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REVIEW OF FAA'S CERTIFICATION PROCESS: ENSURING AN EFFICIENT, EFFECTIVE, AND SAFE PROCESS

(113–40)

HEARING

BEFORE THE

SUBCOMMITTEE ON AVIATION

OF THE

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
HOUSE OF REPRESENTATIVES

ONE HUNDRED THIRTEENTH CONGRESS

FIRST SESSION

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CONTENTS

Page

Summary of Subject Matter iv

TESTIMONY

PANEL 1

Dorenda Baker, Director of the Aircraft Certification Service, Federal Aviation Administration, acccompanied by John S. Duncan, Director of the Flight Standards Service, Federal Aviation Administration 3
Gerald L. Dillingham, Ph.D., Director, Physical Infrastructure Issues, Government Accountability Office 3
Jeffrey B. Guzzetti, Assistant Inspector General for Aviation Audits, U.S. Department of Transportation 3

PANEL 2

Peter J. Bunce, President and CEO, General Aviation Manufacturers Association 19
Thomas L. Hendricks, President and CEO, National Air Transportation Association 19
Michael Perrone, President, Professional Aviation Safety Specialists, AFL–CIO 19
Ali Bahrami, Vice President-Civil Aviation, Aerospace Industries Association of America 19

PREPARED STATEMENTS SUBMITTED BY WITNESSES

Dorenda Baker and John S. Duncan, joint statement 36
Gerald L. Dillingham, Ph.D. 46
Jeffrey B. Guzzetti 63
Peter J. Bunce 72
Thomas L. Hendricks 80
Michael Perrone 85
Ali Bahrami 95

SUBMISSION FOR THE RECORD

Thomas L. Hendricks, President and CEO, National Air Transportation Association, response to request for information from Hon. Mark Meadows, a Representative in Congress from the State of North Carolina 34

ADDITION TO THE RECORD

Eric Byer, Vice President of Communications, Policy, and Planning, Aeronautical Repair Station Association, written statement 103

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October 25, 2013

SUMMARY OF SUBJECT MATTER

TO:	Members, Subcommittee on Aviation
FROM:	Staff, Subcommittee on Aviation
RE:	Subcommittee Hearing on "Review of FAA's Certification Process: Ensuring an Efficient, Effective, and Safe Process"

PURPOSE

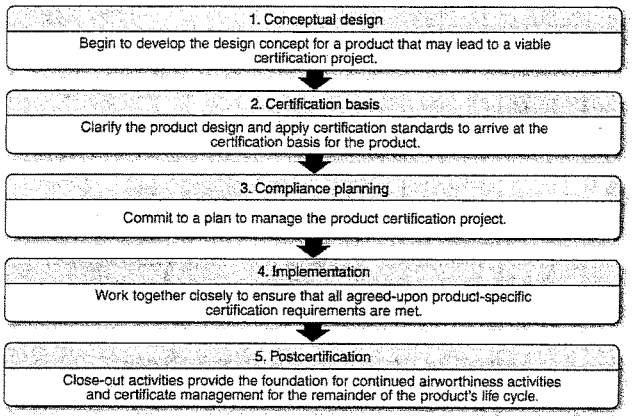
The Subcommittee on Aviation will meet on Wednesday, October 30, 2013, at 10:00 a.m in 2167 Rayburn House Office Building to discuss the Federal Aviation Administration's (FAA) aircraft certification process. Specifically, the Subcommittee will learn about the progress that the FAA has made in implementing provisions in the FAA Modernization and Reform Act of 2012 (Reform Act), which require the agency to develop plans to streamline their certification process and address regional inconsistencies. The Subcommittee will receive testimony from witnesses representing the FAA, the Government Accountability Office (GAO), the Inspector General of the Department of Transportation (DOT IG), the General Aviation Manufacturers Association (GAMA), the Aerospace Industries Association (AIA), the National Air Transportation Association (NATA), and the Professional Aviation Safety Specialists (PASS). Each witness will provide their assessment of the FAA's progress to streamline the certification processes and reduce regulatory inconsistencies while maintaining the highest level of safety. They will also share what actions they believe can be taken in the short term to achieve these goals.

Aircraft Certification

The FAA is responsible for issuing type and manufacturing certificates for aircraft, aircraft engines and propellers, as well as aircraft parts and appliances (aircraft and aircraft components). To ensure the safety of an aircraft and aircraft components the FAA has developed a set of safety standards that an aircraft and aircraft component must comply with. In exercising its discretion, the FAA has devised a system of compliance review that involves the certification of the design and manufacture of aircraft and aircraft component. Under this process, the duty to ensure that aircraft and aircraft components conform to FAA safety regulations lies with the manufacturer and operator, while the FAA retains responsibility for overseeing compliance.

Thus, the manufacturer is required to (1) develop the plans and specifications and (2) perform the inspections and tests necessary to establish that an aircraft design comports with the regulations; the FAA then reviews the data by conducting a risk-based review of the manufacturer's work. If the FAA finds that a proposed new type of aircraft and aircraft component comports with minimum safety standards, it signifies its approval by issuing a type certificate. Typically, aircraft appliances are approved through technical standard orders. Aircraft components can also be approved by the FAA through a supplemental type certificate, which has similar process for approval as type certificate. Figure 1 provides a basic overview of key FAA aircraft certification processes.

Figure 1: Key Phases in Aircraft Certification's Process for Approving Aviation Products



Source: FAA.

Type Certificate

When a new aircraft or aircraft component design is being proposed, the applicant must first apply to the FAA for a type certificate. The applicant must show that the proposed design meets the applicable existing airworthiness requirements. The regulations provide for the issuance of special conditions when the Administrator finds that the airworthiness standards do not contain adequate or appropriate safety standards because of novel or unusual design features of the product to be type certificated. In order to receive a type certificate, the applicant must conduct a series of tests and reviews to show that the product is compliant with existing standards and any special conditions issued by the FAA.

Production Certificate

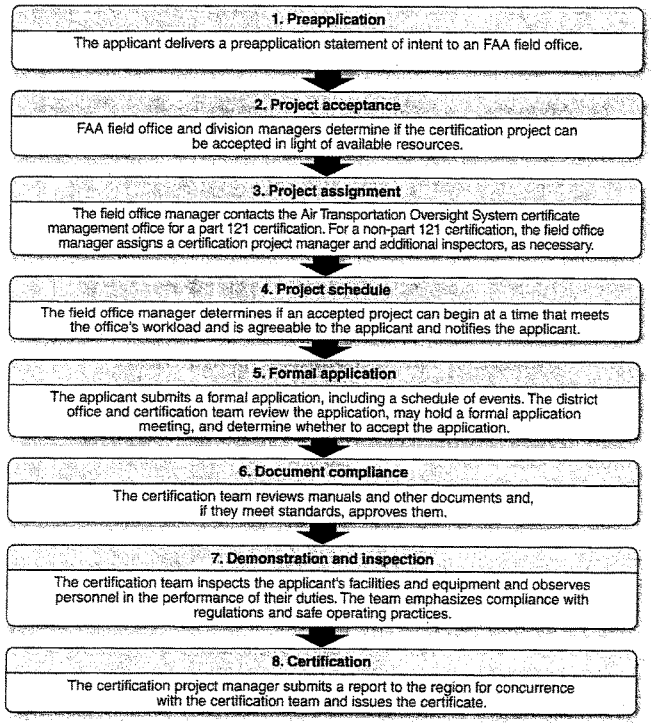
Along with seeking a type certificate, the applicant can simultaneously seek a production certificate from the FAA. A production certificate is an approval by the FAA to manufacture duplicate products of the type design approved by the type certificate. Before approving a

production certificate, the FAA will review the manufacturer's quality control systems against regulatory and policy requirements. The holder of the production certificate is responsible for the quality of all parts, even those that are not specifically manufactured by the production certificate holder. Aircraft parts can obtain a parts manufacturing approval, which is equivalent to a production certificate but is only for one specific part.

Flight Standards' Certificates for Air Operators and Air Agencies

Within the FAA, the Flight Standards Office is responsible for issuing certificates and approvals for airmen, air operators, air agencies, commercial air carriers, repair stations, designees, pilot schools and training. These certificate actions are covered in over 100 FAA field offices with roughly 4,000 flight standards inspectors. This office, in conjunction with the Aircraft Certification office, is responsible for continued oversight of (1) operational safety of certificate holders, (2) designees, (3) air operators, and (4) air agencies operation and maintenance. Figure 2 shows the process by which Flight Standards carries out their duties.

Figure 2: Key Steps in Flight Standards' Process for Issuing Certificates to Air Operators and Air Agencies



Source: FAA.

Organization Designation Authorization

In order to ensure that all parts meet quality standards, the FAA also has the ability to issue a company an Organization Designation Authorization (ODA). The ODA allows a company to set up an organization of airworthiness representatives (AR) who act on behalf of the FAA. The FAA, in conjunction with the approved ODA, develops a manual which specifies the procedures, processes, and practices to be used. The ARs are authorized by the FAA and carryout routine certification actions. The FAA inspectors have the authority to perform any of these activities themselves should they wish to, or they can delegate the responsibility to the AR. An AR is approved by the FAA after going through a review process and are responsible for ensuring the manufacturers' compliance to FAA standards. The FAA has multiple processes that must be met to ensure that a new aircraft meets the standards of aircraft design and manufacturing. Ultimately, the FAA remains responsible for safety oversight.

FAA Modernization and Reform Act of 2012

Section 312: Aircraft Certification Process Review and Reform

The Reform Act contains two key provisions addressing the FAA's certification process. Section 312 requires the FAA to conduct an assessment of the certification approval processes and develop recommendations to improve efficiency and reduce costs through the streamlining and reengineering of the certification process. After developing the recommendations, the Administrator is required to submit a report to Congress containing the results of the assessment and an explanation of how they will implement the recommendations contained in the report. Section 312 also directed the FAA to begin implementing the recommendations by February 2013.

The FAA submitted the report required by section 312 on July 31, 2013.[1] The FAA is currently addressing six recommendations that were developed in consultation with industry and included in the report. They include:

1. Develop a comprehensive means to implement and measure the effectiveness of implementation and benefits of certification process improvements;
2. Enhanced use of delegation;
3. Develop an integrated Roadmap and vision for certification process reforms;
4. Update part 21 to reflect a systems approach for safety;
5. Develop and implement a comprehensive change management plan; and
6. Review and implement process reforms and efficiencies needed for other aircraft certification service functions.

[1] United States Department of Transportation, Federal Aviation Administration "Detailed Implementation Plan for the Federal Aviation Administration Modernization and Reform Act of 2012, Public Law no. 112-95, Section 312". July 31, 2013.
http://www.faa.gov/regulations_policies/rulemaking/committees/documents/media/ACPRR.ARC.Implementation%20Plan.20130731.pdf

According to the FAA's Implementation Plan, recommendations 1, 3 and 5 will be addressed in the FAA's roadmap for major change initiatives in aircraft certification service. Recommendation 2 is being addressed in an action plan to improve the effectiveness of the delegation process and as part of the Aircraft Certification Training Advisory Committee. The FAA will address recommendation 6 through a report exploring options for streamlining processes. The FAA has developed an implementation plan which will address all recommendations. According to the FAA, the agency was already in the process of implementing initiatives to address some of the recommendations and it will continue its efforts.

Section 313: Consistency of Regulatory Interpretation

Section 313 of the Reform Act requires the Administrator to establish an advisory panel of government and industry representatives to review the GAO's October 2010 report[2] on certification and approval processes and develop recommendations to address GAO's findings and other concerns raised by interested parties. In addition, the Advisory Panel is tasked with developing plans to increase consistency of interpretation of regulations by Flight Standards Service and Aircraft Certification Service. On July 19, 2013, the FAA submitted the advisory panel's report to Congress.[3] The FAA planned to submit an Action Plan on implementation of these measures by the end of September 2013, however the plan is still in process.

The FAA charted an Aviation Rulemaking Committee (ARC) on April 30, 2013 and tasked the ARC with reviewing the GAO report, determining the root causes of inconsistent interpretations and developing recommendations. The ARC recommended the FAA should:

- review all guidance documents and interpretations to identify and cancel outdated material and cross-reference material to its applicable rule;
- develop a standard decision-making methodology for the development of all policy and guidance material to ensure such documents are consistent;
- review and revise regulatory training for agency personnel and make curriculum available to ensure the training includes interactive workshops, appropriate initial and recurrent training;
- establish a Regulatory Consistency Communications Board (RCCB) with representatives from the FAA to provide clarification to FAA personnel and certificate holders and applicants;
- improve the FAA's rulemaking procedures and guidance to ensure each proposed and final rule preamble contains a comprehensive explanation of the purpose, technical requirements, and intent; and
- determine the feasibility of establishing a full-time Regulatory Operations Communication Center (ROCC) as a centralized support center to provide real-time guidance to FAA personnel, industry, certificate holders, and applicants.

[2] U.S. Government Accountability Office "GAO-11-14, Aviation Safety: Certification and Approval Processess Are Generally Viewed as Working Well, but Better Evaluative Information Needed to Improve Efficiency." October 2010.

[3] United States Department of Transportation, Federal Aviation Administration "Report to Congress: Consistency of Regulatory Interpretation, FAA Modernization and Reform Act of 2012 (P.L. 112-95)- Section 313." July 19, 2013.

The FAA has developed an implementation plan to execute the reforms needed to address the ARC recommendations.

Witnesses:

Panel I

Ms. Dorenda Baker
Director of Aircraft Certification Service
Federal Aviation Administration

Dr. Gerald Dillingham
Director of Civil Aviation Issues
Government Accountability Office

Mr. Jeff Guzzetti
Assistant Inspector General for Aviation Audits
U.S. Department of Transportation

Panel II

Mr. Ali Bahrami
Vice President – Civil Aviation
Aerospace Industries Association

Mr. Tom Hendricks
President
National Air Transportation Association

Mr. Pete Bunce
President
General Aviation Manufacturers Association

Mr. Michael Perrone
President
Professional Aviation Safety Specialists

REVIEW OF FAA'S CERTIFICATION PROCESS: ENSURING AN EFFICIENT, EFFECTIVE, AND SAFE PROCESS

WEDNESDAY, OCTOBER 30, 2013

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON AVIATION,
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE,
Washington, DC.

The subcommittee met pursuant to notice at 10:00 a.m. in Room 2167, Rayburn House Office Building, the Hon. Frank A. LoBiondo (Chairman of the subcommittee) presiding.

Mr. LOBIONDO. Good morning. The subcommittee will come to order. Thank you for being here today.

Today the subcommittee will hear from the FAA and other expert witnesses on the agency certification process. It is the shared goal of everyone in this room to find the right balance between maintaining the highest level of aviation safety while achieving greater efficiencies in the FAA certification process. As the aviation industry develops new products and other innovations, the FAA must likewise evolve. Examples of this creative spirit can be found throughout the industry. Many companies I have worked with with the FAA Tech Center in my district to develop and test new products that improve safety and efficiency of the U.S. aviation system.

To ensure that the hard work at the Technical Center and elsewhere in the industry, it is not needlessly delayed or wasted altogether, it is critical that the FAA certification processes keep pace. The Aviation Subcommittee often hears concerns from companies, operators and other certificate holders related to the FAA's certification processes, and particularly long wait times, inconsistent regulatory interpretations, and redundant or outdated processes have all been brought to the subcommittee's attention.

In response, Congress included two important provisions in the FAA Modernization and Reform Act of 2012 to improve the FAA certification process. These provisions require the agency to develop plans to streamline their certification processes and address regional regulatory inconsistencies, all while maintaining the highest level of safety. In response, the FAA submitted reports to the committee that outlined recommendations to improve and streamline certification and address inconsistent regulatory interpretations.

Today we look forward to hearing what progress the FAA has made carrying out these provisions and what recommendations they will implement to further ensure certification processes are ef-

fective and efficient. I look forward to hearing from our witnesses and thank them for their participation.

I ask unanimous consent that all Members have 5 legislative days to revise and extend their remarks and include extraneous material for the record of this hearing. Without further objection it is so ordered. I would like now to yield to Mr. Larsen.

Mr. LARSEN. Thank you, Chairman LoBiondo, for calling today's hearing to review the FAA certification process.

Mr. Chairman, the ability of U.S. manufacturers to improve our aviation system and compete successfully in the global marketplace is tied directly to the FAA's timely review of new products. The public relies on a skilled and dedicated FAA workforce to work with industry and ensure that new products and services are safe.

I certainly see firsthand how important FAA's certification services are in my State of Washington where aviation manufacturing is a significant economic driver. My State is home to over 1,000 firms in the airspace cluster employing more than 131,000 people; in the export industry in my State, aviation accounts for $27 billion of a total $64.6 billion in exports. So to ensure that aviation manufacturing continues to play a critical role in our economy, Congress must provide adequate resources for FAA certification services.

Additionally, Congress should encourage FAA to improve the streamlining process while maintaining the highest level of safety. Therefore, I am pleased that the most recent reauthorization directed the FAA to assess its certification process and address concerns about regulatory interpretation. More specifically, section 312 of the Act requires FAA conduct an assessment of the aircraft certification and approval process.

One of the key recommendations that came out of the report contained in the FAA certification report is that the agency would more effectively use its existing delegation authority. This authority is not new, because FAA simply does not have the personnel to oversee every aspect of aviation certification, though the law allows FAA to delegate certain functions to qualified individuals and companies. And today the FAA appoints both individual designees and grants approval of organizational designation authorizations or ODAs. And, through ODAs, FAA delegates responsibility for selecting individuals to perform routine certification work to aircraft manufacturers and other organizations.

Further, the report notes that if FAA fully utilizes the authority to carry out these certifications, the personnel will be free to focus on critical areas that present more risk. So in theory this makes sense, and I support the idea of streamlining the certification process as long as it can be done safely.

But safety can't take a back seat to efficiency. And the GAO reports that upwards of 90 percent of FAA's certification activities were performed by designees. Therefore, FAA personnel must have tools and the training to properly assess risk so that they are involved when needed to be and are prepared to step up their involvement and certification activity when warranted. And when certain certification activities present greater risk or involve new technologies, the FAA must possess the technical expertise or readily obtain outside expertise so it can work with industry to address safety issues.

And in 2011 the DOT inspector general reported the FAA needed to strengthen its risk assessment analysis capability with respect to ODA, so the FAA personnel could better identify safety-critical certification issues. And so I look forward to hearing from the IG about what steps, if any of the FAA, has taken to strengthen—the opinion that the FAA has taken to strengthen its risk-based targeting program since the 2011 report.

And, likewise, earlier this year the GAO raised concerns that FAA staff have not been able to keep pace with industry changes and thus may struggle to understand the aircraft or equipment they are tasked to certificate. So I would like to hear from Dr. Dillingham whether he believes this is a major concern and what steps the FAA can take or is taking to address this concern.

Now, Mr. Chairman, in 2010 the GAO reported the FAA is inconsistent in interpretation of its own certification and approval regulations, has resulted in delays and higher costs for industry, and this could lead to jurisdiction shopping or unfair standards for different manufacturers, depending on where they are located. For this reason, section 313 of the FAA authorization directed the FAA to be in an advisory panel to determine the root causes of inconsistent, regulatory interpretation by FAA personnel. This July, the panel issued its report to Congress, but the FAA has not yet drafted a plan to implement the panel's recommendations.

Many of the recommendations make sense, centering on improving training for FAA personnel and improving communication between FAA and industry. For example, the panel recommended that the FAA develop a consolidated master database for regulatory policy and guidance for commercial aviation. So I look forward to hearing the FAA's reaction to this and to other panel recommendations.

With that, Mr. Chairman, thank you for holding a hearing. I look forward to hearing from our witnesses.

Mr. LOBIONDO. Thank you very much, Mr. Larsen.

I would now like to recognize our first witness of the day, FAA Director of the Aircraft Certification Service, Ms. Dorenda Baker, who is accompanied by Mr. John Duncan, the Director of the Flight Standards Service. You are now recognized.

Thank you.

TESTIMONY OF DORENDA BAKER, DIRECTOR OF THE AIRCRAFT CERTIFICATION SERVICE, FEDERAL AVIATION ADMINISTRATION, ACCOMPANIED BY JOHN S. DUNCAN, DIRECTOR OF THE FLIGHT STANDARDS SERVICE, FEDERAL AVIATION ADMINISTRATION; GERALD L. DILLINGHAM, PH.D., DIRECTOR, PHYSICAL INFRASTRUCTURE ISSUES, GOVERNMENT ACCOUNTABILITY OFFICE; AND JEFFREY B. GUZZETTI, ASSISTANT INSPECTOR GENERAL FOR AVIATION AUDITS, U.S. DEPARTMENT OF TRANSPORTATION

Ms. BAKER. Thank you.

Chairman LoBiondo, Congressman Larsen, members of the subcommittee, thank you for inviting us to appear before you today on behalf of the Federal Aviation Administration.

I am Dorenda Baker, director of the Aircraft Certification Service. With me is John Duncan, the director of the Flight Standards

Service. Today is the first time John and I are appearing before the subcommittee and we hope that the information we provide will assist you in your oversight responsibilities.

Between the Aircraft Certification Service and the Flight Standards Service, we oversee the life cycle of an aircraft, from design and production of new aircraft, to maintenance, modification and repair of aircraft as they age. We also oversee the pilots, flight attendants, mechanics, airlines and flight schools who fly and maintain them. Throughout the life cycle, our priority is to ensure the continued operational safety of the civil aviation fleet.

As the aviation industry grows in response to the global demand, each new aircraft and operator increases the FAA's oversight responsibility. While we have been successful at using the tools that Congress has given us, such as delegation to leverage our resources, it is incumbent upon us to further improve our processes to make them as efficient and effective as possible and maintain the high standards of safety that the public expects.

Last year Congress passed the FAA Modernization Reform Act of 2012. Sections 312 and 313 of the Act require the FAA to work with industry representatives to review and improve the FAA aircraft certification process, and standardize FAA's regulatory interpretations. In response to section 312, the FAA collaborated with industry representatives on six recommendations to streamline and reengineer the certification processes. The FAA concurred with the intent of all of the recommendations and developed an implementation plan that mapped the recommendations to 14 agency initiatives. Since the original release of the implementation plan in January of 2013, the FAA has made progress on all of the initiatives.

To keep ourselves accountable and promote transparency, we periodically post the updates on the FAA Web site. Our most recent update was posted in July and we plan to post the next update this coming January. Some examples of our progress include the approval of the Part 23 Rulemaking Project, issuance of the revised order on Organization Designation Authorization, or ODA, initiation of a 2-year pilot program for delegation of noise findings, the kick-off of the Part 21 Aviation Rulemaking Committee, and a revision to the Aircraft Certification Sequencing process.

In response to section 313, the FAA reviewed and accepted an Aviation Rulemaking Committee's six recommendations to improve upon consistency and regulatory interpretation by offices within AIR and AFS, as well as between our two organizations. It is clear that long-term planning and cultural change is essential to make the improvements sought by industry. In order to address the recommendations as soon as practical, the FAA's plan for section 313 identifies near, mid and long-term priorities related to each recommendation.

The primary focus area identified by industry was a standardized methodology, whereby all FAA guidance documents, including legal interpretations affecting compliance with the regulations are linked to the respective regulation. The FAA is currently reviewing existing data systems to determine how best to achieve this goal. As one of the near-term strategies, we are identifying existing guidance documents used by FAA personnel that are not catalogued in one of our electronic databases.

We expect to identify all such documents and establish a protocol to determine if such documents are still applicable, in which case they will be integrated into one of our existing electronic systems by the end of 2014. As the reports we have submitted in our testimony indicate, the FAA is making progress in addressing the concerns identified in the Act. We understand the importance of the recommendations, and are committed to following through with their implementation. Our efforts are transparent and are being done with the support of industry. The implementation of these improvements provides a path forward for the FAA to meet the ongoing and future demand of a dynamic industry that is crucial to the economic interests of all Americans. We look forward to working with this industry and the subcommittee to achieve these goals.

Mr. Chairman, this concludes my statement. Mr. Duncan and I will be happy to answer any questions you have at this time.

Mr. LOBIONDO. Thank you very much, Ms. Baker.

Our next guest witness is Dr. Gerald Dillingham, director of Physical Infrastructure Issues at the Government Accountability Office.

Dr. Dillingham, we thank you for being here. You have been at this a number of years. I am trying to remember just how many, but I know it is a bunch.

Dr. DILLINGHAM. Sir, I don't remember exactly how many times myself.

Mr. LOBIONDO. OK. OK. But we thank you for your expertise and welcome your remarks.

Dr. DILLINGHAM. Good morning, Mr. Chairman, Ranking Member Larsen, members of the subcommittee.

Thank you for inviting me here today to discuss FAA certification processes and inconsistencies in regulatory interpretation. In 2010 at the request of this committee we conducted a study of these issues. Overall, we found that the aviation industry views the certification and approval processes as generally working well and making positive contributions to the safety of the National Airspace System.

I happen to know circumstances where there are inefficiencies. It can result in costly delays, particularly for smaller operators. We made two recommendations to address these inefficiencies. Section 312 and section 313 of the FAA Reauthorization Act require the agency to work with industry to assess the certification processes and concerns that have been raised about the inconsistency of regulatory interpretation. My statement today discusses FAA's response to those recommendations that we made in 2010 and the recommendations of two FAA-industry advisory committees regarding the certification and approval processes.

FAA has taken sufficient action on the GAO recommendations that allowed us to close them as implemented. The Certification Process Committee that was established in accordance with section 312 developed six recommendations to improve process, efficiency and reduce cost. In response, FAA issued a detailed implementation plan earlier this year. The plan identified many initiatives and programs that FAA has planned and underway that it believes will address the committee's recommendations. However, FAA's plan lacks performance goals and measures to track the outcomes of

most of the initiatives. Without these performance goals and measures, FAA will not be able to gather the appropriate data to evaluate current and future initiatives.

Additionally, FAA's response does not include an integrated plan for achieving the desired future end-state for the certification process. Without this plan, FAA will not have an overall blueprint or guide for how or if the individual initiatives fit together to achieve the desired outcome of improving the entire certification system. Regarding consistency of regulatory interpretation, the Regulatory Interpretation Committee that was established in response to section 313 identified several root causes of inconsistent interpretation of regulations and made six recommendations to address them.

The root causes identified by the committee were similar to those that we also identified in our 2010 study. According to FAA, an action plan to address the recommendations and metrics to measure implementation is a work in progress. The estimated date for completion of the plan is December of this year. We would note again that measuring implementation may provide useful information, but FAA should also develop outcome measures which can help determine whether the actions undertaken are having their intended effect.

Mr. Chairman, Ranking Member Larsen and members of the subcommittee, as I stated earlier, problems in the certification and approval processes can cause delays in getting innovations and safety improvements into the National Airspace System and have significant cost impacts on the industry. With FAA certification and approval workload expected to grow in the next 10 years because of the introduction of new aircraft, including unmanned aerial systems, the increasing use of composite materials and aircraft and the expected progress of the NextGen initiative, continued progress in implementing the committee's recommendation is even more critical.

To its credit, FAA has taken steps toward improving the efficiency and consistency of the certification and approval processes. It will be essential for FAA to follow through with its plans for implementing the committee's recommendations and to develop measures of effectiveness to evaluate the impact of those initiatives before closing the recommendations. We look forward to supporting this committee in its continued oversight to ensure the full implementation of sections 312 and 313 and the achievement of the intended efficiencies and streamlining of the certification and approval processes.

Thank you, Mr. Chairman.

Mr. LOBIONDO. Thank you, Doctor.

We will now turn to Mr. Jeff Guzzetti.

Mr. Guzzetti, you are recognized for your statement and Mr. Guzzetti is the Department of Transportation assistant inspector general for aviation audits.

Mr. GUZZETTI. Mr. Chairman, members of the subcommittee, thank you for inviting me to testify on FAA's certification processes.

As you know, certification plays an important role in FAA's efforts to ensure the safety of the National Airspace System. However, our work as well as joint FAA industry reports have identi-

fied opportunities for improving the efficiency and effectiveness of FAA's certification process. My statement today will focus on vulnerabilities in three areas of FAA certification: Organization Designation Authorization, or ODA; new air operators and repair stations; and NextGen capabilities, including the integration of unmanned aircraft systems.

First, ODA: Through ODA, FAA's Aircraft Certification Service delegates certification tasks to aircraft and component manufacturers and other outside companies, making it an important resource for managing the industry's growing certification needs. However, our previous work identified vulnerabilities in the ODA program, including inconsistencies in how FAA offices interpreted FAA's role in how manufacturers selected the personnel to perform certification tasks.

In response to our 2011 report and a mandate in the FAA Modernization and Reform Act of 2012, FAA has taken steps to improve its oversight of the ODA program. For example, in May of this year FAA issued new and more stringent guidance for prescreening staff prior to assigning them to an ODA. They established procedures for tracking and removing poor performing ODA staff and they improved training for FAA engineers on how to enforce ODA policies. As the ODA program continues to grow, effective oversight will remain critical to ensure that all aircraft certification organizations are following FAA's policies and procedures.

Now, while improvements to ODA oversight are in process, we identified shortcomings in another area of FAA's certification, and that is certification of new air operators and repair stations by FAA's Flight Standards Service. Currently, more than a thousand aircraft operators and repair stations around the country are awaiting certification, 138 of which have been delayed for more than 3 years. Several factors contribute to this backlog, including the lack of an effective method to prioritize new applicants, the lack of a standardized process to initiate new certifications, and poor communications regarding FAA's certification policy. According to FAA officials, budget uncertainties have also contributed to these backlogs. Since March 2011, FAA halted certain certification activities several times in an effort to maintain oversight of existing operators.

Finally, it is important to note that a growing demand for certifying NextGen technologies and procedures, as well as unmanned aircraft systems, will only add to FAA certification workload and further tax its certification staff. For example, FAA has mandated that airspace users equip with ADS–B Out avionics by 2020 to provide more accurate satellite-based surveillance data for reduced separation between aircraft.

However, FAA has not certified all of the needed avionics that must be installed or developed and certified the procedures for controlling air traffic with ADS–B. Developing and installing these avionics may take years, and any certification delays translate into further delays with both user equipage and NextGen benefits.

Another certification challenge along these lines facing FAA is its effort to safely integrate unmanned aircraft systems into U.S. airspace, something that could further exacerbate FAA's certification workload. While FAA successfully certified two unmanned aircraft

for civil use, the agency relied on an older rule addressing military aircraft and only authorized flights over water in the Arctic.

FAA has not yet developed certification standards for novel and new civil unmanned aircraft operating over populated areas. A wide range of safety related issues regarding unmanned systems also remain unresolved, including standards for certifying new systems, crewmembers and ground control stations. Until FAA establishes a regulatory framework and certification standards, unmanned aircraft will continue to operate with significant limitations in the Nation's airspace.

Clearly, there is greater industry activity than FAA can support through its current certification processes. While continually adapting to meet industry needs is no simple task, strategies for enhancing the management and oversight of FAA's certification process must be developed and implemented, and our office remains committed to oversight that will identify areas needing attention.

Mr. Chairman, this concludes my prepared statement. I will be happy to answer any questions you or other members of the subcommittee may have.

Mr. LOBIONDO. Thank you very much.

The FAA's plans to streamline and ensure consistency of certification processes I think are a good first step. As we move forward, what can be done by the FAA industry and Congress to further improve certification and approval processes? For anyone on the panel or everyone on the panel.

Dr. DILLINGHAM. Well, Mr. Chairman, I think if FAA continues to implement the recommendations that came from 312 and 313, that's a first step, because part of that means better utilizing some of the initiatives and some of the tools that they currently have. I think that partnership that was established by the industry FAA committee when they did the committee to respond to 312 and 313 is something that needs to be continued.

In our work we found that whenever the stakeholders are not included early and continuously, the problem doesn't go away easily and I think congressional oversight, as you are having this hearing today, to get to actual implementation, oftentimes there are plans; but, sometimes, that implementation falls short. So I think continued oversight is also going to be critical.

Mr. LOBIONDO. Anyone else?

Mr. GUZZETTI. Well, I'd like to add that in regards to the flight standards service side of the equation, that is, the FSDOs, the inspectors that review applicants for repair stations, and for aircraft operators, such as crop dusters, there's quite a big backlog, over a thousand as I indicated in my testimony. About a quarter of those applications, about 251 of those thousand, are older than 2 years old. It's a big workload and FAA only has a certain number of resources. But, perhaps they can move away from their philosophy of first come, first served, when these applicants come in. There could be a better way to triage these applications to look at complex operations versus simple operations and get more of the applications rolling. A different philosophy on how they utilize their workforce to process these applications would stem the tide of the backlog.

Ms. BAKER. I would echo Dr. Dillingham's comment in regard to section 312. It provides a number of initiatives that will help us

streamline the process. One in particular is echoed in the Small Airplane Revitalization Act. We are taking a relook at Part 23 and reorganizing it so that it is more fitted for the complexity and performance of the aircraft. That should make it much easier for applicants to get their aircraft certified.

Also, Part 21 is another part of the initiatives in 312. We are going to be looking at a systems safety approach. So it will make a difference in how the applicant can apply the rules and we can apply our resources from a safety approach.

Mr. LOBIONDO. Do you believe the use of designees is safe?

Ms. BAKER. Yes, I do.

Mr. LOBIONDO. Dr. Dillingham?

Dr. DILLINGHAM. Yes, I do, Mr. Chairman. And I think the reality is there is no way that FAA can carry out all of its responsibilities without the use of designees. I think the critical dimension is proper oversight and accountability, and this is something that they've been doing for decades. It's just a matter that it still needs monitoring, and it frees up FAA to actually work on those, to spend more time and attention on the real safety-critical aspects of certification.

Mr. GUZZETTI. Sir, I think generally, yes, although I do think it's an open question. I absolutely agree with Dr. Dillingham that oversight is key. ODA is yet one layer removed of FAA direct oversight of certifying products, and FAA needs to have the companies who know the product best help them with taking care of all these technical aspects. But delegation, which has been used in this Nation for decades, has always needed strong oversight by the FAA. So as long as that's maintained, then it will remain a safe process.

Mr. LOBIONDO. For the FAA, when will the 313 implementation plan be completed? And is it being developed with input from the ARC members, and what role is labor taking in the process?

Mr. DUNCAN. Yes, first of all, we are working with the ARC members in developing the 313 plan. The 313 plan has short-range, mid-range and long-range goals. We are working the short-range goals right now to include the required fix to the rulemaking process. It would make sure that the guidance in rules that we produce, in the preambles, that they clearly state the purpose of the rule and the technical requirements of the rule, as well as the intent of the rule. Also we are evaluating the training that's required for those folks who write the rules and later interpret the rules and what kind of guidance should be involved. We are also evaluating the existing IT systems that we have for the master database that you described earlier.

Those are short-term goals, and we look to have those completed shortly. Some are completed already. The longer range goals are more of a challenge for us and we will continue to work toward those goals.

Mr. LOBIONDO. So no timeframe for implementation of 313?

Mr. DUNCAN. The timeframe for implementation of the short-term goals and the continued evaluation for long-term goals is this year.

Mr. LOBIONDO. This year?

Mr. DUNCAN. Yes.

Mr. LOBIONDO. For Mr. Guzzetti, in your testimony you mentioned the weaknesses that the IT found in the 2011 report on organizational designation authority, in particular the oversight by FAA. Since your 2011 report, what actions have the FAA taken to address these concerns, and do you think they are adequate?

Mr. GUZZETTI. Thank you for the question.

We made five recommendations from that report, and FAA has taken action on every one of them. They have concurred with a plan to revise their policy to require a full, 2-year transition before an ODA unit can begin to self-appoint their own designees. They developed explicit guidance on the process to remove an ODA unit member in a timely fashion. They are tracking unit member appointments better.

They have concurred and are developing new training and guidance for its certification engineers that never used to be in the habit of being an enforcer, of taking enforcement action. But with ODA they have to now, and we found in our audit that the engineers weren't familiar with the enforcement process. So FAA has instituted training and guidance in that regard, and they also concurred with our recommendation to improve the oversight structure for large ODA organizations by again developing training and assessing the effectiveness of the new oversight structure. So they have moved out and completed just about every one of our recommendations in this regard.

Mr. LOBIONDO. My last question, Dr. Dillingham. What can be done by the FAA now in recognizing the current situation and new regulations or additional resources to improve its certification and approval process.

Dr. DILLINGHAM. Thank you, Mr. Chairman. I think the first thing is something that FAA is currently doing, that is making the best and highest use of the tools that they have. It is also, I think, to implement those recommendations, fully implement those recommendations that came from 312 and 313, and establish some accountability up and down the line from the very top to the very bottom of actually implementing the recommendations. Of course, it is going to be tough in terms of the whole fiscal situation for the country, but getting more from what you already have is a first step.

Mr. LOBIONDO. Thank you.

Mr. Larsen?

Mr. LARSEN. Thank you, Mr. Chairman.

First, for Mr. Guzzetti, you talked about ODA a little bit here and guidance for the engineers. Have you assessed whether or not FAA Aircraft Certification Engineers have enough direction regarding which activities should be delegated and which should not?

Mr. GUZZETTI. Congressman Larsen, I think that area could use some improvements. We addressed an aspect of that in our 2011 report, specifically in regard to a tool that FAA developed called the risk-based resource targeting, or RBRT tool, for engineers to use. And at the time the RBRT tool wasn't a part of the ODA program, but we were requested to look at it, I think now it can be a candidate for ODA.

We found some problems with that tool. RBRT is the tool that was designed to assist FAA engineers in prioritizing how complex

a project was to give them a better feel for whether it should be delegated or whether FAA should address it directly. And we found a lot of problems with that tool. There were software glitches, but also we felt that there wasn't enough objective data feeding into the tool for its use; and there wasn't enough training for folks to use that tool. Additionally, even after the tool would provide guidance to the engineer, the engineer had the option to not use the prioritization if the engineer was biased.

We made a recommendation in that regard; and FAA responded and they are attempting to resolve the software glitches. Right now, I believe it's just a voluntary tool to be used, but it would greatly enhance FAA's ability to have another objective input to decide whether or not they should delegate an aspect of certification or keep it close hold.

Mr. LARSEN. The term "software glitch" up here has a whole new meaning in the last 4 weeks. So I am trying to stay away from—just trying to find what that is.

Can you, though, Ms. Baker, respond to Mr. Guzzetti's comments regarding what should be and what should not be delegated, whether there is enough guidance for engineers?

Ms. BAKER. Yes, Mr. Guzzetti characterized our problems very, very accurately. The tool was supposed to provide a standardized methodology for all of our engineers to use, so that it wasn't just a personal bias just from the start. But it does allow the engineer to use engineering judgment. The idea is to try to understand the complexity of the design, understand the experience of the company that you are working with, understand the clarity of the regulation.

All of these will eventually be put into the tool along with additional data, as Jeff said. We were trying to get other sources so that the engineer is aware of failures within the system. So when we get that complete, we will implement it wholly across all of our service and offices, and they'll start using it at that time. They'll also start using it for the ODAs. At this time they are not using it for ODAs.

Mr. LARSEN. And on that last point, is that one of the issues that is a limiting factor for the FAA on using or delegating the full panoply of ODA authorities? Right now, some folks aren't able to use all that is allowed through the delegation authority. Are there limiting factors to allow that to happen?

Ms. BAKER. Yes. I wouldn't say that this tool is the limiting factor. That tool is supposed to identify what areas within the actual, tight certification would be delegated and not delegated. When the companies are talking about full authority, we believe that they are really saying that whatever is authorized under our orders should be granted to them, which actually goes beyond certification. So there would be quite a few things associated with that. Issuance of certificates, for example, if they have a production certificate under their ODA, they would have a lot of autonomy. We are trying to get metrics that will measure how much autonomy they should actually have.

Mr. LARSEN. Dr. Dillingham, I'll finish here so the other side is ready. You mention on page 10 of your report a couple of issues with regard to the consistency of regulatory interpretation, ARC and the issue of fear of retribution, perhaps by industry players,

if they are complaining. There was a gentleman in my district office, a few weeks back I met with on, getting the name or company, a small company in the district.

And he talked about this issue of fear of retribution from the regulator, from the certificator, if they even knew that he was in my office, much less if he complained to them directly about it. It sort of reminds me of one of the many classic lines from the movie "Blazing Saddles," where old lady Johnson delivers a pie to Sheriff Bart and she says, "Of course, we have the good common sense not to mention to anybody I was here." And that's kind of what I felt like this guy was so concerned about retribution from the regulator for even bringing these issues up to me that he didn't want to be known.

Can you assess that that's prevalent? I will give you an opportunity to respond to this, Ms. Baker. Is that prevalent? Is that a one-off? Have you looked at that? Can you address that?

Dr. DILLINGHAM. Thank you, Mr. Larsen.

We did hear that from the stakeholders that we interviewed when we were doing the work for this committee a few years back. And the way it worked was that an applicant would be concerned about raising a dispute with their specific inspector, raising it up to the FSDO level or raising it up to the FAA headquarters level, because even if they won, they were concerned that that same inspector would be back to inspect something else later on, and there might be a problem with that.

So FAA, to its credit, has a system in place that allows you to appeal all the way to the top, but that fear of retribution meant that the system wasn't being used as much as FAA thought it might be used. How widespread that problem is, we weren't able to assess. I wouldn't say it is one-off, and that is one of the most difficult things to do. It is the cultural change that will be necessary, that inspectors are willing to do something different than the way they have in the past. And, in another way, the tool that one of the committees recommended was to have this comprehensive database with all of the regulations, the various interpretations that have been made of it, so that the inspector had a ready source to go and look and see there is another way to do this.

There have been other alternatives, so, hopefully, we are just sort of moving towards a cultural change, putting this comprehensive database in place that we will have or hear fewer experiences like that. It certainly is a problem. How widespread, we couldn't say.

Mr. LARSEN. Yeah. Thanks.

Ms. Baker, do you want to respond to that? Or Mr. Duncan? Yeah.

Mr. DUNCAN. If I may, thank you, sir.

Mr. LARSEN. Sure.

Mr. DUNCAN. The relationship between our inspectors and the stakeholders is a one-to-one relationship in many cases through flight standards. It depends on a professional relationship between the two parties. That, in some cases, is challenging for us. We understand the perception in some cases of potential retribution, and we are concerned about that.

Number one, we obviously do not condone any kind of retribution. We also understand that there is a cultural challenge in dealing with certain cases. I think this is the case with both parties, on the part of the FAA and the part of the stakeholders as well. We are working to try to address this concern through several different mechanisms, including the recommendations of 313. To have clearer and more concise guidance is important to address these concerns. We need to promote within our organization the attitude that we are always looking for a consistent answer to the question. That is part of what we are trying to do.

Mr. LARSEN. Yeah. Thank you, Mr. Chairman.

Mr. LOBIONDO. Mr. Bucshon?

Dr. BUCSHON. Thank you, Mr. Chairman, Ms. Baker. Hi. Over here!

There was described there is a backlog of—you know—as much as 3 years in the approval process. What is the rate limiting step when you have that type of what I would prolonged approval process? Is there a specific area within the process that generally causes that kind of delay?

Ms. BAKER. Yes. There are actually two, different sequencing processes. I will let John handle the actual certification of the airlines, and then I will cover the other.

Dr. BUCSHON. Right. There are two. I understand.

Ms. BAKER. Yes.

Dr. BUCSHON. In your particular instance, what would be the——

Ms. BAKER. Yes. In 2005 we implemented a sequencing process, because we needed to ensure that we meted in the certification work so that we could reserve resources to work on our main priority, which is safety, and the continued operational safety of the aircraft that are in the fleet. The limiting factor is just the capacity of our engineers to do the work. We recognize that the process that we had in place was fraught with problems. The biggest complaint was that there was no predictability. There was a situation where the applicant would put in their application, and they would be in the queue for an indefinite period of time.

We took those comments on our original process, rewrote our process completely, put that process back out for comment. When we finished dispositioning all the comments from industry, we put a revised process for sequencing out. It will still sequence. It's basically going to be prioritization of specific resources, but it won't hold up the initiation of the projects.

So from here out, after we implement this in 2014, when you put in an application, you'll immediately be able to initiate your project; and then the limiting factor might be a particular specialty in engineering to issue a special condition where there's a novel item in the design of the aircraft. If there isn't, it would just flow through the system and there wouldn't be any holdup anymore.

Dr. BUCSHON. OK. Mr. Duncan?

Mr. DUNCAN. Yes, sir. Our primary responsibility and highest priority is to maintain the safety of the existing system, the operators that are currently out there. So in order to protect our ability to do that, we created the certification services oversight program. When an applicant files an application, or when a stakeholder files an application for some kind of certificate, we first evaluate wheth-

er the resources are available in that jurisdiction to support the initial certification of the operator and the ongoing oversight of that operator.

If they don't exist in that office, we look more broadly to see if it can be done by someone else or somewhere else. If that can't happen, then the application is placed on the wait list. For all practical purposes, the certification oversight process is where we keep applicants informed, on a 90-day basis, of where they are in the process. The limitation in that process is our resources, the resources to perform the required work that needs to be done and to provide the ongoing oversight of the new operator that's created.

Dr. BUCSHON. Thank you very much.

I yield back, Mr. Chairman.

Mr. LOBIONDO. Ms. Johnson?

Ms. JOHNSON. Thank you very much, Mr. Chairman, and let me thank all the witnesses for being here.

Your last statement about the resources, I do have a question about the recent Government shutdown and the budget cuts, hiring freezes, and some say they were sequestered. It has had the affect on FAA's ability to attract and retain qualified staff for aircraft for Flight Standard Certifications. And I wonder also about the kind of risk that's based on improving the aviation safety and wonder if you had those impacts to deal with and how it's affected it.

Mr. DUNCAN. Well, I'll start from a flight standards standpoint and say that the challenges that you described, the impact on us is that we evaluate the resources that we have available to make sure that we cover the continuing operational safety requirements that we have. Because of the resource constraint, we expect that we will have slower response times in terms of what we just described, the certification processes and so forth. It'll be slower and our ability to use overtime and travel expenses may also impact those things.

New operators will likely be delayed, as we talked about a minute ago, and that may have an impact on small businesses. There may be significant delays associated with those operators. Additionally, operators that require changes, such as new aircraft on their certificates or training program approvals and so forth, may be delayed beyond the time that they would plan to implement those things, because of the resource constraints.

Ms. JOHNSON. One further question. Just earlier this year, just before the shutdown came, there was an air control tower open, and—with the promise that staff would be furnished for the control tower. And after much discussion, that promise was kept, but also we are very aware that there is some threat to that. Now, how much of that is being experienced throughout the country, and for air traffic controllers?

Ms. BAKER. Thank you for the question, but that's something handled by Air Traffic Control. So we could take an action to get back to you on that.

Ms. JOHNSON. OK. Thank you very much.

Mr. LOBIONDO. Mr. Davis?

Mr. DAVIS. Thank you, Mr. Chairman.

I just want to note that both panels today have testimony that references the Small Airplane Revitalization Act. I am proud to co-

sponsor this bipartisan bill that would improve general aviation safety and spark innovation in the private sector by streamlining regulations. It appears this bill is getting very close to being presented to the President.

You take a look at bills like that and ODA, and this committee has some good momentum and I hope we are able to keep it going. My question is going to be directed to Director Baker. Thanks for your role in ensuring the safety of our system. GAO made two recommendations in 2010. FAA has addressed one, but still has a little work to go on the other.

GAO indicates that performance measures are necessary for FAA to be able to evaluate current programs. Can you talk about what you are doing to institute these performance measures?

Ms. BAKER. Yes, Gerald was correct. We found that setting performance measures is very difficult. You have got to be sure that you don't create unintended consequences. The approach that we chose to take was to develop a vision and pull together all of the initiatives in the section 312 response, and then to start working with industry to develop those metrics.

We have milestones and goals to meet each of the initiatives. The actual effectiveness and efficiency metrics will be built as we work through the projects. It will have to be done very, very carefully, again, so that we don't cause things to happen that we hadn't intended to have happen.

Mr. DAVIS. I yield back, Mr. Chairman.

Mr. LOBIONDO. Mr. DeFazio?

Mr. DEFAZIO. Thank you, Mr. Chairman.

I have pretty much a very simple question or observation. It seems to me I've been on this committee an awful long time, and I remember when Libby Dole cut back on the inspector work for us big time.

I don't think we've ever recovered from that, and I guess my question is—we have testimony in the next panel from Michael Perrone from PASS, and he says, "The balance of FAA oversight is insufficient. The high number of designees"—and he talks about that basically people are just chained to their desks reviewing paperwork or answering questions, but they really can't get out any more because of the impossible workload they're being given.

Do we have—and I guess the FAA has actually studied this issue and they've come up with varying numbers. Do we have enough people? We can talk about all the systems, changes we want to make, and all the other things we want to do and all the computer applications, and all this streamlining and all that stuff; but if you don't have enough people to provide the critical oversight of the designees program—which I think is a good program when properly overseen—it's not going to work. Do we have enough people?

Dr. Dillingham? Anybody? Do we need more?

Dr. DILLINGHAM. Well, Mr. DeFazio, you know, of course, FAA can always use more people. I mean its responsibilities are ever-expanding, and we support that, but we also—there's a reality of the fiscal condition that we all are in. So that means that you have to make the best of the resources that you have.

Mr. DEFAZIO. Well, I get that, but OK. So let's not be fiscally constrained. We could look at novel ways to—you know. I mean if

the people who are developing the new systems and new aircraft, the new avionics, all the other things are feeling like they're being held back so much in terms of their productivity. They might be happy to contribute some money to the FAA to hire more people so that they could get more timely reviews more quickly.

Dr. DILLINGHAM. I think you hit the nail on the head when you started off, Mr. DeFazio, by saying a properly overseen designee program is probably the quickest, most efficient way to expand the resources available to carry out the work. That oversight has to be top-notch. Otherwise, you do start to risk issues of safety and other related matters.

Mr. DEFAZIO. I think we have seen with some other agencies over at the—overseeing pharmaceuticals, the FDA or the Corps of Engineers, sometimes, on major projects where they essentially allow people who have an interest to contribute resources; but the resources are not employees of or responsible to those who contributed the additional resources. They are responsible to the agency doing the reviews. And so you are still having the amount of oversight you need, but you are providing more people.

Isn't the number of people ultimately going to be a choke point, no matter what we do here and no matter how efficient we make this? No matter what reforms we adopt, they're still shuffling stuff around.

Dr. DILLINGHAM. Absolutely.

Mr. DEFAZIO. Anybody else got a different opinion or want to augment that opinion?

Ms. BAKER. No. I don't think that there is a different opinion. There is, obviously, a point where you've got a diminishing return. You can only have as many designees as you can have enough employees to oversee those designees appropriately. What we're trying to do is to develop processes and procedures and tools so that they can do a better job at oversight by making sure that FAA inspectors are doing their jobs strategically, instead of using the personal preference of an individual. If you can determine which areas you, as an inspector, should target, then the idea is that you would use a system safety approach and it would direct you to the areas where you should concentrate.

That way, you'd use fewer people. But there is, obviously, a point where you cannot delegate any more. You have to have more people.

Mr. DEFAZIO. Hm-hmm. OK.

Mr. GUZZETTI. Congressman DeFazio, I just wanted to piggyback off that statement. Because of the fiscal constraints, because of the inability to hire new inspectors, it's up to FAA to make sure that they have the best process to target what limited resources they have to risk, and we just issued a report this past March regarding a staffing model that FAA has, that they've been having some difficulties with.

But it would be helpful if there was a model to at least identify how many inspectors FAA needs, given the demand out there, and we made some recommendations along those lines. And that model was also meant to not only include flight standards inspectors, but also aircraft certification engineers and inspectors. It's not there

yet, but perhaps that could be very helpful to FAA to get that model up and running.

Mr. DEFAZIO. Right. But, you know, if we target the people to the risk areas—I fly a lot and am happy with that—but that leads to the statistics we heard earlier in all these routine things that become a bigger and bigger backlog. Isn't that correct?

Mr. GUZZETTI. It's definitely a balancing act. You heard Mr. Duncan indicate that continuing operational safety should be the priority and that has impacted his ability to process new applications. It's a big challenge, but it's one that has to be tackled. And to not allow any new applicants to begin at the exclusion of continuing operational safety, I don't know if there's a proper balance right now.

Mr. DEFAZIO. All right.

Thank you, Mr. Chairman.

Mr. LOBIONDO. Mr. Williams.

Mr. WILLIAMS. Thank you, Mr. Chairman. I want to thank all of you for being here today. Appreciate it. I'm from Texas. We have got a lot of aviation in Texas, and especially in my district. And, also, I just want to add one thing. I am a small business owner, and I hear what you are saying about balancing and this and that, and remind you in all due respect that small businesses are balancing right now. That's the nature of our economy to get the most; sometimes the least, but I appreciate what you all are doing.

My question would be to Mr. Guzzetti. Of course, safety is, I know, everybody's top priority and we appreciate the record that you have. But I guess I would ask at least in here with all that in mind to find a balance between streamlining your processes, your certification processes, and make sure it doesn't compromise. Are you able to do that, make sure it doesn't compromise with what we call the gold standard of safety that you all have?

Mr. GUZZETTI. I think there's probably ways to do it. I don't know what they are. I think FAA needs to explore those additional processes or a different process for efficiencies. Right now, the general philosophy at these flight standards offices is to process these new applicants that come in, whether it be a small airline or a repair station that wants to start up, on a first-come-first-served basis.

But, when you look at the guidance, it can allow some flexibility for the FAA to bypass that process, marshal their resources, and not let a complex project clog the pipeline of simpler projects behind it. So FAA could explore those flexibilities to add a little more balance.

Mr. WILLIAMS. Compromising safety is not anything we want, so.

Mr. GUZZETTI. No, absolutely not. Safety should always remain FAA's number one priority; but, by the same token, they also are the regulator and the organization to give the green light to small business. Safety should be number one, but they have this other component they need to perhaps make more efficient.

Mr. WILLIAMS. Thank you, Mr. Chairman. I yield back.

Mr. LOBIONDO. OK. Thank you, Mr. Williams.

Mr. Larsen, do you have any thing else?

Mr. LARSEN. One more question.

Mr. LOBIONDO. OK.

Mr. LARSEN. Dr. Dillingham, in April you testified before the Senate that "When faced with the certification of new aircraft or equipment, FAA staff have not been able to keep pace with industry changes, and thus may struggle to understand the aircraft or equipment they are tasked with certificating."

Do you think that is a major problem? If so, what steps can the FAA take or is it taking to address that concern?

Dr. DILLINGHAM. Thank you for the question, Mr. Larsen.

We heard that opinion from some of the stakeholders that we interviewed about FAA's capabilities. I don't think that that's a major problem at this point in time. It could take on more, become more of an issue as their workload expands and different technologies come in. But our experience in looking at FAA, for example, when we did the work looking at the composite components of the Boeing Aircraft, we found that FAA had taken numerous steps to train its workers, establish centers of excellence, work with the industry to understand what's going on.

So our experience, at least in that example, shows that when FAA sees an issue that requires that kind of technological expertise that it reaches out to industry, hires people when it can, but also makes sure that its current workforce is up to speed on things. So now we don't see it as a major problem; and, again, the future is to be determined.

Mr. LARSEN. Yeah.

Ms. Baker and Mr. Duncan?

Ms. BAKER. I agree. No entity is going to have the expertise in every, single, new technology. Especially when industry is consistently pushing the boundaries of technology. Our people gain experience through the certification of the new technology, but they also work with committees, like RTCA and SAE. Our people are in amongst the world-renowned experts and absorb the information from them, and rely upon them in many cases. We can go to contractors, like Volpe, if we need expertise in a particular area. So all of these are at our disposal.

In addition, we have chief scientists within our organization, whose sole role is to go out and to learn more about new technology and bring information back to our engineers. When we do see that we are, maybe deficient in a particular area, or not multistranded in a particular area, then we'll provide the training for those individuals who need it so that they can be up to speed with the technology that's presented to them.

Mr. LARSEN. Thanks. Thanks.

OK. Thank you.

Mr. LOBIONDO. Thank you, Mr. Larsen.

To our first panel, thank you very much. We will take a very, very short break, allow the second panel to get set up and then proceed again.

[Recess.]

Mr. LOBIONDO. Thank you. We will pick up with our second panel. We welcome Mr. Peter Bunce, president and CEO of the General Aviation Manufacturers Association; Mr. Tom Hendricks, president and CEO of the National Air Transport Association; Mr. Michael Perrone, president of Professional Aviation Safety Special-

ists; and Mr. Ali Bahrami, vice president of civil aviation, Aerospace Industries Association of America.

Peter, you are recognized.

TESTIMONY OF PETER J. BUNCE, PRESIDENT AND CEO, GENERAL AVIATION MANUFACTURERS ASSOCIATION; THOMAS L. HENDRICKS, PRESIDENT AND CEO, NATIONAL AIR TRANSPORTATION ASSOCIATION; MICHAEL PERRONE, PRESIDENT, PROFESSIONAL AVIATION SAFETY SPECIALISTS, AFL–CIO; AND ALI BAHRAMI, VICE PRESIDENT-CIVIL AVIATION, AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA

Mr. BUNCE. Thank you, Mr. Chairman.

Chairman LoBiondo and Ranking Member Larsen, it is a pleasure to be here today and be able to discuss certification. Certification is a very complex topic, and it was very evident by the first panel and the discussion that went back and forth that everyone is very familiar with some of the impediments to this process and also the opportunities that we have as we move forward with being able to streamline certification.

General aviation manufacturing in this country is extremely important. We are talking 1.2 million jobs, and $150 billion in economic contributions to this Nation's economy. But, what's really important is in recent years 50 percent of the product that is produced in this country is going overseas. That is a great export engine for this Nation, and that's why being able to get product to market is so important.

We are one of the most heavily regulated industries that there are, and getting product through the system and through the FAA certification process has a tremendous impact on jobs. This committee has been extremely supportive of this journey that we are on with our Government regulators in both section 312 and 313. The last Congress and the FAA Reauthorization Act really put a focus on this. And then, during this Congress, and particularly this subcommittee and the full committee, the support for the Small Aircraft Revitalization Act is absolutely instrumental.

That is just the start. We want to be able to extend that to Part 27 and Part 29 for rotorcraft, and eventually to Part 25 for transport category aircraft, because this is a new way of doing business, and it is very important to keep aerospace leadership here where it belongs. But reform is extremely important, and let me put the challenge that we have in front of us in terms of different companies that we have out there.

If we take a small company that is trying to develop a new technology—and Mr. Massie was here earlier, and one company he's very familiar with actually looked at being able to put safety-enhancing, a great safety-enhancing technology in their new iteration of a product going out the door—and looked at the length of time it was going to take to be able to get that certified, and just said "we cannot afford to be able to wait that length of time to introduce this new product. We will miss a market opportunity in our timing when other companies are introducing similar technologies," and they had to forgo some great safety enhancement, just because of the amount of time it took.

You take another company, such as one that's located in Mr. Nolan's district. It is their first foray into a jet. They have only produced piston aircraft heretofore. They need resources to be able to be devoted to them to get this new technology and be able to get the help from the FAA to get that product to market because they haven't done that before.

Now, compare that to some mature companies that are in both of your States or in Mr. Bucshon's State looking at engine technology, these companies are very mature. They set up these ODAs to be able to go and have a safety system in place that recognizes that when they are doing something that they have done time and time again, they have competencies built up. So, Mr. Larsen, when you ask that question about what you delegate and what you don't, the system recognizes that they have competencies. But when they are doing something new and novel, then resources can be devoted there.

So leveraging resources becomes so very, very important, and the burn rates for some of these companies are very huge. When you look at a larger company, a burn rate in a development program is up to $10 million a month; and, when it is extended out for a year, you are talking real dollars. When you are talking a smaller company and you look at investment dollars and the requirement of investment capital to get a return on investment, but you have to go back and tell them, "Well, the certification process is uncertain. It could take 3 years or it could take 5 years," that investment just doesn't happen, because of that uncertainty.

The return on investment is too far out there, because of the certification process. So, if we allow delegation to work through an ODA, we free up resources to be able to go to those newer companies. And unfortunately, I can give you a list as long as my arm of companies that just couldn't make it because they ran out of money in the certification process. So leveraging these resources becomes absolutely critical.

Implementation is the key. As Dr. Dillingham brought out, we've started a journey, but it is just not enough for the FAA leadership, which I believe really is behind this effort and is in concert with us to try to make this process more efficient. But you can't just put out edicts from headquarters without putting in the implementation criteria, actually having metrics that we can measure and be able to come back to this committee, and you all asking important questions, "Are we making progress?" It's got to be measurable.

We need to be changing job descriptions; we need to be changing that culture, and you heard that in the first panel. Cultural change is the real driver to be able to make this work. And, finally, what I want to emphasize is this gold standard. The erosion of the gold standard is something we are very concerned about. FAA should be the standard for certification across this entire planet, so we have got to make sure that we keep talking to international authorities about the robustness of our programs and how we produce the safest products on the planet.

Thank you.

Mr. LOBIONDO. Thank you.

Mr. Hendricks?

Mr. HENDRICKS. Thank you and good morning, Chairman LoBiondo, Ranking Member Larsen and other members of the subcommittee.

We appreciate the opportunity to speak to the subcommittee today, and thank you for your foresight in conducting this hearing. It is good to testify before the subcommittee, again, in my new role as the president of the National Air Transportation Association. Our members represent—are characterized by small businesses at the Nation's airports. We have over 2,000 members.

As stated earlier, we operate in a very highly regulated environment. Our members include fixed-base operators, charter companies, maintenance repair stations, flight schools and airline service companies. The 2012 FAA Modernization Reform Act played a large role in how our companies are regulated, and I am pleased to provide comment today.

Specifically, regarding section 313, the consistency of regulatory interpretation, as you are aware, NATA cochaired the Aviation Rulemaking Committee. We were honored to do that. The FAA has a challenging environment. They have eight regions, 10 aircraft certification offices, and 80 flight standards district offices. And so we need to strike a proper balance between the different operating environments that these companies find themselves in.

I'll give you an example of one of our members. A member, a charter company, actually moved an aircraft to a different region of the FAA. To get that aircraft placed on their operating certificate in that region required 5 weeks. During this time, this small company spent $25,000 trying to comply with the new requirements in this new district, and they had to forgo over $200,000 in revenue. Again, these are small businesses. Thirty percent of our members have 20 employees or less. These are make-or-break decisions, so we support reform in this regard.

The Aviation Safety Information System that the FAA is developing is a step in the right direction, and we support this system that provides the ability to coordinate, not only within the Flight Standards Service and the Aircraft Certification Service, but between those two organizations. We view it as a positive development.

Specifically, regarding section 312 of the Act, we strongly support the modernization of the certification processes, and I agree with Mr. Bunce's comments on this issue. We are concerned about the rapid pace of technology evolution in the aircraft environment, in the FAA's ability to keep up with that pace. Right now, there are safety enhancing and economic enhancing technologies that are just slow to the market, because of the FAA's struggles with certifying this new equipment.

And we are concerned that as technology rapidly evolves over the coming years that there will be a larger bow wave of requirements, and we are going to fall further and further behind. The FAA has acknowledged this. We are working with them, trying to be very solution-oriented, and we agree that expanding the ODA, the Organizational Delegation Authorization, is a correct path and will yield results. And we couldn't do that without the great work force we have already with the inspectors. So it is a community-industry-

Government effort to try to expand this program and leverage the talent that we already have.

So, in conclusion, I would like to say that we all have helped create the safest, most complex aviation system on the planet. We can't lose sight of that. It has taken strong collaboration with our regulator, with industry, and the oversight of the Congress. We are very thankful for that, and what we would like to see in the future is an FAA that provides more agility to respond to these ever-evolving, safety-enhancing technologies that can improve our businesses and grow jobs. With that, I'll be happy to take any questions you might have.

Thank you.

Mr. LOBIONDO. Thank you.

Mr. Perrone?

Mr. PERRONE. Chairman LoBiondo, Ranking Member Lawson and members of the committee, thank you for inviting PASS to testify today.

PASS represents approximately 11,000 FAA employees, including over 3,000 aviation safety inspectors in the flight standards and manufacturing bargaining units. We appreciate the opportunity to present our views on the FAA certification process and ways to improve it for the safety and efficiency of the aviation system.

The FAA certification process is intended to ensure aircraft and equipment meet FAA's airworthiness requirements. Section 312 and 313 of the FAA Reform Act included requirements for the FAA to streamline the certification process and address inconsistencies. In response, the FAA created two Aviation Rulemaking Committees to analyze the certification process and make recommendations.

Regarding the ARC recommendations, we agree that the certification process is in need of some streamlining; however, we don't believe that creating additional steps or layers of paperwork is the most efficient way to achieve this goal. In fact, paperwork requirements included in the FAA's CPI guide and other guidance contribute to inefficiencies rather than address it.

PASS recommends conducting a review of agency regulations, policies and procedures in the certification process to eliminate those that are inefficient, redundant and conflicting. PASS also supports the development of a database to monitor and track certification process improvements. The ARC also recommends that the FAA enhance its use of the designee program. PASS has serious concerns with this recommendation. The FAA cannot keep delegating out work without an adequate number of inspectors to oversee the designees. In our view, this is an aviation safety issue.

Oversight is especially difficult to ensure in the ODA program where an entire corporation performs work on behalf of the FAA. Since inspectors are only able to examine a small portion of a large company, it is literally impossible to ensure sufficient oversight. When the ODA program was first introduced, it was intended to allow companies with the highest expertise and capabilities to serve as an extension of the FAA. Now there are 76 ODAs, and the FAA intends to expand this program.

The level of work and the oversight needed to ensure proper surveillance of designees and ODAs must be addressed. This com-

mittee asked what can be done in the near term to improve the certification process. The number one way to improve the process is through additional inspector staffing. There are currently 139 manufacturing inspectors. Unbelievably, that number has not changed for over a decade, despite the steadily increasing level and diversity of work and responsibility including oversight of the designee program.

Certification activity is on the rise due to industry changes and advances in technology. At the same time, budget cuts resulting from sequestration are preventing the hiring of additional inspectors due to the hiring freeze; and, while staffing is dropping in many locations due to retirements and other factors, the work is steadily increasing for the remaining inspectors. Without a doubt, in order to ensure a safe and efficient certification process, there must be an adequate number of FAA inspectors in place to oversee these important functions.

In closing, PASS wishes to express our serious concerns regarding the impact of the Government shutdown. For 16 days in October, oversight of important certification work was put on hold. During the shutdown, among other things, no new safety design approvals were addressed, quality system audits and supplier control audits were delayed. Investigations were altered and safety data was not evaluated. When a limited number of inspectors were called back during the shutdown, they were directed to focus only on continued operational safety and stop all certification work.

Aircraft manufacturers and the aviation industry as a whole depend on FAA employees being on the job to review and certify new equipment on a timely basis. These critical employees must be given the tools and resources to continue performing their important work.

Thank you for your attention to this important matter. I would be happy to answer any questions you have.

Mr. LOBIONDO. Thank you.

Mr. Bahrami?

Mr. BAHRAMI. Chairman LoBiondo, Ranking Member Larsen, distinguished members of the subcommittee, thank you for allowing AIA to submit testimony at this important hearing.

I am Ali Bahrami, vice president for civil aviation at the Aerospace Industries Association. AIA represents the interests of over 380 U.S. aerospace and defense manufacturers. Our members have a keen interest in efficiency of the FAA certification activities, because those activities govern our ability to bring new and innovative products to the market.

Before joining AIA earlier this year, I worked 24 years in the FAA's aircraft certification service. In 2012 I also served as the co-chair of the agency's Aviation Rulemaking Committee, formed in response to section 312 of the FAA Modernization and Reform Act. I think it is appropriate to first recognize the dedication and technical expertise of the FAA certification work force.

Our aviation system is the safest in the world. This is partly due to effective partnership between aircraft manufacturers and FAA certification staff. While industry has continued to grow, certification offices have been facing budget cuts, hiring freezes, and furloughs due to sequester and the Government shutdown. Expecting

the FAA to keep pace with industry while conducting business as usual is not realistic.

If the streamlining is not implemented properly, FAA will not be able to keep up and will begin to fall behind our global competitors. FAA's response to the 312 ARC recommendation has been very encouraging. The FAA has developed detailed implementation plans for all six recommendations, and work has already begun on several of them. We are also pleased that the FAA's plan includes establishment of a joint FAA-industry group to review the implementation progress.

The AIA welcomes the recommendations made by the so-called 313 ARC, the committee charged with addressing the inconsistencies in regulatory interpretation. We are waiting for the release of the implementation plan for these recommendations. Since many certification standards are performance-based and not prescriptive, it would be unrealistic to assume that these recommendations will eliminate all inconsistencies.

AIA believes development of an effective process to quickly resolve disagreements between applicants and the FAA staff is essential. Given the magnitude of the process changes, it is important that the FAA institute a robust change management process that ensures acceptance of the change by the workforce and successful transition. The members of the 312 ARC believe this issue was important enough to be included as one of the recommendations.

While we are moving forward with these activities, let's not forget that today we have an effective tool that can reduce certification delays. It's called delegation. We have over half a century of successful history with delegation. This successful history supports expansion of delegation based on data. The AIA members can tell you obtaining an organizational designation authorization is not easy. It requires a lot of resources, care and oversight on part of an applicant. We urge the FAA to allow greater use of delegation, not only to take full advantage of industry expertise, but to increase the collaboration that improves aviation safety.

Mr. Chairman, we applaud the committee for holding this hearing. It demonstrates to the agency that certification is a priority for this subcommittee; but, equally important is ensuring that the FAA has the resources it needs to maintain momentum. Like any other initiative, process re-engineering will take resources to implement. In some cases, this will divert staff from paying attention to the certification work and other safety matters, at least in the short term.

The FAA's 312 implementation plan does not estimate the resources needed to follow through on the recommendations. We believe these resources should be clearly identified, reviewed by the subcommittee, and protected as much as possible in the appropriations process.

Mr. Chairman, that concludes my statement, and I look forward to answering any questions you may have.

Mr. LOBIONDO. Thank you very much.

For the whole panel, the question I asked of the first panel, we have heard a lot about the use of designees. Are the use of designees in those programs safe in your eyes, in your estimation?

Mr. HENDRICKS. Yes, Mr. Chairman. It's a very safe, highly regulated environment as Mr. Bahrami alluded to, to be admitted in the program. With the volume of projects and the evolution of technology, we feel like this is a very safe, sound process at the FAA, and we'd like to see it expanded.

Mr. BUNCE. Mr. Chairman, designees are nothing new. Since the FAA was created in 1958, we've been using designees all along. I mean every pilot out there that flies in the system uses a designee just to be able to get their pilot's license. Using them in the certification process actually makes the system safer, because we are able to go ahead and leverage that FAA expertise and the great men and women that we have their work on, the engineering workforce, to go into the new and novel technology. So as long as we leverage this correctly, we are actually making the system safer.

Mr. BAHRAMI. Mr. Chairman, as I mentioned during my remarks, we have a lot of data over the past 50 years that indicates that the system is working and it is safe.

Mr. PERRONE. Mr. Chairman, as I said, because we only have a limited number of staff, the expansion is probably a concern; but, overall, it's safe. But how much oversight, how much checks and balances can we have if we don't have enough inspectors to oversee the designees? So, right now, are we pushing the envelope, or are we at a safe place? It's hard to tell what. In our view, more inspectors will help make it a safer and continue to make it a safer system.

Mr. LOBIONDO. Also, for the whole panel, how has the FAA consulted with industry on gauging implementation plans and progress? And what role do you think should labor have and are they being utilized?

Mr. PERRONE. From PASS's perspective, we should be involved in any decisions that the agency and industry work with to have more eyes and ears, to be involved in would help and I think be as successful, because we have a particular need to make it the safest system in the world. So labor should be at the table with this.

Mr. LOBIONDO. Are they consulting with you?

Mr. PERRONE. From the PASS perspective, limited to none.

Mr. BUNCE. Mr. Chairman, I would say that we have a very close relationship with the engineers out in the aircraft certification offices throughout the country. And so there's constant feedback between industry and the regulator, itself, at that local level; one, to get consistency across the board, but also to be able to implement the guidance that's coming down from headquarters.

Sometimes that information flows differently to industry than it does to Government. And that's why as we implement ODA, and we also just streamline the whole certification process, being able to have metrics in place that everyone understands, that we can measure and have everybody on a common sheet of music is extremely important. And then the education and training for the FAA workforce, we want nothing more than to be able to have very educated engineers, especially when we are working with new and novel technology.

So that's why industry is very eager, and when we're doing something new to have them partner with us so they can learn along with us when we have this new technology. But when we are doing

something that we have done routine time and time again, we don't need the FAA engineers down there with the sharp pencil down in the details. Let's focus them on areas where we really need them, and I think that's where the communication has to be.

Mr. LOBIONDO. I understand. But are they consulting with you or are they dialoguing with you? Or is there a back and forth here on some of these critical things?

Mr. BUNCE. Absolutely; there is a back and forth. Just when you go and you develop a plan to be able to certify a program, whether you are using an ODA or whether you are in the normal sequencing process, there is a back and forth that goes on. Industry will submit the plan. It's brought back to us with either acceptance or recommendations. So there is a process back and forth.

Now, one thing that we are asking for is if a company actually does have an ODA that they have invested a lot of money to be able to set this up on the promise that the FAA will allow them to go ahead and administer and have these programs delegated unless it's new and novel. Right now, the process works that a lot of times the FAA can go ahead and say, "I'm going to retain this, this, this. You can do this, this and this."

What we'd like to do is see a process because the way the ODA was originally envisioned that says, "OK. FAA, if you are going to retain it, give us rationale on why you want to retain it. Is it to train your workforce? Is it because it is new and novel technology?" And then if there is a discussion about that, we can go ahead and elevate it to a higher level, but that would be a much more efficient way of administering the ODA and leveraging those precious resources.

Mr. HENDRICKS. Mr. Chairman, I would just like to offer you may be shocked to know that in the aviation world our members are not shy about sharing their opinions, about what they are seeing out there in the field. And they see challenges at the local level. We can't allow everything in the FAA to be run at headquarters. It wouldn't be a good way to operate. But our members share those with us. All of us have expertise on our staffs, and the FAA has been very collaborative as we bring them evidence of the cases I cited in my testimony about a challenge you are seeing in the field. So I would say the FAA is working very well with us. We are looking for solutions, collectively, and trying to be constructive in those suggestions we offer.

Mr. BAHRAMI. Mr. Chairman, a key word is collaboration, and I believe so far on these two initiatives FAA has been doing a great job of communicating and working with industry. With respect to questions on working with labor, as I mentioned, acceptance of these changes by the workforce is really important. If you don't have that, we are going to continue to struggle. So, whatever the form is for that collaboration, through whatever means, I think that's appropriate and necessary.

Mr. LOBIONDO. I have some additional questions but I am going to hold back and let some of the other Members go.

Mr. Larsen?

Mr. LARSEN. Thank you, Mr. Chairman. Mr. Perrone, considering the future and the next decade or so, trying to get NextGen technologies out, new models and new airplanes being designed and

built in the country, application of new technologies to existing general aviation platforms, have your folks done any sort of independent or in-house analysis of the number of inspectors that you need to (1) perhaps catch up to where we should be today, and (2) looking out in the future, the numbers that we would need to maintain an efficient certification and approval program?

Mr. PERRONE. We had the Academy of Sciences do a study a few years back, the flight standards folks, and they came up with a recommendation for a model that the FAA has used. They plugged in a number, somewhere between 300 and 900 short of inspectors.

On the manufacturing side, however, there has not been any study. That is why I am saying the 139 manufacturing inspectors, it has been that way for a decade.

From PASS's perspective, we just continue to see and hear the workload is increasing and increasing to oversee the designees and expand—the ODAs.

We believe we are short staffed. The more the industry needs to move along with NextGen, and we see that as an important aspect—NextGen is going to be here. There are going to be a lot of new products. The FAA needs to have more of that oversight to make sure everything is done safely and efficiently.

Mr. LARSEN. Does your thinking include the need for FAA to have some folks come in, outside experts come in just for a brief period of time and leave again? You are not including that group of folks, are you?

Mr. PERRONE. No.

Mr. LARSEN. You still expect that to happen: outside folks to come in for a technology-specific thing and then go, but once we are in implementation and application, incorporating it in the platforms, that is where we are going to need additional folks?

Mr. PERRONE. Correct.

Mr. LARSEN. Mr. Bunce, you talked about the gold standard. Is the FAA in danger of losing its gold standard status for certification?

Mr. BUNCE. Yes, sir. Actually, we see an erosion of it that is happening all across the board. If you look internationally right now, EASA, the rough FAA equivalent over in Europe, it is very aggressive with teams out, being able to explain their certification processes.

When they go and do that to other countries that are out there starting to stand up more robust aviation regulating authorities, we want to make sure that they have confidence that if something has an FAA Stamp of Certification on it, they say OK, we do not need to spend the time to have to come over to the U.S. or have manufacturers come over to their country to once again prove that this aircraft was built safely.

We want them to be able to accept the FAA as the gold standard. Any of the authorities that we have a bilateral relationship with, that is really not a problem if we are dealing with Transport Canada, ANAC in Brazil, or EASA.

When we have so many countries out there that are now increasingly getting into aviation, it becomes all the more important that we do not waste time having to re-prove that we built this aircraft safely, and they accept that FAA gold standard.

What does that require? That requires the FAA certification offices along with the international offices to be aggressive, to be out there and discuss with these countries and the other regulators, as they stand up their structure, to say "hey, you need to accept what we did because this is the best in the world."

Mr. LARSEN. Mr. Hendricks outlined the problem that even here in the United States, you cannot get one region to accept the standard another region has set.

Mr. HENDRICKS. I think it goes to the point, Congressman Larsen, about striking the proper balance. We do have different operating environments. It is different flying in the southeast U.S. compared to the Rocky Mountain region, and the oversight of those operators in those regions need to reflect that reality.

We do not believe one size does fit all for the regulatory regime, for operating aircraft safely in the U.S., that we need to have thoughtful discussions, and that is the reason we mentioned the balance between headquarters' view of regulation and what the inspectors out there in the field who know their operating environment very well, how they view their operation.

We just would like to see an increase in that dialogue so we are striking the proper balance.

Mr. LARSEN. Mr. Bahrami, I want to ask you to explain yourself, being from the northwest region. I have a different question for you. If you want to address that, that'd be great, given your experience in one of the regions.

This issue of other certification processes. The FAA's August 2012 Aircraft Certification Review states that Europe and Canada have more mature systems approaches for regulatory oversight of design organizations and certification processes.

Has AIA looked at how Europe's oversight of the certification process differs from those of the U.S., and can you grade it? Can you say it is more mature? Can you say it is better or worse?

Mr. BAHRAMI. I would not be in a position to grade it better or worse, but I would tell you that from experience I have had in certification, 24 years, and 10 years of it in large transport, some of the ideas that we are thinking to start, things like certificated design, organization or approved organization, have been used in other countries.

When it comes to the safety level, if you define measure of success as safety, we are competing with those and we are doing quite well.

But if you talk about the transition, the pace of change and things of that nature, I think we are a bit slower, and therefore as Mr. Bunce mentioned, there is a risk of not being able to lead globally if we cannot find ways to do things more effectively.

Mr. LARSEN. Thanks. Thank you, Mr. Chairman.

Mr. LOBIONDO. Mr. Bucshon?

Dr. BUCSHON. Thank you, Mr. Chairman. A general comment and a couple of questions. I have heard a lot today at this hearing, which I do at a lot of other hearings in different committees about funding and how funding has an effect on Federal agencies.

As it specifically relates to the FAA, in regards to where Congress is on funding, when you have the FAA is $4 billion over budget on NextGen, for example, and other issues like that, I think

it is important—we have heard some of that today—not to convince but to show Members of Congress on both sides of the aisle where the taxpayers' money is being used efficiently or not. I think that is one of the rate-limiting steps on funding.

The other comment I have on funding is we have a crisis in debt, but we are only addressing about 40 percent of the overall Federal spending budget. Congress will need to address the 60 percent of our mandatory spending programs or else we are going to continue to see a pinch on the discretionary side.

With that said, Mr. Bunce, can you detail some of the effect on industry and your members from the current system in terms of delay and costs to your members? Do you have just a general comment on that and how that is affecting your members?

Mr. BUNCE. Absolutely, sir. In your State, two very mature engine manufacturers that operate in Indiana—if you look at some of the new technology that we have going forward, in fact, they were very instrumental in success with ICAO in Montreal in developing new CO2 standards, which all jet engines will be measured against as long as we will all be around.

That new technology is complex. There are new materials being used, new metallurgy, new ceramics in those engines.

If you try to get through that process and you are doing something new and novel, if we can go and dedicate those resources, we keep the burn rate down of being able to introduce that new product. Because if you look at the air frame manufacturers, they need to keep constantly putting a new air frame out. They have to have new engines.

If one of those companies misses that development cycle because their program is drawn out because they cannot get the resources devoted to this new technology, they will miss being on that platform. That translates directly into money and directly into jobs and really into safety. These new engines will be safer, and the environment, because they will be more efficient.

It is all intertwined in the efficiency of the system to get that product out the door.

Dr. BUCSHON. Do you think the inspection process and the approval process is causing some difficulty with keeping American competitiveness in place worldwide?

You talked about the expansion of other countries, getting involved in the aviation industry and the regulatory climate in their area of the world, maybe the EU or other places.

Do you think we are at the point where it might be inhibiting America's competitiveness worldwide in your industry?

Mr. BUNCE. Yes, sir. I do think it impacts us. When you have some of our manufacturers in the U.S. looking to actually do their certification program in another country, because they can actually have it being done faster or more efficiently, that concerns me, because those jobs will go there.

At the same time, when you are looking at this program and the competitiveness itself, we are a global industry, and because 50 percent of the market is here in the U.S., we want people to be able to relocate.

I am very proud of the fact that a lot of international manufacturers are building facilities here in the U.S. right now, whether

you are talking North Carolina, Florida, or others, because they look at this market and say "we want to be close to the market," and we want to encourage that by making it very efficient for them to be able to get through the process.

Dr. BUCSHON. Mr. Bahrami, do you have any comments about that with your members, on both the costs and the delays, perceived delays, and also the competitiveness aspect of it?

Mr. BAHRAMI. Sir, any time you have a delay in a program, it is going to be costly, whether the source of that delay is the FAA or some technical challenges in the program.

From our perspective, what we are trying to do is trying to have these collaborative relationships, real dialogue, communication, between the manufacturers and the regulators, to be able to plan things.

Absolutely, if you have delays, it will cost quite a bit of money because you cannot stop everything and let people go and bring them back. Those are things that you just cannot do when you run a program that runs anywhere from 3 to 8 years.

Dr. BUCSHON. Thank you. I yield back, Mr. Chairman.

Mr. LOBIONDO. Mr. Davis?

Mr. DAVIS. Thank you, Chairman LoBiondo. Thank you all for being here today. I should not use all my time. I just have a quick question and a comment for Director Baker. Thanks for your role, too.

For President Bunce, I am sorry. Thank you for being here today and reminding us in your testimony how vital general aviation is to our economy.

I was actually making notes while this hearing was going on. 1.2 million jobs generated by the general aviation industry. It is important that we do not forget that.

There seems to be a commitment from the stakeholders, and as your testimony indicates, these changes can have their challenges. I want to note in your testimony, too, and highlight the fact that you have several cases of smaller aviation businesses faced with a loss of financing and possibly going out of business because of the inability of the FAA to act.

I know we have gone over the FAA process, the certification process. I want you to speak to the importance of congressional oversight in this process as part of this team to achieve our safety goals.

Mr. BUNCE. Thank you, Congressman Davis. I want to put it into something mentioned on the first panel, the Small Airplane Revitalization Act. This really was to make certification something that works in the 21st century.

We developed a bunch of rules back in the 1990s. We promulgated about 800 rules in a very short period of time and basically certified very simple aircraft to the highest common denominator of very complex jets.

What did that do? That stifled innovation. That hurt a lot of companies out there, but it also made regulations become stale.

So what you all have done is help the FAA push the process forward, because left to their own devices, I think the FAA supported everything we were doing, but when it got into the FAA legal chan-

nels and their decisionmaking, they all said no, this is too hard to do.

What you have done with this legislation is to say no, you have to do this, and this is the right way. You get international regulators together to have a common set of standards, you have them meet periodically to keep the rules fresh and keep pace with modern technology, and what do you do? You stimulate innovation to that process, and you are saying, by the way, get it done by the end of 2015.

I cannot thank this committee enough for the support you have given us there. We can do more, and the oversight that this committee and your colleagues in the other body also have, to be able to hold the FAA's feet to the fire and say let's make progress. This is important to us. It is important to safety and important to jobs.

I just cannot overemphasize the importance of it.

Mr. DAVIS. Thank you, President Bunce, and thank you, all. I yield back.

Mr. LOBIONDO. The gentleman from Tennessee, Mr. Duncan.

Mr. DUNCAN OF TENNESSEE. Thank you very much, Mr. Chairman. I can tell you that I appreciate your holding this hearing and calling attention to this problem. Apparently, there is really a serious problem at the FAA in the certification process.

I read in the inspector general's report that there are now, across the country, 1,029 new certification applications pending, and it says of these awaiting certification, 138 applicants have been delayed for more than 3 years, with one applicant waiting since August of 2006.

I am sorry, I was at another committee hearing and did not get to hear all of your testimony. I read in Mr. Bunce's testimony for instance, that according to one aircraft manufacturer, a delay in a large certification project cost over $10 million a month, and it says this is just one project. You can imagine the compounding effect when carried across the whole industry over a number of months.

Additionally, we have had several cases of smaller aviation businesses faced with the loss of financing and possibly going out of business because of the inability of the FAA to act.

And then I read in Mr. Hendricks' testimony about one commercial air charter operator who had to spend $25,000 to secure FAA approval to move an aircraft on his air carrier certificate from one FAA region to another.

It seems to me there is a real problem there. In fact, I wish, Mr. Bunce and Mr. Hendricks, you would get together and give us some specific suggestions as to how we can speed this entire certification process up.

I know there is some variations, depending on what types of things are being requested to be certified, but there are surely ways to do this. I can tell you, it is not a money problem. The FAA is getting plenty of money. They should be handling these certifications much, much faster.

In fact, I think if they started giving out some bonuses to move some things faster, they probably would see a lot of this backlog wiped out pretty quickly.

It is just not a good report. When I read Mr. Hendricks said 89 percent of NATA members responded that their businesses have suffered due to inconsistent interpretation of regulations.

I know the two of you are in a difficult position because you have to work with FAA so you cannot be too critical, and because there might be repercussions, but do either of you have anything you would like to add to what is in your testimony?

Mr. HENDRICKS. Thank you, Congressman Duncan. I would like to offer a couple of views, if you do not mind.

Mr. DUNCAN OF TENNESSEE. Sure.

Mr. HENDRICKS. You know very well with your experience, we are a highly regulated industry, unlike any other industry in the United States.

Mr. DUNCAN OF TENNESSEE. Yes, sir; I know.

Mr. HENDRICKS. When entrepreneurs make the decision to start a small business out there, one of the pieces of the framework that they use to develop their business model is how we are regulated.

During the recent Government shutdown, we saw what happens when the regulator nearly disappears. We had commerce come to a grinding halt in many cases. Pilot qualifications expired, instructors that could help with those pilot qualifications, their qualifications expired. We had aircraft that were unable to be transferred between businesses because the FAA aircraft registry office was closed in the shutdown.

I do not want to focus on the shutdown, but it shows you how dependent we are on our regulator, and why the oversight of the Congress and this subcommittee is so critically important to our members.

One of the things we subscribe to very strongly, and Dr. Dillingham referred to this in his remarks as did Director Dorenda Baker, is that we must take a systems safety approach through safety management systems, very highly structured, risk-based approach, complete buy-in by the regulator, by labor, by management, and moving forward on how we evolve the system more efficiently than we have done.

We have seen success with this in the industry and we would like to see this process and this culture change accelerated within the FAA as well.

Mr. DUNCAN OF TENNESSEE. I did not want to get into this but I will say on our side, we voted four times to open the entire Government back up with just a simple delay of Obamacare for a year, but we do not need to get into all that.

Mr. Bunce?

Mr. BUNCE. Congressman, I would just add that the workforce that Mr. Perrone represents, they are great people, they are sharp people, they want to learn, they want to be with us on this journey, but I think they are trapped by the bureaucracy in a lot of ways.

We are in a very risk-averse setting where they are very constrained by the guidance that is coming down to them. It is very important that they get clear guidance of what they are allowed to do and what they cannot do, but also that they can take confidence in what some of the other FAA inspectors already approve.

Let me give you an example. Several years ago we went to this thing called RVSM, reverse vertical separation minimums, so it al-

lows us up at the high-altitude airspace to fly closer together vertically.

When we give an aircraft and sell it to a customer, we have to show it can do this, that the avionics is very tight, the tolerances are very specific, to be able to fly there. But then we had a process where that was the certification side, but then we had to reprove the aircraft could do that on the flight standard side.

That side was not trusting what the other side did. Then within the flight standards—we just had an incident a few months ago where on a telecon, they were discussing RVSM and the capability to certify aircraft to fly there, and all of a sudden, an FAA inspector chimed in over the phone and said "how can I trust what the FAA inspector did in another region, how can I trust that he did that right?" All of a sudden, there was silence in the room, and people got it then, right away, that we have inspectors, because of the guidance, are not able to trust what another FAA inspector has done.

That is just debilitating for industry. What happened is FAA leadership listened to this, there was industry in the room, there was a lot of discussion, and now there is going to be some very clear guidance put out dealing with RVSM and what should be expected.

That is what we are asking more of and that is why this oversight is so important, that we have metrics available and that we make sure the FAA is putting implementation guidance to leverage these resources properly and use delegation.

Mr. DUNCAN OF TENNESSEE. My time has gone way over. Thank you very much, Mr. Chairman.

Mr. LOBIONDO. Mr. Meadows?

Mr. MEADOWS. Thank you, Mr. Chairman. Thank each of you for coming today. I want to focus a little bit on the bureaucracy and what was just touched on. I am troubled at times when I hear about the need for regulators on a daily basis. That is counterproductive to a vibrant economy.

At the same time, we obviously need a safe environment, and the airline and general aviation industry has been extremely safe. It is highly publicized when there is an accident, but when you look at it compared to a number of other transportation modes, we have a great track record.

The—administrator for the FAA, I have been very direct in some of my questioning, but yet at the same time I believe him to be a person who wants to do the very best for the industry.

And so Mr. Hendricks, I would ask you, specifically what would be the top three things that we could do to get rid of some of the bureaucracy, to speed up the process, to make sure we have a competitive aviation business? Because if it is not us, it is going to be somebody.

I come from North Carolina. We love aviation in North Carolina, but what would be the top three things that you would recommend?

Mr. HENDRICKS. Thank you, Congressman Meadows. I actually would give you the top choice rather than the top three, and it would be let's accelerate the movement towards safety management systems at the FAA and drive cultural change.

The industry is already rapidly moving in this direction, the airline industry is very mature in their safety management system processes.

Former Director of Flight Standards, John Allen, spoke very frequently about the role of the regulator changing in the future because of the cultural change that is taking place at the regulated parties, and it needs to take place at the FAA. The FAA knows this. The Administrator will acknowledge this. It is a proven system. It is very thorough. It requires everyone to take ownership of the identified risks in an operation or a certification process, and we believe this is the way of the future for the FAA and will allow them to be much more agile in their oversight responsibilities.

Mr. MEADOWS. All right. I would ask you for the record and not to respond right now, is to give us three areas that we can get rid of. Because what we do is we add layer upon layer upon layer. Most of us in this room have flown, and we still get—and this may be a poor example, but every time we get on a commercial airline, they are still showing us how to put our safety belts on. You want to go at what point is there a market saturation on that training.

I would assume in this particular area, you can identify three areas that we just added layers, so I would ask you to respond to the committee on that, if you would.

Mr. HENDRICKS. I would be happy to do that. Thank you.

[The information follows:]

Three actions the Federal Aviation Administration (FAA) can take to improve safety and help our industry compete in the marketplace by streamlining the FAA processes:

1. SMS—The FAA should leverage the Safety Management Systems being implemented throughout the industry. The FAA could reduce direct involvement and could rely on an approved SMS regime to identify and mitigate risks so that overall safety levels are improved with more efficient FAA oversight activities. Reliance on SMS principles should permit expanded use of delegation authority without requiring additional FAA personnel for oversight.

2. The FAA should develop and publish directions to the inspector workforce through handbook guidance that specifically requires approvals from one geographic region to be approved in every region. This procedure should require that any approval deemed not "transportable" be reviewed at a higher level to determine the root cause. Therefore, this procedure could dramatically improve standardization by automatically elevating differences in policy interpretation so that operators would not be reluctant to complain or fear retribution.

3. The FAA should continue its effort to provide a single platform for all regulations, guidance materials and legal interpretations for both Aircraft Certification and Flight Standards. A critical aspect of this effort is that much of the guidance is outdated and should be modernized so that it will be clearer to both FAA inspectors

> and to the operators and manufacturers. A consolidated library of standardized, modern and clear guidance will support more consistent regulatory interpretation and is key to streamlining FAA processes. This project will only be enabled if Congress protects necessary funding and provides adequate staffing.

Mr. MEADOWS. Mr. Bunce, you mentioned in your testimony about the certification process using engineering experts, that they are the same with the traditional, I guess, certification, and that was problematic.

Can you expand on that a little bit, the difference, why using those same engineers would be a problem?

Mr. BUNCE. If you take an aircraft certification office, Congressman, that has been working traditionally in the old model, and all of a sudden you say convert to this new safety system management/safety oversight, there is resistance to change. That is just human nature. People do not want to change.

What does an engineer want to do? God love them, they want to be down there designing, working on the intricacies. It is very tough to be able to say no, your job now is to manage the whole safety processes network and let this company that has had a very mature record of developing aircraft, or engines, avionics, whatever it is, go and do the day-to-day sharp pencil engineering, and you make sure their processes are safe. That is cultural.

Mr. MEADOWS. So they have more of a broader brush overarching engineering responsibility where specifically you allow the stakeholders and so forth to do the processes that go into that? Is that what you are saying?

Mr. BUNCE. Absolutely. Sometimes that may be appointing different people to go do that expertise. This may be the sharpest engineer in one specific area. You may want to move that engineer and say go work on this project for this company that it is brand new for, and put another person into that safety oversight.

In your great State, Honda, this is their first foray into jets, this is a complex program. We want to make sure they have all the resources they need to be able to get that product to market quickly, because they are spending a lot of money. I am sure you have been to that facility. It is tremendous.

They are going to employ a lot of people. The sooner they start delivering jets, the sooner they start ramping up that employment.

We want them to have the resources, but a mature company that has been doing it for a long time, let their processes be overseen by a safety management system.

Mr. MEADOWS. I appreciate the Chair's indulgence and I yield back, Mr. Chairman. Thank you.

Mr. LOBIONDO. Thank you, Mr. Meadows. I have some additional questions that I am going to submit for the record. Unfortunately, we are up against a little bit of a time constraint, but I want to thank the second panel, encourage you to keep thinking ideas to bring to us. Rick and I want to stay very much engaged with trying to see how we can further get this on a positive track.

The committee stands adjourned.

[Whereupon, at 12:01 p.m., the subcommittee was adjourned.]

STATEMENT OF DORENDA BAKER, DIRECTOR OF THE AIRCRAFT CERTIFICATION SERVICE AND JOHN S. DUNCAN, DIRECTOR OF THE FLIGHT STANDARDS SERVICE, FEDERAL AVIATION ADMINISTRATION, BEFORE THE HOUSE COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE, SUBCOMMITTTEE ON AVIATION ON THE REVIEW OF FAA'S CERTIFICATION PROCESS: ENSURING AN EFFICIENT, EFFECTIVE, AND SAFE PROCESS, OCTOBER 30, 2013.

Chairman LoBiondo, Congressman Larsen, Members of the Subcommittee:

Thank you for the opportunity to appear before you today to discuss the Federal Aviation Administration's (FAA) certification processes. I am Dorenda Baker, the Director of the Aircraft Certification Service (AIR), and with me today is John Duncan, the Director of the Flight Standards Service (AFS). This is our first time formally appearing before this subcommittee and we look forward to informing you of the ongoing work for which our organizations are responsible. We share the view of this subcommittee that, in order to support the safest, largest, most complex aviation system in the world, FAA must continue to strive to make our processes as efficient and effective as possible, while also maintaining high standards of safety.

FAA Aircraft Certification Processes

First, I would like to recognize that we expect the Small Airplane Revitalization Act of 2013 to be passed by Congress quite shortly. This legislation is intended to support the manufacturers of, primarily, general aviation airplanes and components by requiring FAA to reorganize and streamline our regulations to improve the certification process applicable to small airplanes. We believe that transforming part 23 into requirements that are based on airplane complexity and performance will provide for streamlined approval of safety advancements, which will improve safety and reduce the regulatory cost burden for both the FAA and industry. This approach is

expected to advance the safety of general aviation by spurring innovation and adoption of technical advancements. AIR agrees completely that this undertaking is worthwhile. Last month, the FAA formally approved the rulemaking project to revise part 23 (the certification regulations applying to small airplanes), giving it the priority and necessary resources. We believe this project is essential to supporting the vitality of the general aviation community, which is an important foundation for all aviation-related operations and products in our industry. This is a priority of my organization and I am personally committed to seeing that the rework of part 23 is successful.

FAA certifies aircraft, aircraft engines, propellers and articles. We set standards to which an applicant must conform. Some version of our certification processes have been in place for over 50 years, but our regulations and policies have evolved in order to adapt to an ever-changing industry that uses global partnerships to develop new, more efficient and safer aviation products and technologies.

The FAA uses a risk based approach to improving aviation safety by focusing resources and efforts on those areas that have the highest risk. AIR continues to develop procedures and tools under this philosophy. The applicant is required to develop the plans and specifications and perform the inspections and tests necessary to establish that the design of an aircraft or article complies with the regulations. The FAA is responsible for determining that the applicant has shown that the design meets the required standards. Using our risk based approach, we focus our resources on areas of highest risk while leveraging our delegation system to focus on other areas.

FAA encourages applicants that want to apply for a type certificate to work with the FAA well in advance of presenting a formal application in order to both familiarize the applicant with the

applicable certification requirements and familiarize FAA with the proposed design. Once the certification basis is established for the proposed design, the FAA and the applicant develop and agree to a certification plan. In order to receive a type certificate, the applicant must show that the product is compliant with existing standards and any special conditions for novel or unusual design features. This is accomplished through detailed airplane-level analysis, lab tests, and flight tests, all of which are subject to FAA oversight. If the FAA finds that a proposed new type of aircraft, engine or propeller (product) complies with safety standards, it issues a type certificate.

AIR monitors the production and continued operational safety of all the products it certifies for the life of those products. In that respect, we are responsible for an ever expanding range of products. Effectively managing the safe oversight of the largest fleet of aircraft in the world, while continuing to support the innovation of new products and technologies is a challenge, but one that we recognize is vital to the economic growth of our country.

Flight Standards Certification Processes

Once the aircraft is certified and introduced into service, it is the responsibility of AFS to set the standards for the people and organizations who operate and maintain them. AFS sets standards for pilots, mechanics, airlines, repair stations and training schools.

Airmen certification standards are set at differing levels of privilege. For pilots, they range from student pilot, for those with the least experience, to airline transport pilot, for the most accomplished pilots in the system. In addition to pilot certificates, other airmen certificates include anyone who can impact operational safety in the system, from instructors and mechanics, to parachute riggers and flight attendants.

Individuals who hold FAA certificates must demonstrate proficiency for the type of certificate that they are applying for and hold. This is usually done through some type of training with a certified instructor, some number of hours logged doing the activity authorized by the certificate, and passing a practical test that includes both an oral and demonstration of proficiency component.

For operators, such as part 121 air carriers, the FAA uses a comprehensive certification process to determine whether an applicant is able to conduct business in a manner that complies with all applicable regulations and safety standards and allows the entity to manage the hazard-related risks in its operating systems and environment. The FAA's initial certification process assures that the operator's processes, programs, systems, and intended methods of compliance are thoroughly reviewed, evaluated, and tested. The certification process provides the traveling public confidence that the air carrier's infrastructure, including its programs, methods and systems, results in continued compliance and provides it with the ability to manage hazard related risks in the specific operating systems and environment. The certificate holder must provide service at a high degree of safety in the public interest.

As is the case with aircraft certification, AFS must monitor the continued operational safety of its certificate holders. As in other areas of the agency, this monitoring is based on risk identified by information FAA is continually obtaining through its oversight activities. Any action that has the potential for impacting a certificate holder, such as a merger or bankruptcy, triggers additional scrutiny to ensure compliance with FAA standards.

FAA Modernization and Reform Act of 2012

In February of 2012, Congress passed the FAA Modernization and Reform Act of 2012. The law contained two provisions that required the FAA to work with industry representatives to review and reform the aircraft certification process and standardize the FAA's regulatory interpretations (sections 312 and 313 respectively). Both sections required FAA to issue reports to Congress on the recommendations reached as a result of these Congressional directives. On August 13, 2012, FAA delivered the report pursuant to section 312. On July 19, 2013, FAA delivered its initial report on section 313. Both AIR and AFS are working internally and with industry on implementation of the recommendations contained in these reports.

Section 312

In response to section 312, the FAA and industry representatives met to develop consensus recommendations to review and reform the aircraft certification process, with the goal of reducing the time and cost of certification without compromising FAA safety standards. The group developed six recommendations. The recommendations were mapped to 14 FAA initiatives. The process is extremely transparent. FAA meets regularly with industry representatives to update them on the status of the initiatives and posts the status on the FAA website every six months.

The recommendations encourage FAA to more thoroughly utilize its delegation authority in several areas to better utilize FAA resources. Some of the changes required to implement the recommendations are long term in nature or require coordination with other agencies. Consequently, while initial steps have been taken to initiate implementation of the recommendations, such as the establishment of an Aviation Rulemaking Committee (ARC), or a

pilot program, full implementation, in most cases, will take several years. In addition, in order to determine if the agency actions are achieving the goals of the initiatives, metrics must be developed and agreed to. We are currently working with industry on those metrics.

Since the original release of the Implementation Plan on January 7, 2013, the FAA has made progress on all of the initiatives. To give you an idea of some of the foundational steps we have taken toward implementation of the recommendations, last August the FAA entered into a two year pilot program to expand delegation of noise findings to an organizational designation office (ODA). This will give the industry more flexibility in its planning of certification activities. This is an endeavor FAA has been working on for several years and required the assistance of FAA's Office of Environment and Energy and the agreement of the Environmental Protection Agency. We are hopeful the information generated by the pilot program will support the expansion of delegation in this area.

In addition, the FAA established an Aviation Rulemaking Committee (ARC) to update part 21 Certification Procedures for Products and Parts. The kickoff meeting was held last November with a goal of updating the regulations to reflect a systems safety approach to product certification processes and oversight of the design organizations.

Another area of importance to industry that was addressed in the report on section 312 is FAA's system for sequencing its certification projects. FAA put its system into place in 2005 and, while industry understood the need to prioritize work within the agency, it was critical of the inability to predict when a project would be initiated under this system. The FAA requested comments from the public on the original process in October of 2012. The public comments were assessed and a revised process was published for public comment in April 2013. Those comments have

now been reviewed and a revised process has been developed to address industry concerns. FAA expects to begin to transition to the new process in 2014.

Finally, as part of FAA's ODA Action Plan, FAA published an order that included a number of enhancements requested by industry to increase the efficiency of ODA certification processes and improve the utilization of ODA authority. The order provides for better communication between FAA and ODA holders, as well as more flexibility for the ODA. Greater flexibility translates into the ODA having more control over its projects timelines. The effectiveness of the changes made in the order will be evaluated with industry in the first quarter of calendar year 2014.

Section 313

In response to section 313, the FAA reviewed and accepted the Consistency of Regulatory Interpretation Aviation Rulemaking (CRI ARC) recommendations. The recommendations were reviewed by multiple FAA policy divisions, and we developed a preliminary implementation plan that was included in the FAA Report to Congress on the Consistency of Regulatory Interpretation. The FAA has since developed and begun executing a detailed implementation plan to address the root causes identified by the ARC, including the need for clear regulatory requirements, standardized regulatory application training, and a change in the enforcement-based culture.

The Director of the FAA Flight Standards Service and the Director of the FAA Aircraft Certification Service participated actively with the industry stakeholders in developing six recommendations to improve upon issues of consistency in regulatory interpretation by offices within each service organization, as well as between Flight Standards and Aircraft Certification.

We worked to address these concerns strategically through careful and systemic long-term improvements that will have lasting impact, as well as meaningful metrics that can be tracked internally and by industry. We noted that multiple recommendations are being addressed by current initiatives to change cultural norms within, and improve training for, the Flight Standards and Aircraft Certification workforce. The FAA also wanted to ensure that implementation of the recommendations is consistent with the safety management system framework used to assess and mitigate risk without compromising safety.

It became clear that long-term planning and culture change would be essential to affect the improvements sought by industry. In order to address the recommendations as soon as practical, the detailed implementation plan identifies near-, mid-, and long-term priorities related to each recommendation.

The near-term strategy addresses the foundational concepts in the recommendations that allow the FAA to use existing processes. For example, we were able to address and close the recommendation asking the FAA to improve its rulemaking procedures and guidance to ensure each proposed and final rule preamble contain a comprehensive explanation of the purpose, technical requirements, and intent of the rule. The Office of Rulemaking was able to address this recommendation by reviewing existing training requirements for rulemaking team members, as well as making improvements to existing processes.

The primary area of importance identified by industry was a standardized methodology whereby all FAA guidance documents, including legal interpretations and Chief Counsel opinions, are linked to a specific regulation. The FAA is currently reviewing existing IT systems to determine how best to achieve this goal. As one of its near-term strategies for implementation, we are

reviewing existing guidance documents used by FAA personnel that are not catalogued in one of the electronic databases. By the end of the year, we expect to identify all such documents and establish a protocol to determine if such documents are still applicable, in which case they will be integrated into one of our existing electronic systems. In the alternative, we will issue guidance to all personnel that any such documents not otherwise integrated into one of the electronic systems are cancelled. This process will address a significant concern on the part of industry involving ad hoc usage of guidance documents issued to address a specific and narrow set of circumstances.

Since the FAA concurs that a change in culture is the primary component of successful implementation of the recommendations, we have begun the process of reviewing and improving FAA workforce training. We started our evaluation with training for FAA personnel responsible for promulgating guidance material to ensure that all guidance is clearly linked to the underlying regulation and a standardized methodology is used to develop guidance documents. We will then review current FAA workforce training for personnel responsible for regulatory application.

The FAA met with industry representatives to review the implementation plan. We expect to complete the near-term priorities by the end of this year. The FAA agrees with industry stakeholders that a more standardized methodology for regulatory application at the national, regional, and field levels of Flight Standards and Aircraft Certification is necessary. We expect to continue a dialogue with industry stakeholders and evaluate the implementation plan on an ongoing basis as we work toward implementation of the feasible long-term priorities by 2015.

Conclusion

As the reports we have submitted and this testimony indicates, the FAA is underway in addressing the concerns identified as a result of the provisions in the FAA Modernization and Reform Act of 2012. Our efforts are transparent and are being done with the support of industry. The reports have clarified a path forward for the FAA to meet the ongoing and future demand of a dynamic industry that is crucial to the economic interests of all Americans. We are cognizant of the importance of our efforts and we look forward to working with industry and this subcommittee as we strive to achieve the goals that have been set for us.

Mr. Chairman, this concludes my statement. Mr. Duncan and I will be happy to answer any questions you have at this time.

United States Government Accountability Office

Testimony
Before the Aviation Subcommittee, Committee on Transportation and Infrastructure, House of Representatives

For Release on Delivery
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AVIATION SAFETY

STATUS OF RECOMMENDATIONS TO IMPROVE FAA'S CERTIFICATION AND APPROVAL PROCESSES

Statement of Gerald L. Dillingham, Ph.D.
Director, Physical Infrastructure Issues

GAO Highlights

Highlights of GAO-14-142T, a testimony before the Aviation Subcommittee, Committee on Transportation and Infrastructure, House of Representatives

October 30, 2013

AVIATION SAFETY

Status of Recommendations to Improve FAA's Certification and Approval Processes

Why GAO Did This Study

Among the agency's responsibilities for aviation safety, FAA issues certificates for new aircraft and parts and grants approvals for changes to air operations and aircraft. In 2010, GAO made recommendations to improve FAA's certification and approval processes. Subsequently, the Act required FAA to work with industry to assess the certification process and address some of the findings in GAO's report. In July 2013, FAA issued reports on its efforts, including those in response to committee recommendations and FAA's implementation plans. This testimony addresses FAA's responses to the recommendations made by GAO in 2010 and the two joint FAA-industry committees concerning (1) the certification and approval processes and (2) the consistency of regulatory interpretation. It also discusses future challenges facing FAA's certification and approval processes.

This statement is based in part on GAO's 2010 report. More detailed information on the objectives, scope, and methodology for that work can be found in that report. In addition, for this statement, GAO interviewed industry representatives, reviewed the methodologies used to develop the committees' recommendations, and assessed the recommendations and FAA's planned responses to those recommendations in terms of whether they were relevant, clear, actionable, and feasible.

GAO is not making any new recommendations in this testimony.

View GAO-14-142T. For more information, contact Gerald L. Dillingham, Ph.D. at (202) 512-2834 or dillinghamg@gao.gov.

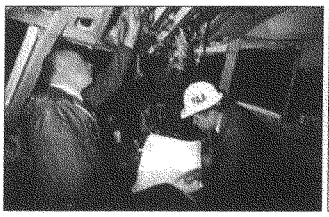
What GAO Found

In 2010, GAO reported that industry stakeholders and experts believed that the Federal Aviation Administration's (FAA) certification and approval processes contribute positively to the safety of the national airspace system. However, stakeholders and experts also noted that negative certification and approval experiences—such as duplication of approvals—although infrequent, can result in delays that industry says are costly. GAO made two recommendations requiring, among other things, that FAA develop a continuous evaluative process and a method to track submission approvals. FAA addressed one recommendation and partially addressed the other. An FAA-industry committee established in response to the FAA Modernization and Reform Act of 2012 (the Act) made six recommendations to improve the certification and approval processes, including establishing a performance measurement process. In response to recommendations from the certification process committee, FAA developed an implementation plan with 14 initiatives, but the initiatives do not contain some elements essential to a performance measurement process, such as performance measures. Without performance measures, FAA will be unable to evaluate current and future programs.

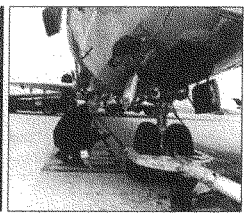
GAO also reported in 2010 that variation in FAA's interpretation of standards for certification and approval decisions is a long-standing problem. A second FAA-industry committee, established in response to the Act, made recommendations concerning the consistency of regulatory interpretation. FAA reported that it is determining the feasibility of implementing the recommendations and expected to develop an action plan by December 2013. Further, FAA reported it would measure implementation, but not outcomes; measuring outcomes helps to understand if the action is having the intended effect.

Among the challenges facing FAA, its certification and approval workload is expected to grow due to the introduction of new technologies and materials and expected progress in the deployment of the Next Generation Air Transportation System. Having efficient and consistent certification and approval processes would allow FAA to better use its resources to meet these increasing workload demands and better ensure aviation safety in an era of limited resources.

FAA Conducts Inspections as Part of Certification



Source: How Stuff Works.



Source: FAA.

Chairman LoBiondo, Ranking Member Larsen, and Members of the Subcommittee,

I am pleased to be here today to discuss the Federal Aviation Administration's (FAA) certification process. FAA is responsible for aviation safety, in part, by issuing certificates for new air operators, new aircraft, and aircraft parts and equipment, as well as by granting approvals for such things as changes to air operations and aircraft. FAA issues certificates and approvals based on its evaluation of aviation industry submissions against standards set forth in federal aviation regulations and related FAA guidance. In 2010, we found that variation in FAA's interpretation of standards for certification and approval decisions was a long-standing issue.[1] While we found that the processes for certification and approval are viewed by the aviation industry as generally working well, the industry believes process inefficiencies have negatively affected it. We made recommendations to address some of these inefficiencies. The FAA Modernization and Reform Act of 2012 (the Act) required FAA to work with industry to assess and recommend improvements to the certification and approval processes (in Section 312) and to establish an advisory group to address the findings in our report related to consistency of regulatory interpretation (in Section 313). In July 2013, FAA issued reports on these issues, including recommendations and implementation plans.[2]

My statement today discusses FAA's responses to the recommendations we made in our 2010 report and the recommendations by the two industry committees that FAA established in response to the Act concerning (1) FAA's certification and approval processes and (2) FAA's consistency of regulatory interpretations. It also discusses challenges to making further improvements to the certification and approval processes. This statement is based in part on our 2010 report.[3] For that report, we convened a panel

[1]GAO, *Aviation Safety: Certification and Approval Processes Are Generally Viewed as Working Well, but Better Evaluative Information Needed to Improve Efficiency*, GAO-11-14 (Washington, D.C.: Oct. 7, 2010).

[2]Federal Aviation Administration, *Report to Congress: Consistency of Regulatory Interpretation, FAA Modernization and Reform Act of 2012 (P.L. 112-95)—Section 313*, July 19, 2013 and Federal Aviation Administration, *Detailed Implementation Plan For The Federal Aviation Administration Modernization and Reform Act of 2012, Public Law No. 112-95, Section 312*, July 31, 2013.

[3]GAO-11-14.

of aviation industry and other experts. The panel included FAA senior managers; officials representing large and small air carriers, aircraft and aerospace product manufacturers, aviation services firms, repair stations, and aviation consultants; and academicians specializing in aviation and organization theory. We also interviewed aviation trade groups and certificate and approval holders of various sizes that represented a broad range of aviation industry sectors—including air carriers, repair stations, and manufacturers. More detailed information on our objectives, scope, and methodology for that work can be found in the report. In addition, in preparing for this hearing, in October 2013 we interviewed selected industry officials representing aircraft and parts manufacturers, airlines, and repair stations and reviewed the two July 2013 reports prepared by FAA and the industry committees it established to respond the Act. The FAA-industry reports contain recommendations to FAA, information on the method used to develop the recommendations, and FAA's response to the recommendations. We reviewed the methodologies used to develop the committees' recommendations using best practices.[4] We also assessed whether the committees considered the feasibility of the recommendations in developing them. In addition, we reviewed the recommendations and FAA's responses to the recommendations contained in the two reports. We assessed the recommendations and FAA's planned responses to those recommendations, including 14 FAA initiatives, in terms of whether they were relevant, clear, and actionable using relevant criteria.[5] We reviewed prior GAO work, including our 2010 report, to identify challenges.

We conducted the work on which this statement is based in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

[4]GAO, *Designing Evaluations: 2012 Revision*, GAO-12-208G (Washington, D.C.: January 2012).

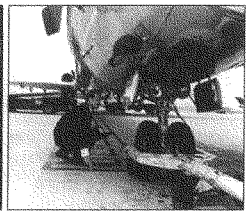
[5]See for example, GAO, *Managing for Results: Analytic Challenges in Measuring Performance*, GAO/HEHS/GGD-97-138 (Washington, D.C.: May 30, 1997).

Background

FAA's Aircraft Certification Service (Aircraft Certification) and Flight Standards Service (Flight Standards) issue certificates and approvals for the operators and aviation products used in the national airspace system based on standards set forth in federal aviation regulations. FAA inspectors and engineers working in Aircraft Certification and Flight Standards interpret and implement the regulations governing certificates and approvals via FAA policies and guidance, such as orders, notices, and advisory circulars. (See fig. 1.)

Figure 1: FAA Conducts Inspections as Part of Certification

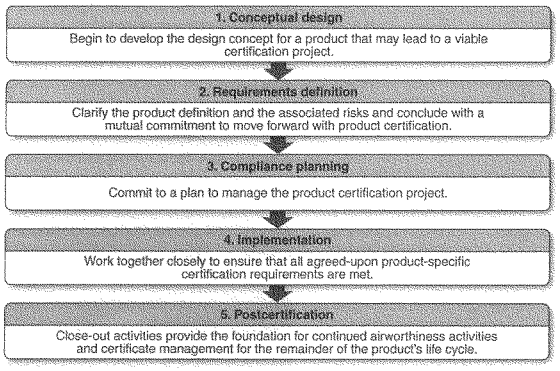
Source: How Stuff Works.



Source: FAA.

Aircraft Certification's approximately 950 engineers and inspectors in 42 field offices issue approvals to the designers and manufacturers of aircraft and aircraft engines, propellers, parts, and equipment. Since 2005, Aircraft Certification has used project sequencing to prioritize certification submissions on the basis of available resources. Projects are evaluated against several criteria, including safety attributes and their impact on the air transportation system. Figure 2 outlines the key phases in Aircraft Certification's approval process.

Figure 2: Key Phases in FAA's Aircraft Certification Service's Process for Approving Aviation Products

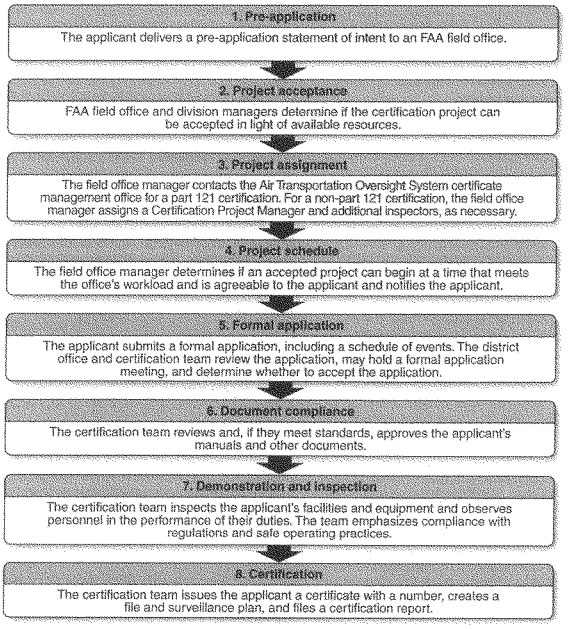


Source: FAA.

Note: During each phase, both the applicant and FAA staff are involved. FAA staff include managers, engineers, inspectors, flight test pilots, a chief scientist, and technical advisors, as well as an aircraft evaluation group from Flight Standards.

In Flight Standards, approximately 4,000 inspectors issue certificates allowing individuals and entities to operate in the National Airspace System (NAS). These include certificates to commercial air carriers, operators of smaller commercial aircraft, repair stations, and pilot schools and training centers. Flight Standards also issues approvals for programs, such as training. Flight Standards field office managers in over 100 field offices use the Certification Services Oversight Process to initiate certification projects within their offices. Delays occur when FAA wait-lists certification submissions because it does not have the resources to begin work on them. Once FAA determines that it has the resources to oversee an additional new certificate holder, accepted projects are processed on a first-in, first-out basis within each office. Figure 3 illustrates the key steps in the Flight Standards certification process.

Figure 3: Key Steps in FAA's Flight Standards Service's Process for Issuing Certificates to Air Operators and Air Agencies



Source: FAA.

Note: These steps are accomplished within a four-phase process for part 121 (scheduled service) certifications and a five-phase process for part 135 (commuter and on-demand service) and repair station certifications. For part 121, the phases include application, design assessment, performance assessment, and administrative functions. For part 135 and repair stations, the phases are preapplication, formal application, document compliance, demonstration and inspection, and certification.

Responsibility for the continued operational safety of the NAS is shared by Aircraft Certification and Flight Standards, which oversee certificate holders, monitor operators' and air agencies' operation and maintenance

of aircraft, and oversee designees and delegated organizations (known as organization designation authorizations or ODA).[6]

FAA's Certification and Approval Processes

In 2010, we reported that many of FAA's certification and approval processes contribute positively to the safety of the NAS, according to industry stakeholders and experts.[7] They also noted that the certification and approval processes work well most of the time because of FAA's long-standing collaboration with industry, flexibility within the processes, and committed, competent FAA staff. Industry stakeholders and experts noted that negative certification and approval experiences, such as duplication of approvals, although infrequent, can result in costly delays for them, which can disproportionately affect smaller operators. We made two recommendations to improve the efficiency of the certification and approval processes. FAA addressed one recommendation and partially addressed the other. We found that while FAA had taken actions to improve the efficiency of its certification and approval processes, it lacked outcome-based performance measures and a continuous evaluative process to determine if these actions were having the intended effects. To address these issues, we recommended that FAA develop a continuous evaluative process and use it to create measurable performance goals for the actions, track performance toward those goals, and determine appropriate process changes. To the extent that this evaluation of agency actions identifies effective practices, we further recommended that FAA consider instituting those practices agency wide, i.e., in Aircraft Certification and Flight Standards. In response to our recommendation, FAA implemented new metrics that provide the ability to track process performance and product conformity to standards. These metrics would allow FAA to set measurable performance goals necessary to determine the effectiveness of the certification and approval processes and assist FAA in deciding on necessary and appropriate actions to address systemic issues that could negatively impact agency processes and their outcomes. These actions addressed the intent of our recommendation. We also recommended that FAA develop and implement a process in

[6]Designees are private persons and organizations to which FAA designates much of its safety certification work, allowing FAA to concentrate its limited staff resources on the most safety-critical functions, such as certifying new and complex aircraft designs. For more information on designees, see GAO, *Aviation Safety: FAA Needs to Strengthen the Management of Its Designee Programs*, GAO-05-40 (Washington, D.C.: Oct. 8, 2004).

[7]GAO-11-14.

Flight Standards to track how long certification and approval submissions are wait-listed, the reasons for wait-listing them, and the factors that eventually allowed initiation of the certification process. As of October 2013, FAA had partially addressed this recommendation by altering the software in its Flight Standards' Certification Service Oversight Process database to designate when certification submissions are wait-listed. The database now tracks how long certification submissions are wait-listed. As a result, FAA now has the capability to track how long certification submissions are wait-listed and reallocate resources, if appropriate, to better meet demand.

In April 2012, as required by Section 312 of the Act, FAA established the Aircraft Certification Process Review and Reform Aviation Rulemaking Committee (certification process committee). Its role is to make recommendations to the director of FAA's Aircraft Certification Service to streamline and reengineer the certification process. The committee considered guidance and current certification issues—including methods for enhancing the use of delegation and the training of FAA staff in safety management systems[8]—and assessed the certification process.[9] It developed six recommendations, which called for FAA to

- develop comprehensive implementation plans for certification process improvement initiatives, including measuring the effectiveness of the implementation and benefits of improvements as well as developing a means to track and monitor initiatives and programs;
- continue to improve the effectiveness of delegation programs;
- develop an integrated, overarching vision of the future state for certification procedures;

[8]A safety management system (SMS) is a proactive approach to safety in which all aspects of safety operations are continually monitored and appropriate data is collected to identify emerging safety problems before they result in death, injury, or significant property damage. FAA is overseeing implementation of SMS within FAA and throughout the U.S. aviation industry. For more information on SMS, see GAO, *Aviation Safety: Additional FAA Efforts Could Enhance Safety Risk Management,* GAO-12-898 (Washington, D.C.: Sept. 12, 2012).

[9]*A Report from the Certification Process Review and Reform Aviation Rulemaking Committee to the Federal Aviation Administration,* May 22, 2012.

- update Part 21 certification procedures to reflect a systems approach for safety;
- develop and implement a comprehensive change management plan to prepare the workforce for its new responsibilities in a systems safety approach to certification and oversight; and
- review continued operational safety and rulemaking processes and implement reforms to improve efficiency.

We found these recommendations to be relevant, clear, and actionable. In response to the committee's recommendations, FAA developed a plan that includes 14 initiatives to implement the committee's recommendations and publicly reported the plan in July 2013.[10]

We believe that the committee took a reasonable approach in assessing FAA's aircraft certification process and developing recommendations by assessing the status of previous recommendations from 19 reports related to the certification process, reviewing certification guidance and processes as well as major initiatives, and reviewing other areas that it believed required consideration when making recommendations for improving efficiencies in the certification process. FAA has many initiatives and programs underway that it believes will respond to the committee's recommendations to improve efficiency and reduce costs related to certifications. For example, FAA and two industry groups had already developed an ODA action plan to address the effectiveness of the ODA process. We found these initiatives were generally relevant to the recommendations and clear and measurable. However, FAA's initiatives and programs to implement the recommendations do not contain some of the elements essential to a performance measurement process.[11] For example, the certification process committee recommended that FAA develop an integrated roadmap and vision for certification process reforms, including an integrated overarching vision of the future state for certification procedures. While FAA has outlined a vision in AIR: 2018,[12] it

[10]FAA, *Detailed Implementation Plan for the Federal Aviation Administration Modernization and Reform Act of 2012*, Pub. L. 112-95, Section 312, July 31, 2013.

[11]GAO, *Managing for Results: Analytic Challenges in Measuring Performance*, GAO/HEHS/GGD-97-138, (Washington, D.C.: May 30, 1997).

[12]FAA, *AIR: 2018*, Aircraft Certification Service.

has not yet developed a roadmap. FAA is planning to roll out its roadmap, which is to include information on major change initiatives and a scaled change management process, concurrently with or following implementation of many of its certification process improvement initiatives. This calls into question FAA's ability to use the roadmap to guide the initiatives.

FAA has developed milestones for each initiative and deployed a tracking system to track and monitor the implementation of all certification-related initiatives. However, FAA has not yet developed performance measures to track the success of most of the initiatives and programs. The agency plans to develop these measures of effectiveness after it has implemented its initiatives. Without early performance measures, FAA will not be able to gather the appropriate data to evaluate the success of current and future initiatives and programs. In addition, in response to the certification process committee's recommendation to review rulemaking processes and implement reforms to improve efficiency, FAA plans to expedite the rulemaking process by implementing a new rulemaking prioritization model. However, this model will have no effect on the duration of the rulemaking process since it only prioritizes potential rulemaking projects for submission to the rulemaking process and makes no changes to the rulemaking process per se.

Consistency of Regulatory Interpretation

In 2010, we reported that variation in FAA's interpretation of standards for certification and approval decisions is a long-standing issue that can result in delays and higher costs for industry.[13] For example, a 1996 study found that, for air carriers and other operators, FAA's regulations are often ambiguous; subject to variation in interpretation by FAA inspectors, supervisors, or policy managers; and in need of simplification and consistent implementation.[14] Experts on our panel and most industry officials we interviewed for our 2010 report indicated that although variation in decisions is a long-standing, widespread problem, it has rarely led to serious certification and approval process problems, and experts on our panel generally noted that serious problems occur less than 10

[13]GAO-11-14.

[14]Booz Allen & Hamilton, *Challenge 2000: Recommendations for Future Aviation Safety Regulation*, prepared for FAA, Office of Policy, Planning and International Aviation (McLean, VA: Apr. 19, 1996).

percent of the time. Nonetheless, when such occasions occur, experts on our panel ranked inconsistent interpretation of regulations, which can lead to variation in decisions, as the most significant problem for Flight Standards and as the second most significant problem for Aircraft Certification. Panelists' concerns about variation in decisions included instances in which approvals are reevaluated and sometimes revised or revoked in FAA jurisdictions other than those in which they were originally granted. Such situations can result in delays and higher costs for industry but also may catch legitimate safety concerns. According to industry stakeholders we spoke with, variation in FAA's interpretation of standards for certification and approval decisions is a result of factors related to performance-based regulations, which allow for multiple avenues of compliance, and the use of professional judgment by FAA staff. FAA's Deputy Associate Administrator for Aviation Safety and union officials representing FAA inspectors and engineers acknowledged that variation in certification and approval decisions occurs and that FAA has taken actions to address the issue, including the establishment of a quality management system to standardize processes across offices.

A second FAA-industry committee—the Consistency of Regulatory Interpretation Aviation Rulemaking Committee (regulatory consistency committee)—established to respond to Section 313 of the Act, identified three root causes of inconsistent interpretation of regulations—(1) unclear regulatory requirements; (2) inadequate and nonstandard FAA and industry training in developing regulations, applying standards, and resolving disputes; and (3) a culture that includes a general reluctance by both industry and FAA to work issues of inconsistent regulatory application through to a final resolution and a "fear of retribution." The root causes are consistent with issues raised in our 2010 review and those raised by industry during that review. To address the root causes, the committee made six recommendations to promote clearer regulations and guidance, more standardized application of rules, a consolidation and cross-reference of guidance and rules, and improved communication between FAA and industry. In priority order, those recommendations called for

- developing a single master source for guidance organized by Title 14 of the Code of Federal Regulations (which covers commercial aviation);
- developing instructions for FAA staff with policy development responsibilities;

- reviewing FAA and industry training priorities and curriculums;
- setting up a board to provide clarification to industry and FAA on regulatory compliance issues;
- improving the clarity in final rules issued by FAA; and
- creating a communications center to act as a central clearinghouse to assist FAA staff with queries about interpretation of regulations.

We found that the committee took a reasonable approach in identifying these root causes and developing its recommendations. It compiled and reviewed case studies involving issues of regulatory application, obtained additional information by surveying industry stakeholders, and reviewed FAA regulatory guidance material. The recommendations are relevant to the root causes, actionable, and clear. The committee also considered the feasibility of the recommendations by identifying modifications to existing efforts and programs and prioritizing the recommendations.

FAA reported on July 19, 2013, that it is determining the feasibility of implementing these recommendations. The agency told us that it expected to develop an action plan to address the recommendations and metrics to measure implementation by December 2013. We note that measuring implementation may provide useful information, however, FAA is not intending to measure outcomes. Measuring outcomes can help in understanding if an action is having the intended effect.

Challenges Moving Forward

FAA's certification and approval processes generally work well. However, when the certification and approval processes do not work well, the result can be costly for industry and FAA. Inconsistent interpretation of regulations can lead to rework by FAA and industry. Likewise, inefficient processes can require extra time and resources. FAA faces challenges in implementing the committees' recommendations and further improving its certification and approval processes. FAA's certification and approval workload is expected to grow over the next 10 years because of activities such as the introduction of new technologies and materials, such as composite materials used in airplanes, according to one industry

committee report.[15] Additional work will be needed to establish new means of compliance and establish new standards. In addition, FAA's certification and approval workload is likely to increase substantially as the Next Generation Air Transportation System (NextGen) progresses and operators will need to install additional equipment on their aircraft to take full advantage of NextGen capabilities.[16] Having certification and approval processes that work well will allow FAA to better meet these increasing workload demands and better ensure aviation safety in an era of limited resources.

To its credit, FAA has taken steps toward improving the efficiency of its certification and approval processes. It will be critical for FAA to follow through with its plans for implementing the key recommendations to achieve the intended efficiencies and streamlining. However, making fundamental changes to the certification and approval processes can require a cultural change by its workforce and resistance to change can cause delays. Some improvements to the processes, such as those requiring new rulemakings, will likely take years to implement and, therefore, will require a sustained commitment as well as congressional oversight.

Chairman LoBiondo, Ranking Member Larsen, and members of the Subcommittee, this concludes my prepared statement. I would be pleased to answer any questions at this time.

GAO Contact and Staff Acknowledgements

For further information on this testimony, please contact Gerald L. Dillingham, Ph.D., at (202) 512-2834 or dillinghamg@gao.gov. In addition, contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this statement. Individuals

[15] *A Report From the Aircraft Certification Process Review and Reform Aviation Rulemaking Committee to the Federal Aviation Administration: Recommendations on the Assessment of the Certification and Approval Process*, May 22, 2012. In addition, we discuss FAA's certification processes and oversight of composite airplanes in GAO, *Aviation Safety: Status of FAA's Actions to Oversee the Safety of Composite Airplanes*, GAO-11-849 (Washington, D.C.: Sep. 21, 2011).

[16] NextGen refers to FAA's efforts to transform the U.S. national airspace system from a ground-based system of air traffic control to a satellite-based system of air traffic management.

making key contributions to this testimony include Teresa Spisak (Assistant Director), Pamela Vines, Melissa Bodeau, David Hooper, Sara Ann Moessbauer, Josh Ormond, and Jessica Wintfeld.

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Before the Committee on Transportation and Infrastructure
Subcommittee on Aviation
United States House of Representatives

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FAA Can Improve the Effectiveness and Efficiency of Its Certification Processes

Statement of
Jeffrey B. Guzzetti
Assistant Inspector General for
Aviation Audits
U.S. Department of Transportation

Mr. Chairman and Members of the Subcommittee:

Thank you for inviting me to testify on the Federal Aviation Administration's (FAA) certification process. FAA is responsible for ensuring an efficient, effective, and safe process for certifying numerous aviation products. However, two FAA and industry studies mandated by the FAA Modernization and Reform Act of 2012 identified a number of opportunities for improving the Agency's process for certifying and approving aircraft and consistently interpreting regulations. Our previous and ongoing work has highlighted additional management challenges related to FAA's certification processes, including its ability to certify the new technologies and equipment needed to fully implement the Next Generation Air Transportation System (NextGen).

Today, I will discuss FAA's certification processes specifically as they relate to: (1) overseeing organizations with designated aircraft certification authority; (2) certifying new air operators and repair stations; and (3) certifying NextGen capabilities and Unmanned Aircraft Systems (UAS).

IN SUMMARY

Management and oversight weaknesses have hindered the effectiveness and efficiency of FAA's certification processes. First, because FAA's resources are limited, FAA relies on designees and delegated authorities to certify aircraft or components on the Agency's behalf through its Organization Designation Authorization (ODA) program. However, our previous work has identified vulnerabilities with FAA's oversight of this program, which increased the risk that individuals without proper training or qualifications or with known performance problems could approve critical aircraft components. FAA is continuing its efforts to resolve these vulnerabilities. Second, issues with FAA's approval process, resource management, and communication from Headquarters have led to a backlog of more than 1,000 aircraft operators and repair stations awaiting certification. Finally, these weaknesses will be further exacerbated by the growing demand for certifying NextGen technology and procedures, and the need to establish certification standards to safely integrate UAS into the National Airspace System (NAS).

BACKGROUND

FAA's certification process is an integral quality control method to ensure the safety, reliability, and efficiency of the NAS. FAA carries out its certification activities primarily through two lines of business:

- FAA's Aircraft Certification Service issues approvals to designers and manufacturers of aircraft and aircraft components, including equipment required for NextGen. In addition, the Aircraft Certification Service is also responsible for oversight of designees and delegated organizations that perform certification activities on FAA's behalf.

- FAA's Flight Standards Service issues certificates and approvals for individuals and entities to operate in the NAS, including commercial air carriers, repair stations, pilot schools, and training centers.

While FAA's certification processes have been a key factor in achieving the remarkable safety record of the NAS, industry stakeholders and Members of Congress have noted inconsistencies in the application of these processes that have led to inefficiency and increased costs. As a result, Congress included several mandates in the FAA Modernization and Reform Act of 2012 addressing FAA's certification processes.

In Section 312 of the Act, Congress directed the FAA Administrator, in consultation with industry representatives, to conduct an assessment of its certification and approval processes. The Act further directed the Administrator to make recommendations to improve efficiency and reduce costs through streamlining and reengineering the certification process and to consider methods for enhancing the effective use of delegation systems, including ODA. FAA formed an Aviation Rulemaking Committee (ARC), which explored these issues and made six recommendations in May 2012 aimed at improving efficiency and expanding the use of delegation. In July 2013, FAA issued an implementation plan detailing its planned actions in response to the ARC's recommendations.

In Section 313 of the Act, Congress further required that FAA establish an ARC for the development of recommendations to improve the consistency of regulatory interpretation across FAA. In July 2013, the ARC issued a report making six recommendations to improve consistency in regulatory interpretation. According to the 2013 report, FAA is developing a detailed implementation plan.

EFFECTIVE OVERSIGHT OF ORGANIZATIONS WITH DESIGNATED AUTHORITY IS ESSENTIAL IN THE AIRCRAFT CERTIFICATION PROCESS

Recognizing that it is not possible for FAA employees to personally oversee every facet of aviation, public law allows FAA to delegate certain functions, such as approving new aircraft designs, to private individuals or organizations. In 2005, FAA established the ODA program, through which FAA now delegates to aircraft manufacturers and other organizations the responsibility for selecting individuals to perform certification work on FAA's behalf. However, with less FAA involvement in the selection process, there is the risk that an ODA company could appoint certification responsibilities to individuals whose qualifications are inadequate or who have a history of poor performance. Therefore, effective oversight is critical to ensure that all ODA organizations are following FAA's established policies and procedures for aircraft certification.

In 2011, we identified weaknesses with FAA's oversight and enforcement of its ODA program, including inconsistencies in how FAA aircraft certification offices interpreted

FAA's role and in how manufacturers selected personnel to perform certification tasks.[1] For example, only three of the five FAA offices we visited were consistently pre-screening the performance histories of proposed certification personnel. In addition, although FAA has the authority to remove personnel based on performance issues, we found that FAA engineers sometimes experienced pushback from ODA companies when they tried to take corrective action against ODA personnel, which led to individuals with performance problems continuing to perform important certification work. In one instance, the ODA company resisted attempts to remove an individual for nearly a year before reassigning the individual in question. Furthermore, FAA did not provide adequate training to its staff on how to enforce its ODA policies and procedures, including how to cite non-compliant ODA companies with regulatory violations and levy civil penalties.

Since our 2011 report, FAA has taken steps to improve its aircraft certification process and ODA program oversight. For example, in response to our ODA report recommendations, FAA issued new guidance requiring a full 2-year transition for personnel appointments,[2] established procedures for removing ODA personnel in May 2013, and began tracking personnel with performance problems in a database. Table 1 describes FAA actions taken in response to our recommendations in greater detail.

Table 1. FAA Actions To Address OIG Recommendations To Improve ODA

OIG Recommendation/FAA Action	Status
Require full 2-year transition for unit member self selection.	FAA issued updated guidance in May 2013.
Develop better guidance on timely removal of ODA certification personnel with performance issues.	FAA issued updated guidance in May 2013.
Track certification personnel with identified performance issues in an FAA database.	FAA implemented new policies that met the intent of our recommendation in May 2013.
Develop training and guidance pertinent to the unique requirements of the certification engineering discipline.	FAA developed new training and guidance, which was completed in January 2013.
Improve the new oversight structure for large ODA holders by developing training for engineers, disseminating procedures, and assessing the new structure's effectives before implementing it at other large ODA holders.	FAA completed training in January 2012, will disseminate additional procedures in the next update to its ODA policies, and completed an assessment of the new oversight structure. The Agency will issue a report on the results soon.

Source: OIG.

In addition, in 2012, FAA established an ARC to review the aircraft certification process. In a May 2012 report,[3] the ARC made six recommendations to improve the efficiency of aircraft certification, including the enhanced use of delegation through a 23-point ODA

[1] *FAA Needs To Strengthen Its Risk Assessment and Oversight Approach for Organization Designation Authorization and Risk-Based Resource Targeting Programs* (OIG Report No. AV-2011-136), June 29, 2011. OIG reports are available on our Web site at http://www.oig.dot.gov.

[2] FAA's initial ODA policy called for a 2-year transition period before the ODA holder could self-select personnel. However, it also permitted FAA to allow an ODA holder to proceed with self-selection sooner if the company demonstrated a capability to do so. Our audit identified the need for a full 2-year transition.

[3] Aircraft Certification Process Review and Reform Aviation Rulemaking Committee, May 22, 2012.

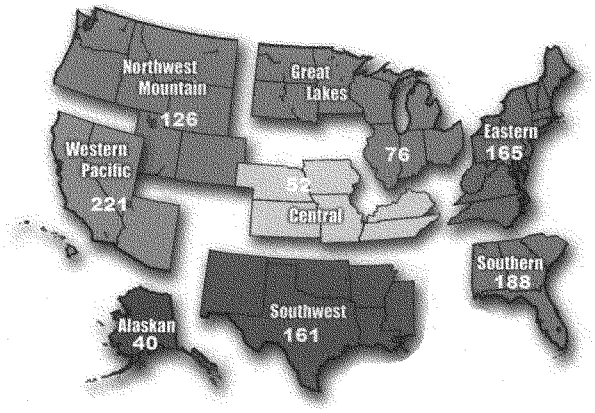
action plan. The action plan calls for joint industry and FAA efforts to improve the effectiveness of the ODA program, including better processes for pre-screening ODA company certification personnel and training improvements. FAA has begun taking action on the plan, and FAA as well as industry representatives expect to assess the effectiveness of changes implemented by July 2014.

Given the expected continued growth of the aviation industry, effectively using ODA will be key to managing FAA's resources and meeting the industry's certification needs. However, it remains critical that adequate oversight controls are in place to ensure that qualified individuals are properly certifying critical aircraft components. Accordingly, we plan to begin a follow-up review early next year to assess the status of the ODA program (including the roles of government and industry) and the effectiveness of program controls and FAA oversight.

INEFFECTIVE FAA PROCESSES HAVE DELAYED NEW OPERATOR AND REPAIR STATION CERTIFICATIONS

FAA's certification process for new air operators and repair stations has led to significant delays in approving applicants. Across the country there are currently 1,029 new air operator and repair station applicants awaiting FAA certification.[4] Of these 1,029 applicants, 415 are for repair stations and 358 are for Part 135 air carrier[5] certification. This backlog spans all eight FAA regions (see figure 1).

Figure 1. Applicants Awaiting Certification in FAA Regions



Source: OIG analysis of FAA data.

[4] According to FAA's Certification Services Oversight Process database.
[5] Part 135 air carriers operate smaller aircraft that are configured for 30 passengers or less or under 7,500 pounds of payload; most fly on-demand (i.e., at the request of their customers).

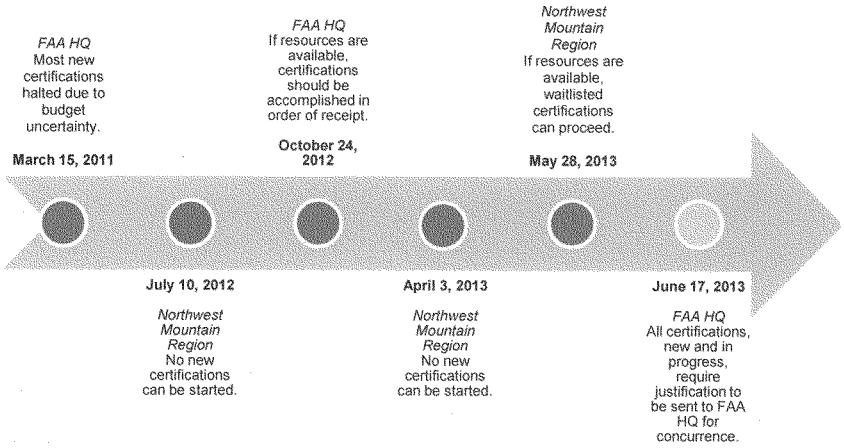
Of those awaiting certification, 138 applicants have been delayed for more than 3 years, with one applicant waiting since August 2006. These delays demonstrate the need for an effective and efficient certification process that ensures safe operations while supporting economic growth. We have identified a number of factors that have likely contributed to FAA's backlog.

First, FAA's certification process itself has led to delays. FAA lacks an effective method to prioritize new certifications for air operators and repair stations. Instead, the Agency uses a first come-first served approach to certifications. As a result, many applicants may be significantly delayed if more complex certifications are ahead of them. For example, a large Part 135 carrier applicant that requires extensive inspector staff time and effort due to the size and complexity of the operation could delay all new certifications. FAA guidance provides flexibility for field offices to "pass over" more complicated applicants in the process when specific resources are not available to perform those types of certifications. While this flexibility would allow less complicated certifications to move quickly through the backlog, this process is seldom used. FAA is currently working on refining the guidance to streamline certifications.

Second, FAA lacks a standardized process for initiating new certifications. FAA has not provided a reliable and objective method or guidance to its offices for determining when resources are available to initiate new certifications. When FAA receives new applications, an evaluation of available inspector staff should be performed to determine whether the certification can proceed. If resources are not available, FAA can determine whether to wait-list the applicant or transfer the certification to a different field office with more work capacity. Field offices are required to communicate with applicants every 90 days regarding their status; however, once applicants are placed on a waiting list there is no requirement for FAA to later re-evaluate available inspector resources to determine when certification for the backlog applicant can begin.

Finally, over the last 3 years, poor communication regarding FAA certification policy has resulted in workflow interruptions and diminished incentive for inspectors to expedite new certification applicants. While FAA states it has never formally suspended all certification work, figure 2 below shows a variety of frequently changing guidance and inconsistent communications between Headquarters and the field regarding when to perform and when to halt certifications. For example, in March 2011, FAA halted most new certification activity. In addition, a large FAA regional division stopped new certifications twice over a 1-year period. Also, as recent as June 2013, FAA stated that Headquarters must approve any new certification work at field offices. According to FAA representatives at both the regional and district office levels, these cessations in certifications were due in part to ongoing budget issues and sequestration, coupled with the need to maintain safety oversight of existing operators.

Figure 2. FAA Communications Regarding New Certifications



Source: Information obtained from FAA inspectors.

As a result of these certification issues, new operators and repair stations face barriers to entering the aviation industry. While FAA recognizes that improvements are needed to streamline the process, regional divisions and field offices should use the flexibilities currently available to reduce the certification delays. We are currently performing a review of this issue and expect to report the results early next year.

CERTIFYING NEXTGEN CAPABILITIES AND INTEGRATING UNMANNED AIRCRAFT SYSTEMS IN THE NAS WILL FURTHER EXACERBATE FAA'S MANAGEMENT AND OVERSIGHT WEAKNESSES

FAA's weaknesses in its certification process will be further exacerbated by the need to certify the equipment, systems, and procedures necessary to fully implement NextGen, as well as its need to establish certification standards for unmanned aircraft. These efforts will significantly increase FAA's certification workload, and certification delays could delay both NextGen benefits and FAA's goals to safely integrate UAS into the NAS.

Certification Is Key to Achieving NextGen Benefits

As we have noted in past reports and testimonies, FAA's ability to certify complex systems and new technologies is a critical factor in the successful implementation of NextGen and providing benefits to airspace users. As NextGen progresses, airspace users will need to purchase and install new avionics to obtain benefits, which will add to FAA's already extensive certification and approval workload.

In particular, certification plays a large role in the success of FAA's Automatic Dependent Surveillance-Broadcast (ADS-B) program, a new satellite-based system that will rely on new avionics to communicate flight information to pilots and air traffic controllers. In 2010, FAA issued a rule mandating that all airspace users equip with *ADS-B Out*[6] technology by 2020[7] at an estimated cost to users of over $4 billion dollars. However, when FAA published its final rule, the Agency had not yet certified avionics that could meet the rule's requirements. According to FAA, the Agency has now certified some rule-compliant avionics, and avionics manufacturers have indicated that additional approvals are expected between now and 2015. However, any certification delays could impact users' ability to equip with the avionics and could delay benefits. Moreover, the most significant benefits from ADS-B rely on *ADS-B In*[8] advanced applications, which have yet to be implemented and will require certification as well. It remains unknown when FAA will be able to develop these applications and how long the certification process will take.

ADS-B will further contribute to FAA's certification workload because FAA must also certify the new procedures that allow pilots and controllers to use the new technology. While FAA has approved ADS-B procedures for the Gulf of Mexico and at some limited locations, it is uncertain when ADS-B procedures can be developed and certified for using ADS-B exclusively and to allow aircraft to fly closer together in congested airspace.

FAA Lacks Certification Standards for Unmanned Aircraft

FAA's goals to integrate unmanned aircraft into the NAS will also increase the Agency's certification challenges. Currently, FAA's congressionally mandated goal is to safely integrate UAS into U.S. airspace by 2015.[9] However, any UAS operating in the NAS must first be certified, and FAA has not yet developed design certification standards for civil UAS. As a result, FAA's progress in integrating unmanned aircraft has been delayed.

To begin addressing this concern, FAA established "Pathfinder" projects to aid in the certification of civil UAS for operations in the NAS. Under these projects, FAA certificated the first two aircraft in July 2013—an important first step in certifying and integrating UAS. However, the Pathfinder projects rely on an existing certification rule aimed at repurposing surplus military aircraft for civilian use. As a result, they do not apply to new and novel types of UAS or provide new UAS manufacturers with needed guidance on design requirements. Moreover, the first two aircraft are restricted to operations only in the Arctic area. However, FAA officials told us they are working on evaluating the lessons learned from this process to develop standards for widespread use.

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[6] *ADS-B Out* allows aircraft to broadcast more accurate flight position information data to controllers on the ground.
[7] Automatic Dependence Surveillance--Broadcast (ADS-B) Out Performance Requirements To Support Air Traffic Control (ATC) Services; Final Rule, "75 Federal Register 30160-30195 (May 28, 2010) (amending 14 C.F.R. Part 91).
[8] *ADS-B In* allows for display of flight information in the cockpit, such as allowing pilots to "see" other aircraft.
[9] Pub.L. 112-095 (2012).

As FAA progresses in its efforts to integrate UAS, the Agency's certification workload will continue to grow. For example, in addition to certification standards for civil UAS, FAA has not yet established regulatory requirements or standards for a wide range of related issues, including UAS pilot and crew[10] qualifications, ground control stations, airspace procedures, and command and control reliability. These aspects will all require detailed certification efforts before they can be implemented. Until FAA has developed and certified a regulatory framework and related procedures, UAS will continue to operate with significant limitations in the NAS due to safety concerns. At the request of the Chairmen and Ranking Members of this Committee and the House Committee on Transportation and Infrastructure, as well as their Aviation Subcommittees, we are currently assessing FAA's progress on integrating UAS into the NAS. We expect to issue a report early next year.

CONCLUSION

FAA's certification responsibilities are at the heart of its mission to ensure the safety of and efficiency of aviation products and operations, as well as its NextGen modernization goals. Moreover, the aviation industry—a vital component of the U.S. economy—depends on an efficient and fair certification process to advance new technologies in the marketplace. While FAA has taken steps to improve its processes, there is greater industry activity than FAA can support, and new demands for NextGen and UAS will further tax FAA's ability to address its certification challenges. To both meet its goals and support our Nation's economic growth, FAA must continue to seek solutions for enhancing the management and oversight of its certification processes Agency-wide.

[10] Crew, in addition to the pilot, can include ground-based individuals who assist the Pilot in Command (PIC) with determining UAS proximity to other aviation activities and assist the PIC with operating within the visual line of sight limit.

Testimony of Peter J. Bunce
President and CEO, General Aviation Manufacturers Association
1400 K Street, NW Suite 801 | Washington, DC 20005 | (202) 393-1500
Committee on House Transportation and Infrastructure| Subcommittee on Aviation
Review of FAA's Certification Process: Ensuring an Efficient, Effective and Safe Process
2167 Rayburn House Office Building
October 30, 2013

Introduction

Chairman LoBiondo, Ranking Member Larsen, distinguished members of the Subcommittee; my name is Pete Bunce and I am the President and CEO of the General Aviation Manufacturers Association (GAMA). GAMA represents over 80 companies who are the world's leading manufacturers of general aviation airplanes, rotorcraft, engines, avionics, and components. Our member companies also operate airport fixed-based operations, as well as pilot training and maintenance facilities worldwide. I appreciate the opportunity to testify today regarding the FAA's certification process and look forward to providing GAMA's perspective. We applaud the leadership of this Subcommittee for focusing on an issue that is so vital to general aviation manufacturers.

General Aviation, Manufacturers, and Certification

General aviation (GA) is an essential part of national transportation systems in the United States and in many countries around the world. It is especially critical for individuals and businesses that need to travel and move goods quickly and efficiently in today's just-in-time market. Equally important, GA is a contributor to economies around the world. For example, in the United States, GA supports over 1.2 million jobs, provides $150 billion[1] in economic activity and, in 2012, generated $4.8 billion[2] in exports of domestically manufactured airplanes. The market for general aviation aircraft has shifted tremendously in recent years, with over 50 percent of billings linked to the export market.[3]

This poses new challenges and opportunities for industry and the U.S. government. Aviation safety, operator efficiency, and environmental progress are all dependent on the success of aviation manufacturers and aircraft operators. Manufacturers stand ready to help drive innovation and investment but, too often in the past and despite the best intentions, FAA policy and procedure has hindered the industry's ability to successfully develop and deploy new

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[1] General Aviation Contribution to the U.S. Economy, Merge Global, 2006
[2] 2012 General Aviation Statistical Databook and Industry Outlook, GAMA, 2013
3 Ibid

aviation products and technologies. We must remove these unnecessary obstacles if we are to improve aviation safety and keep manufacturers competitive.

An important step to addressing a significant obstacle is the Small Airplane Revitalization Act originally introduced by Congressmen Pompeo, Lipinski, Graves of Missouri, Nolan, and Rokita. I want to thank them, Transportation and Infrastructure Chairman Shuster, full committee Ranking Member Rahall, Chairman LoBiondo and Ranking Member Larsen, as well as other subcommittee members and staff for their leadership on this important issue. This legislation is a critical first step to regulatory reform of small airplane design requirements focused on streamlining the FAA certification process and making real-world safety improvements. We can have the best research programs and the most innovative technology, but if these products cannot get to market it is of no benefit to manufacturers, users, or the cause of safety. The Small Airplane Revitalization Act charts a new path, promising safety benefits and hope to a part of the industry which has struggled with the economic downturn that occurred over the last several years.

Aircraft Certification Process Review & Reform

There is, however, much more progress that can and should be implemented to meet the laudable goal of ensuring an efficient, effective and safe FAA certification process.

Simply put, our companies cannot bring new product to market without FAA approval. FAA must certify every aspect of a new aircraft design and all components and technologies as meeting the safety standards. We cannot overemphasize the importance of FAA certification to growth and sales in the global aviation industry. Unfortunately, FAA resources simply cannot keep up with the pace of industry activity and inefficiencies in FAA certification processes have led to missed business opportunities that restrict industry growth.

Too often, the current certification process focuses FAA resources at the detailed project level which is extremely inefficient and often results in delays and additional costs. Such a high level of direct involvement in certification activities means FAA staff is conducting routine activities which are well known and the manufacturer has already demonstrated experience and capability. Many of our member company programs are significantly delayed because FAA does not have the resources available for a timely review and approval of key milestones which are required for companies to continue product development. These are items such as defining the applicable requirements known as the certification basis or approving the certification plan and issue papers so that the manufacturer can get to work. It is relatively commonplace for these types of FAA decisions and approvals to linger for several weeks and even several months.

These problems have a real world impact. For instance, according to one aircraft manufacturer, a delay in a large type certification project can cost over $10 million a month. This is just one project and you can imagine the compounding effect when carried across the whole industry over a number of months. Additionally, we have had several cases of smaller aviation businesses faced with a loss of financing and possibly going out of business because of the inability of FAA to act.

FAA's limitations in starting and supporting aircraft certification programs in a timely and efficient manner significantly impacts the schedule and cost of a new program and manufacturer and supplier company decisions to invest in new projects, expand facilities and increase employment. This will become even more acute as demand for certification services increase as more and more of NextGen comes on line. With NextGen, there are also other opportunities to streamline and make FAA processes more efficient and effective for approval and authorizations required by our customers – the operator community. FAA plans to issue changes to their current authorization policy for Reduced Vertical Separation Minimum (RVSM) later this month and this work provides a good guidepost for changes needed in other authorization areas.

The cumulative effect of all of this underscores how the FAA can no longer do business as usual. FAA recognizes it, industry recognizes it, and Congress has as well by including Section 312 of the FAA Modernization and Reform Act of 2012 (P.L. 112-95) to address these certification process bottlenecks and minimize ramifications to industry in terms of time and cost. This section is already helping to improve the effectiveness and efficiency of the certification process and allow FAA to focus on priority safety activities.

Section 312 requires the FAA to conduct an assessment of the FAA's aircraft certification and approval processes. FAA submitted this assessment report to Congress in August 2012 which made recommendations to streamline and reengineer the certification processes in a manner that supports and enables the development of new aviation products and technologies.

GAMA fully supports all the recommendations outlined in this report which includes both specific near-term and strategic longer-term initiatives for implementation to improve the certification process. The report includes many detailed recommendations, but I would like to highlight below two key areas for improvement that are essential to ensuring an efficient, effective and safe FAA certification process. At the outset, let me highlight that progress in the end will be determined by FAA's implementation and your Subcommittee will play a key role in providing oversight to ensure these recommendations make a difference.

Systems Safety Approach to Certification

The first key recommendation concerns shifting the certification process toward a systems safety approach with a focus on enhanced use of delegation programs. The type certification process is basically a verification review of thousands of individual discreet compliance activities the manufacturer undertakes to show the design meets the safety standards. To leverage its limited resources, and supplement them with the best expertise available, FAA can appoint and oversee designees who are qualified industry individuals or organizations authorized by FAA to make the inspections necessary to support FAA's issuance of product design certificates and approvals.

FAA established the Organization Designation Authorization (ODA) program in 2005 to improve the safety, quality and effectiveness of delegation programs and expand the use of organizational delegation to all type certificated products. This has the potential to significantly reduce the FAA's workload by appointing organizations with the required qualification, experience, and management systems to supervise the day-do-day activities of individuals authorized to perform certification activities. By shifting to a systems safety oversight of these organizations, the certification process can be more effective because the same FAA resources can now focus on safety critical activities and support for new and evolving technologies. The certification process can also be more efficient because increased capacity enables FAA to support a continuously growing level of aviation industry activity in a timely manner, reducing delay and cost.

Despite a strong commitment to the development and implementation of ODA, the key benefits that would improve effectiveness and efficiency of the certification process are not being fully realized by industry or FAA. Manufacturers and FAA have invested significant resources in establishing and qualifying ODA organizations, technical capability and staffing to obtain FAA authorization. However, the practical implementation and use of ODA authorizations has been inconsistent from one region to another and even from project to project for the same manufacturer. Our members regularly experience situations where their company has obtained full FAA ODA authorization to conduct specific technical certification activities, but on a project-by project basis the FAA engineers and specialists choose to retain these activities themselves and not utilize the available delegation capability. This inefficiency adds significant delay and cost to certification programs – not only for those manufacturers that have an ODA but also for other projects that are waiting on these FAA resources. In these situations, the FAA workforce has not shifted to an organizational systems safety approach that makes better use of FAA authorized activities and FAA oversight resources.

FAA recognizes these challenges and under the umbrella of Section 312, is working with GAMA and AIA to implement an ODA improvement action plan with 23 specific tasks and milestones. Today, the action plan is moving forward and key improvements being implemented this year include the issuance of updated FAA certification and training materials. One of the most important changes establishes a new default position that all properly authorized ODA functions shall be fully utilized unless there is a specific safety reason not to do so, such as deficiencies in the manufacturer ODA system, new technologies, or new methods of compliance. This means the FAA workforce will not have to "opt-out" of reviewing specific compliance tasks through delegation but instead decide to "opt-in" to retain tasks where necessary for safety. This will help facilitate the cultural changes necessary for FAA implementation of ODA by focusing their resources on key safety issues. In addition, when an FAA engineer determines that it is appropriate to retain a task they document the rationale which ensures that the manufacturer ODA receives coaching in terms of what areas of technical expertise or oversight needs to be strengthened.

Implementation of Certification Process Improvements

As outlined with ODA, implementation of these changes is challenging and it is essential that FAA develop a comprehensive means to implement and measure the effectiveness of certification process improvements. Section 312 has helped to focus efforts on these challenges. It requires FAA to develop a comprehensive implementation plan for each recommendation along with a plan to measure their effectiveness through performance metrics. FAA submitted this implementation plan to Congress in July 2013 and noted that it is a living document which will be updated regularly with several areas still under development.

This comprehensive implementation plan addresses all the facets necessary for successful and effective improvements including: FAA staff knowledge, skills and abilities, certification processes, guidance, tools and training, and transition planning to the changed processes. This is particularly important for shifting to a systems safety approach to certification as it requires changes to some of the workforce roles, responsibilities, and behavior. FAA recently took an important first step when it issued an integrated vision of the future state for the Aircraft Certification Service organization which emphasizes the importance of making improvements and ensuring efficient and effective use of resources. Next, FAA should have as its focus comprehensive culture and change management to prepare the workforce for its evolving roles and responsibilities in a systems safety approach to certification and oversight.

For example, one of the challenges we experience today is that many FAA employees who oversee ODA certification projects are the same engineering experts involved in traditional certification projects. This results in treating ODA certification projects in the traditional manner where there is a very high level of detailed involvement which does not fully utilize the FAA authorized ODA capability introducing significant inefficiencies, delay, and cost. In order to be successful, the FAA employees responsible for ODA oversight and certification project management should have position descriptions, performance standards, and training which reflect the systems oversight and auditing expertise needed. FAA will not be successful unless FAA employees have the training and guidance necessary to understand and participate fully in the new system with appropriate management and performance measures.

We have been encouraged by Administrator Huerta's commitment to the importance of these certification process improvements, but implementation of similar efforts have failed in the past. I encourage this committee to provide its continued support and oversight for FAA's implementation of these certification process improvements. FAA should regularly update the status of its implementation plan and performance metrics which promotes transparency among Congress, industry and the public and ensures accountability and effectiveness of the improvements.

Consistency of Regulatory Interpretation

A Government Accountability Office (GAO) report titled *"Certification and Approval Processes Are Generally Viewed as Working Well, but Better Evaluative Information Needed to Improve Efficiency"*[4] found that inconsistent interpretation of regulations is one of the most pressing problems with FAA's certification and approval processes. For manufacturers, this can have significant impact upon certification project cost and schedule and has been a recurring and systemic problem affecting manufacturer programs.

FAA offices continuously develop new policy and guidance to support the broad range of fresh products and technologies which our companies develop. Unfortunately, this new policy and guidance sometimes changes long standing regulatory interpretation which significantly increases the regulatory burden, schedule, and cost impact on industry without any safety justification. Industry often refers to this as "rulemaking by policy" or "regulatory requirements creep" because the standards to which we must design and certify our products change over time without any rulemaking or administrative procedures such as cost/benefit or small business impact. Today, these issues are addressed on a case-by-case basis consuming significant resources and time across both industry and FAA.

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4 Government Accountability Office Report 11-14 – Aviation Safety "Certification and Approval Processes are Generally Viewed as Working Well, but Better Evaluative Information Needed to Improve Efficiency" October 2010

The FAA Modernization and Reform Act of 2012 required the FAA to establish an advisory panel comprised of both government and industry representatives to review this GAO report and to develop recommendations to improve the consistency of interpreting regulations and a process to improve communications for the identification and resolution of potentially adverse issues in an expeditious and fair manner. FAA submitted a report to Congress in July 2013 along with a preliminary implementation plan to consider the recommendations in combination with other FAA priorities and resource availability.

GAMA fully supports the detailed recommendations outlined in this report which includes changes to existing regulatory database tools, clarification of policy and training, and establishment of a new FAA group of experts to support field personnel and applicants for timely resolution of potential issues. One of the important factors for success is clear policy, training and accountability for the development of new regulatory interpretative material such as guidance and the conditions and processes by which they can and cannot change the interpretation of regulatory requirements or previously acceptable methods of compliance. At their heart, these are efficiency recommendations that if fully carried out will produce better results and maintain the highest standards of safety.

Certification Challenges and the Need for FAA Leadership

As my final point, I want to highlight an issue that is linked to the certification reforms we discussed earlier: proactive leadership by the FAA in supporting their certification and safety activities globally. FAA has historically been viewed as the gold standard for certification around the world. Increasingly, however, other countries are questioning that gold standard. It is imperative that FAA actively promote and defend the robustness of its safety certification globally to facilitate acceptance and/or streamlined recognition of U.S. products - direct engagement with their regulatory counterparts is a necessary part of that effort. At a time of growing exports, any delay in delivering aircraft, after the lengthy U.S. process, is very harmful.

This issue is less of a problem with bilateral partners such as Europe and Canada where a formal agreement promotes streamlined acceptance of products certified and manufactured in our countries. However, in other parts of the world we increasingly find regulators that previously accepted U.S. products now questioning FAA's safety certification, delaying the ability to deliver products to that country. Effectively, once they get their product FAA-certified, manufacturers are facing greater uncertainty in delivering their product to international markets. If these countries decide to recertify these products instead of accepting the FAA certification, it requires significant time and resources from both the manufacturer and FAA that are completely redundant and without any safety benefit. In turn, this compounds the efficiency problems experienced by manufacturers and FAA working to develop and certify new products.

FAA must work with the International Civil Aviation Organization (ICAO), other aviation authorities, and industry to address this issue before it becomes even more significant. We look forward to working with this Subcommittee as we develop ways on how to best address this concern.

Conclusion

Chairman LoBiondo and Ranking Member Larsen, these reforms and improvements are even more vital given the current budget environment that faces our nation. Manufacturers cannot bring any new products to market without FAA certification approval. More than almost any other industry, we depend on action from government regulators in order to grow our businesses, jobs and the economy. FAA stated it expects more challenges associated with staffing, management of programs, and infrastructure investment. For manufacturers, this could result in more uncertainty and delay for approval of products that are safety-enhancing and key to success in an already competitive marketplace. The uncertainty and inefficiency of FAA certification processes restricts industry growth and has even resulted in missed business opportunities and decisions to invest in new projects, expand facilities, and increase employment. The current budget situation is difficult and we encourage policymakers on both sides of the aisle in Washington to constructively discuss ways to mitigate these challenges. At the same time, we encourage the members of this committee to challenge regulators, such as the FAA, to identify and implement reforms across the agency that will enhance the ability of users to more efficiently and effectively operate, while simultaneously promoting safety.

Thank you and I would be glad to answer any questions that you may have.

Before the Committee on Transportation and Infrastructure
Subcommittee on Aviation
United States House of Representatives

Review of FAA's Certification Process: Ensuring an Efficient, Effective and Safe Process

Statement of
Thomas L. Hendricks
President and CEO
National Air Transportation Association

The Voice of Aviation Business

Chairman LoBiondo, Ranking Member Larsen and Members of the Subcommittee:

The National Air Transportation Association (NATA) appreciates the opportunity to appear before you today to review the FAA's Certification Process to ensure it can be efficient, effective and safe.

I am Thomas L. Hendricks and it is my pleasure to address the subcommittee once again, now as President and CEO of the National Air Transportation Association.

At NATA, we are the voice of aviation business. We are the leading organization representing aviation service companies such as fixed base operators, charter providers, maintenance and repair organizations, flight training, airline service and aircraft management companies – including those supporting fractional shareholders. Our more than 2,000 member companies are a vital link to the public, airlines, general aviation industry, and the military.

NATA's mission is to empower its members to be safe and successful aviation businesses. Our members across the nation operate in a very highly regulated environment. We support a system that allows for a delicate balance between the different regional operating environments of our members and the need for consistent interpretation and application of FAA regulations, especially in the areas of safety and competitiveness.

Standardization

Section 313 of the FAA Modernization and Reform Act of 2012 (H.R. 658)

Since 2009, NATA has highlighted a need for a more consistent, standardized interpretation of FAA regulations. We surveyed our members and found that a lack of standardized interpretation was one of the biggest worries on the minds of general aviation industry leaders. The NATA survey also captured specific examples from our members about how the lack of consistency within the FAA has affected their aviation businesses.

The biggest challenge noted was trying to accommodate the varying requirements of eight FAA regions, 10 aircraft certification offices, and 80 flight standards district offices. Each issues individual approvals for a wide range of maintenance and operational requests.

We believe the FAA must apply its regulations consistently. NATA represents businesses large and small that serve key roles in the nation's economy. These drivers of our economy deserve a level playing field where the rules don't change simply because your FAA inspector did. When the FAA grants approval for a certificate or process to one aircraft operator or maintenance facility without giving the same approval to a similar business in another area of the country, it directly affects the competitiveness of companies.

Here are just two examples:

A commercial air charter operator contacted NATA stating that he had to spend $25,000 to secure FAA approval to move an aircraft on his air carrier certificate from one FAA region to another. The operator had already complied with the FAA regulations in the region where the aircraft was based. When the operator moved the aircraft to the new base in another region of the country, he was not allowed to operate it until he received FAA approval from that region.

The new FAA office would not accept the determination of compliance from the original FAA office and insisted that the operator again demonstrate that the aircraft was in compliance with federal aviation regulations. The aircraft was out of service and unavailable for customer use for more than five weeks, at a cost of more than $200,000 in lost revenue to the operator.

Another NATA member, a Part 145 repair station, was informed by the FAA that the region with responsibility for oversight of the repair station would be changing. This company endured a lengthy, costly process as the new region with jurisdiction decided to reapprove the repair station's manual used to prescribe performance of maintenance functions, and identified more than 75 "deficiencies." The manual had been deemed to be fully compliant with all federal aviation regulations and was approved by the first FAA region, but the new region insisted that revisions be made according to its interpretation of the regulations. This drawn-out process cost the repair station countless hours of employee time and hundreds of thousands of dollars in lost revenue while it implemented the new region's revisions.

Inconsistent standards also have important safety implications. New interpretations can cause confusion and force aviation companies to redirect limited human and monetary resources – resources that would be better spent on improving aviation safety.

Other findings from our survey include:

• 89 percent of NATA members responded that their businesses have suffered due to inconsistent interpretation of regulations.

• 81 percent stated that the lack of standardization they experienced was the result of the FAA's reluctance to accept a prior approval.

Although inconsistency has challenged both the FAA and industry for years, there have been positive developments. In the last 10 years, we've seen both the Flight Standards Service and the Aircraft Certification Service combine policy and guidance, and create online access for safety inspectors and engineers as well as the industry. This improved transparency allowed the industry to understand what the FAA looks for when performing tasks such as oversight and issuing approvals.

The FAA has also been working on an information management system that will link all AFS and AIR information. However, we note that the system does not sufficiently review information to eliminate conflicting or duplicative policy or outdated processes.

Let me now turn to the report of the Consistency of Regulatory Interpretation Aviation Rulemaking Committee. At NATA, we recognize the need for the FAA to prioritize its many projects as a way to improve safety amid funding challenges at both the Agency and within the aviation industry.

With this in mind, NATA fully supports the ARC's number one priority and recommendation: that the FAA review all interpretations and policy documents for accuracy, link those documents to the regulations they support, and expand on the current information systems to combine both the Aircraft Certification and the Flight Standard Services systems into one, available online resource for both the FAA and public.

NATA encourages Congress to support and fund these FAA efforts to eliminate inconsistencies in the interpretation and application of its regulations.

Certification

Section 312 of the FAA Modernization and Reform Act of 2012 (H.R. 658)

In reference to Section 312 of the FAA Modernization and Reform Act, NATA believes that many of the existing certification processes are outdated and hamper the introduction of new safety technology. The rapid evolution of modern technology is, in many cases, outstripping the FAA's ability to certify it. The Agency simply can't keep up.

New standards need to be performance-based, so that the industry can quickly innovate without the FAA having the burden of changing the rules each time technology advances. The FAA has already seen success with this method for small aircraft and we believe similar success is possible for larger General Aviation and Commercial aircraft. The FAA also has been moving toward expanded delegation to improve the certification process, but he pace of that expansion has been slower than the industry needs and expects.

NATA is encouraged by efforts to adopt performance-based certification standards and the increased use of delegates to better meet the demands of the industry. We ask for continued support and oversight from Congress to ensure these programs remain a priority.

Role of SMS

Another way the FAA can leverage its limited resources is through Safety Management

Systems (SMS). SMS is a comprehensive, process-oriented approach that requires identifying and mediating all identified risks. It also helps the FAA to ensure that all regulated parties receive appropriate oversight and fulfill the FAA's safety assurance mission.

A healthy SMS encourages the reporting of hazards or compliance errors. It requires thoughtful analysis and response to every report, including corrective actions and changes to policies or procedures to prevent future hazards and errors.

Treating the FAA as a partner in the implementation of an operator's SMS enables the local FAA inspector to regularly receive detailed compliance information from the operator, and evaluate the appropriateness of corrective actions, without the time and costs involved in frequent on-site inspections. We ask that Congress support FAA efforts to adapt their oversight and enforcement to recognize the safety benefits achieved when a business implements SMS.

Conclusion

In conclusion, we believe the FAA can foster consistent interpretations by developing a single master source for all guidance documents and legal interpretations. We strongly encourage the funding of that effort.

We continue to support the FAA's delegation of performance-monitoring duties to bolster the Agency's ability to match the demands of the aviation industry and increase the transparency of certification process improvements.

We welcome the new opportunities to better manage safety and compliance through the use of SMS and ask Congress to ensure the FAA has the authority to adapt its inspection programs to incorporate SMS as a part of oversight protocols.

Lastly, but most importantly, we encourage Congress' continued oversight to ensure that the FAA implements the recommendations set forth by the FAA Modernization and Reform Act of 2012 in a timely and efficient manner.

Thank you for the opportunity to testify, and I will be happy to answer any questions you may have.

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PROFESSIONAL AVIATION SAFETY SPECIALISTS

1150 17th Street NW, Suite 702, Washington, DC 20036
Telephone: (202) 293-PASS Fax: (202) 293-7727

STATEMENT OF MICHAEL PERRONE
PRESIDENT
PROFESSIONAL AVIATION SAFETY SPECIALISTS, AFL-CIO

BEFORE THE HOUSE COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE – SUBCOMMITTEE ON AVIATION

ON
REVIEW OF FAA'S CERTIFICATION PROCESS: ENSURING AN EFFICIENT, EFFECTIVE, AND SAFE PROCESS

OCTOBER 30, 2013

The Professional Aviation Safety Specialists, AFL-CIO (PASS) represents over 3,000 aviation safety inspectors in the Flight Standards and Manufacturing Inspection District Office (MIDO) bargaining units at the Federal Aviation Administration (FAA). These employees are responsible for certification, education, oversight, surveillance and enforcement of the entire aviation system. Among other things, PASS-represented inspectors perform the following tasks: provide continued operational safety support; provide operational suitability determinations; issue airworthiness certificates and production approvals; provide certificate management; conduct enforcement investigations; oversee designees; investigate suspected unapproved parts; and provide information through the Freedom of Information Act (FOIA).

PASS appreciates the opportunity to present our views regarding the FAA's certification process and ways to ensure its safety and efficiency. In specific, we look forward to discussing the elements of the certification process and recommendations put forth by Aviation Rulemaking Committees (ARCs), as required by Sections 312 and 313 of the FAA Modernization and Reform Act of 2012 (P.L.112-95).

Certification: Definition and Overview

The FAA's certification process is a layered system intended to ensure aircraft and equipment meet FAA's airworthiness requirements, which are codified in the Federal Aviation Regulations (FARs). The FAA's Aircraft Certification Service (AIR) division is responsible for issuing approvals and monitoring certificates for aircraft in order to ensure safety from initial design to retirement. The various AIR employees are PASS-represented manufacturing inspectors and Aircraft Evaluation Group (AEG) inspectors, National Air Traffic Controllers Association (NATCA)–represented engineers and flight test pilots, and support staff.

In FY 2011, AIR issued approximately 3,159 design approvals, 76 production approvals and 647 airworthiness certificates.[1] The FAA issues approvals or certificates for new operators, aircraft, and aircraft parts and equipment based on evaluation of aviation industry submissions, FARs and FAA guidance. In addition, the agency grants approval for changes to existing air operations and equipment. FAA approval indicates that the aircraft, equipment and air operations meet minimum FAA safety standards and are safe for use or flight in the National Airspace System (NAS).

Certification requirements are included in part 21 of Title 14 of the Code of Federal Regulations (14 CFR), Certification Procedures for Products and Parts. The steps in the design-approval process include the applicant's conceptual design, the application for design approval, definition of the design standards, test plans and analysis to demonstrate the design meets those standards, generation and substantiation of compliance data, determination of compliance, and issuance of the type certificate. The issuance of the type certificate approves the aircraft design; a similar process is in place to approve the production of the parts for the aircraft. The certification process begins with an industry application for a type certificate and the establishment of a certification basis. The applicant must illustrate compliance plans and prove adherence to these

[1] Consistency of Regulatory Interpretation Aviation Rulemaking Committee, *Recommendations on Improving the Consistency of Regulatory Interpretation* (Washington, D.C.: November 28, 2012), p. 11.

engineering test plans. Following issuance of the type certificate, the applicant must meet the production certificate regulations to obtain a production certificate or approval in order to produce the aircraft and parts. When the aircraft enters service, the certificate holder is responsible for monitoring the aircraft fleet for continued airworthiness. As safety issues are uncovered, these must be reported to the FAA and worked with the FAA to correct them.

While FAA inspectors and engineers are involved in the certification process, individual and organizational designees are often granted authority to verify compliance to specific portions of the regulations in the certification process and make findings of compliance in support of the type and production certificates. For delegated projects, FAA involvement is reduced based on the ability of the designees involved and their technical capabilities. It is relevant to note that according to the FAA, the transition of delegation oversight does not change the certification process.[2]

Section 312: Aircraft Certification Process Review and Reform

Per requirements in Section 312 of the FAA reauthorization legislation, the Aircraft Certification Process Review and Reform (ACPRR) ARC put forth six recommendations focused on streamlining the certification process, reengineering the product certification process, and improving efficiency and effectiveness within AIR.[3] While PASS agrees with many aspects of the recommendations included in the ARC report, we have some specific concerns.

Implementation Plan for Improvement of Certification Process

The ARC report recommends that the FAA develop a comprehensive implementation plan for certification process improvement initiatives and strongly supports use of the FAA and Industry Guide to Product Certification (CPI Guide). Specifically, the ARC report recommends that "an update to type certification and project management policy and guidance to incorporate CPI Guide principles and best practices as a requirement would improve the overall effectiveness and efficiency of certification processes."[4]

The CPI Guide includes a written agreement of adherence to an approval timeline. However, in many instances, companies may not adhere to the timeline or are delayed. While companies are permitted flexibility with their schedules, this does not translate once the FAA receives the application. In other words, if inspectors and engineers are supposed to be given a month to investigate and approve issuance of a certificate and the applicant is late in submitting the completed application, there is no additional time granted to the FAA for review. As such, MIDO inspectors and engineers are put in a position where they have limited time to perform their tasks. The certificate approval process is highly scrutinized and employees are forced to adhere to the timelines, even if that means other work suffers. In no way should a timetable or a rush to complete a task put safety at risk. PASS recommends that guidance in the CPI Guide be reexamined to compensate for the timetable issues.

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[2] Federal Aviation Administration, "FAA Presentation – NTSB Hearing – Panel 4" (April 24, 2013), slide 4.
[3] Aircraft Certification Process Review and Reform Aviation Rulemaking Committee, *Recommendations on the Assessment of the Certification and Approval Process* (Washington, D.C.: May 22, 2012), pp. xiv–xvi.
[4] Id., p. 16.

Another issue related to timelines is the FAA's reliance on a sequencing program designed to prioritize projects in a fair and standardized manner based on safety and company contribution. According to the program, all new applicants for certification and validation that are expected to require more than 40 hours of FAA involvement are entered into the sequencing program, which requires approximately 90 days to determine whether they can be started. It should be noted that the 40-hour threshold does not account for the time it takes MIDO inspectors to support the process, including reviewing the conformity plan, overseeing the work of designees and reviewing the special airworthiness limitations.

Reports from the field indicate that the sequencing program itself is actually the cause of the delays and not the workforce's use of it. Not all offices use the system and it is implemented differently from location to location, and there are inconsistencies with applicants getting acceptable data to the FAA. The FAA is currently working on a process to replace sequencing called project prioritization. While project prioritization has some positive concepts, it adds extra layers of paperwork and assigns time metrics, which has the potential to result in even greater inefficiencies and delays. It should be noted that PASS is not currently a participant in the development of this new program.

The ARC report indicates that the certification process is in need of streamlining. PASS concurs that improvements can be made, but believes that additional guidance or timelines is not the most effective way to ensure a smoother process. In fact, MIDO inspectors state that the layers of paperwork required in the CPI Guide and other tools and guidance merely add work that is not related to providing technical approval and actually contribute to the delay in the process. One inspector claims that the FAA has lost its technical focus of getting the job done and suggests "scrubbing" the process to remove the unnecessary steps and requirements. PASS recommends conducting a national review of agency regulations, policies and procedures in order to eliminate those that are inefficient. PASS also supports the development of a database to monitor and track certification process improvements. This will ensure that all levels of the organization are aware of the improvements to the process and have the ability to educate themselves as new changes are introduced.

PASS believes that union involvement, specifically by a designated representative of the union representing MIDO and AEG inspectors, is critical to ensuring the success of any implementation plan. It has been proven time and time again that stakeholder involvement is critical to successful implementation of new plans or concepts. This will prove greatly beneficial to addressing inefficiencies and assisting in proper implementation.

Designee Program

The ARC report recommends that the FAA enhance its use of delegation programs in order to improve efficiency of the certification process.[5] PASS has serious concerns with a possible expansion of the designee program. Quite simply, the FAA cannot keep delegating out the work without an adequate number of inspectors and engineers to oversee the designees.

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[5] Aircraft Certification Process Review and Reform Aviation Rulemaking Committee, *Recommendations on the Assessment of the Certification and Approval Process* (Washington, D.C.: May 22, 2012), p. xv.

In order to compensate for limited staffing and increased workload, the FAA is relying more on its designee program in which a person or organization performs certification tasks on behalf of the FAA. The FAA is responsible for overseeing the work of designees, who, according to the FAA, "act as surrogates for the FAA in examining aircraft designs production quality, and airworthiness" even though they are "paid by the manufacturers."[6] There are several types of designees, including manufacturing and maintenance designated airworthiness representatives (DARs), who perform examination, inspections and testing services related to the issuance of certificates; designated manufacturing inspection representatives (DMIRs), who issue certificates for aircraft and airworthiness approvals, among other things; and organizational delegations, which are companies who are allowed to serve as designees through the organization designation authorization (ODA) program.

There are 139 MIDO inspectors who, in addition to their other work, are responsible for overseeing 1,106 DMIRs, 312 DARs and 76 ODAs. With designees being permitted to perform more and more work, the balance of FAA oversight is insufficient. According to the Government Accountability Office (GAO), designees perform more than 90 percent of FAA's certification activities despite serious "concerns that designee oversight is lacking," especially in the use of ODAs.[7] As stated by the Department of Transportation Inspector General (IG), "Ineffective oversight of organizations with designated authority weakens FAA's role in aircraft certification."[8] To this point, MIDO inspectors inform PASS that with such a high number of designees to oversee, much of the inspector's day is taken up with reviewing paperwork or answering designee questions rather than witnessing and performing work on projects. Work that once was performed by FAA inspectors but is now designated includes but is not limited to: performing airworthiness determination of aircraft; performing conformity inspection of a new project; witnessing tests on a new project; performing a type inspection report or supplemental type inspection report; and overseeing amateur, light-sport and experimental aircraft.

Even more concerning, the growth of the ODA program is making oversight increasingly unmanageable. With an individual designee, if an inspector notes a problem, the designee's authority can be removed. However, under the ODA program, when the designee is an entire corporation, pinpointing the problem is sometimes impossible since the FAA is only examining a small portion of the activity. In fact, inspectors are not allowed to speak to the ODA unit members directly and are forced to go through a management hierarchy in order to address issues. When the ODA program was first introduced, it was intended to allow companies with the highest expertise and capabilities to serve as an extension of the FAA. Unfortunately, with so many companies permitted to hold the authorization, the program has grown so that oversight is nearly impossible.

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[6] Federal Aviation Administration, "Delegation and Designee Background," page last modified June 21, 2006, available at http://www.faa.gov/about/history/deldes_background.

[7] Government Accountability Office, *Aviation Safety: FAA Efforts Have Improved Safety, but Challenges Remain in Key Areas,* GAO-13-442T (Washington, D.C.: April 16, 2013), p. 3.

[8] Department of Transportation Inspector General, *FAA's Progress and Challenges in Advancing Safety Oversight Initiatives*, CC-2013-013 (Washington, D.C.: April 16, 2013), p. 10.

When a private company is permitted to establish timelines and processes without sufficient government oversight, there will undoubtedly be serious issues. This became painfully clear following the April 2011 crash of a Gulfstream GVI (G650) during a test flight in New Mexico. The aircraft crashed during takeoff and two pilots and two flight test engineers were killed. In investigating the accident, the National Transportation Safety Board (NTSB) indicated that limited FAA involvement in the process contributed to the incident, which was related to uncommand roll events. In fact, during the post-accident investigation, Gulfstream's chief test pilot stated that FAA's participation during previous certification test flights "might have accounted for the difference in the level of attention."[9] Furthermore, Gulfstream was focused on keeping to a delivery schedule and, with little oversight, moved forward aggressively. As stated in the NTSB report, and emphasizing points made above regarding compressed timelines, "Intense schedule pressure can lead to decision biases, shortcuts, and errors that negatively affect safety."[10] The report concluded that deficiencies in technical planning and oversight contributed to the accident.[11]

In addition, during the recent partial government shutdown, designees were allowed to work without direct FAA supervision. In one case, prior to the shutdown, an inspector had removed authority from a designee to issue airworthiness certificates since it had been over a year since that individual's last FAA inspection; inspectors are responsible for physically reviewing each designee at least one day a year. During the shutdown, that designee bypassed the inspector, who was not at work, went directly to FAA management and his authority was reinstated despite the fact that it had been over a year since he had been reviewed.

The level of work and the oversight needed to ensure proper surveillance of designees and ODAs must be addressed. The FAA cannot continue to delegate if it does not have the people to oversee those doing the work. In addition, it may be beneficial to have the inspector specialize in specific areas in order to focus efforts, such as certain inspectors are responsible only for oversight of ODAs.

Regarding specific items in the ARC recommendation regarding expanding delegation, PASS understands that there is a limited amount of delegation for noise and emission testing; however, this is a regulatory matter and involves sectors of the FAA outside of Aircraft Certification. We do not agree that Instructions for Continued Airworthiness (ICA) should be categorized as a low-risk activity, but it can be delegated in a limited and controlled manner. The ICA provides documentation of recommended methods, inspections, processes, and procedures to keep products airworthy. Requirements for ICA, which were published and made effective in 14 CFR in 1980, provide a universal and standardized model for aircraft, aircraft engine, and propeller maintenance data, replacing various maintenance manual data standards previously in effect. Maintenance rules are radically different among airworthiness authorities, including those located outside this country. Delegated ICA review authority by foreign authorities has resulted in ICAs that do not meet basic regulatory requirements. PASS believes that FAA ICA rejection

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[9] National Transportation Safety Board, *Crash During Experimental Test Flight, Gulfstream Aerospace Corporation GVI (G650), N652GD, Roswell, New Mexico, April 2, 2011,* Aircraft Accident Report NTSB/AAR-12/02 PB2012-910402 (Washington, D.C.: October 10, 2012), p. 28.
[10] Id., p. 41.
[11] Id., p. 53.

data has not been considered by the ARC in making this recommendation and strongly disagrees with the proposal for delegation expansion to ICA acceptance.

However, PASS does support the recommendation of implementing an ODA action plan, but emphasizes that it must include PASS-represented MIDO inspectors. Furthermore, PASS is in full support of additional training and resources to ensure robust oversight, and believes additional staffing is critical to fulfilling this recommendation.

Systems Approach for Safety

The ARC recommends that the FAA undertake a review of 14 CFR part 21 certification procedures to reflect a system safety approach to product certification process and oversight of design organizations.[12] PASS agrees with portions of this recommendation, specifically qualification and organizational requirements and increased training, and request to be involved in any changes proposed to the regulation. However, PASS has strong concerns regarding the Certificate Design Organization (CDO) program.

Congress authorized the FAA to develop and oversee a system for the certification of design organizations in order to allow design organizations with proven capability to perform work on behalf of the FAA with little or no oversight. In essence, these organizations would be acting as "mini FAAs" without government involvement or supervision. While PASS acknowledges that some organizations would be capable of performing these duties, we disagree with full implementation of the CDO program and believe it introduces a new level of risk into the process. As stated above, the ODA program started with a focus on only allowing companies with the skills and resources to act as organizational designees. But now it is relatively easy for an organization to act as an ODA. If the FAA wants to pursue the CDO program, PASS emphasizes that it must be done on a trial basis and include input from PASS-represented MIDO inspectors.

Other Process Reforms and Efficiencies

PASS supports parts of the ARC recommendation regarding other process reforms and efficiencies,[13] including increased design approval holder responsibility and fast tracking the rulemaking process to update airworthiness standards in cases where the practice has been in place for a period of time and demonstrated no negative consequence to aviation safety. Regarding strengthening the effectiveness of validation programs under bilateral agreements, PASS supports this with reservation. Any attempt to strengthen validation programs over bilateral agreements will require additional international-related resources. The FAA does not currently have the staffing to support the expansion of international agreements. Additional MIDO inspector staffing would support the ongoing cooperation with international work. Likewise, additional resources would be necessary to leverage bilateral agreements in order to eliminate duplication of efforts in issuing mandatory continuing airworthiness information (MCAI).

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[12] Aircraft Certification Process Review and Reform Aviation Rulemaking Committee, *Recommendations on the Assessment of the Certification and Approval Process* (Washington, D.C.: May 22, 2012), p. xv.
[13] Id., p. xvi.

Based on recent experiences related to certification of light-sport aircraft, PASS is concerned regarding the recommendation to implement Part 23 ARC recommendations related to using consensus standards in general aviation aircraft certification. A report issued in May 2010 by the FAA's Production and Airworthiness division (AIR-200) assessed light-sport aircraft manufacturers in order to review current manufacturing industry systems and processes. The report concluded that the majority of light-sport aircraft facilities surveyed did not comply with FAA-accepted consensus standards and had inadequate knowledge of FAA regulatory requirements and standards. The report emphasized that "relying solely on manufacturer's statement of compliance, for the issuance of airworthiness certificates, should be reconsidered."[14] A pilot program to implement changes to general aviation certification regulations has potential, but PASS recommends that it be a limited trial and include PASS-represented MIDO inspectors.

Section 313: Consistency of Regulatory Interpretation

Per requirements in Section 313 of the FAA reauthorization legislation, the Consistency of Regulatory Interpretation (CRI) ARC issued six recommendations intending to improve the consistency of regulatory application and improve communications between FAA and industry stakeholders.[15]

The ARC report focuses primarily on inconsistencies in the certification process. However, in order to ensure a detailed and specific inspection prior to certification, by its very nature, there will be differences in the application. Different products require different tests; the ever-increasing manufacturing locations require different inspections. The application of a regulation will depend on the aircraft, part or piece of equipment that is being certified. PASS recognizes that there are still some areas where there is inconsistent interpretation of regulations. However, the agency and its employees have been working very hard over the last decade or more to reduce those inconsistencies and make the application of certification processes as uniform, as appropriate, across the country.

The CRI ARC prioritized six recommendations to address inconsistent interpretation of regulations, including the importance of developing a single master electronic database resource, providing a single source of information for all AVS personnel and members of the industry. PASS is in support of plans to address inconsistencies but maintains that application of the regulation depends on the specific product to be certified. PASS also requests to be involved in any committee or workgroup related to implementation of recommendations contained in the ARC.

Staffing

In PASS's opinion, the most effective way to improve the certification process is to address the issue of insufficient FAA inspector and engineer staffing. In discussing the sequencing program,

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[14] Federal Aviation Administration, Production and Airworthiness Division, AIR-200, *Light-Sport Aircraft Manufacturers Assessment (LSAMA)* (May 17, 2010), p. v.

[15] Consistency of Regulatory Interpretation Aviation Rulemaking Committee, *Recommendations on Improving the Consistency of Regulatory Interpretation* (Washington, D.C.: November 28, 2012), pp. v–vi.

the ACPRR ARC emphasizes the importance of adequate inspector and engineer staffing and management of workload. "From a strategic perspective, the FAA must proactively manage the effectiveness and efficiency of the certification processes in combination with necessary staffing management to ensure it can provide the safety certification necessary to support the economic growth of the U.S. industry and the development of aviation products and technologies," stated the ARC.[16] While FAA certification activity has remained steady for the past decade, the ARC found that "the type certification and design approval workload is expected to grow because of an ongoing trend in the increased introduction of new aviation products; technologies and materials; new rulemaking and fleet-wide safety initiatives; international type validations; SMS [safety management system]; and the migration of technologies from large transport airplanes to other category aircraft."[17] As such, PASS believes steps must be taken now to ensure a comprehensive certification process involving an adequate number of trained FAA inspectors and engineers.

For years, PASS has emphasized the importance of adequate inspector staffing. The lack of adequate certification inspectors and engineers has been a complaint of the aviation industry for nearly a decade.[18] There are currently 139 MIDO inspectors represented by PASS and approximately 450 field-level engineers and flight test pilots represented by NATCA. In addition, in Flight Standards, PASS represents 2,900 field-level safety inspectors, including 70 AEG inspectors. Regarding the Flight Standards inspector staffing, in 2009, the FAA introduced a new staffing model but has yet to fully implement it. As of January of this year, the FAA has reported the results of the staffing model six times with six different interpretations of staffing shortages ranging from a nationwide staffing shortage of 389 to 935.[19]

Unbelievably, the MIDO staffing level has not changed considerably over the past decade despite a steadily increasing level of work and responsibility. In PASS's opinion, a full workload for a MIDO inspector would include on average oversight of 10 companies and 10 designees. This is far from the practice in the field. Inspectors interviewed by PASS report having oversight responsibility for more than twice this figure. In many instances, this is resulting in less oversight and an over reliance on a risk-based system. For instance, whereas an inspector used to spend at least once a year with a company he or she was responsible for overseeing in order to conduct a complete inspection, with fewer inspectors and more work, some companies only get inspected in person every three years. In the past, since inspectors were traveling to the companies on a regular basis, they would develop a "good feel" for the company and become familiar with what was happening at the company (i.e., whether the facility was expanded, any disagreements with labor, etc.). That relationship does not exist anymore due to the limited ability to physically inspect the companies.

To highlight the importance of regular visits, in 2011, the FAA changed its regulations to require companies to submit new manuals with a list of all accepted suppliers. Despite the rule change

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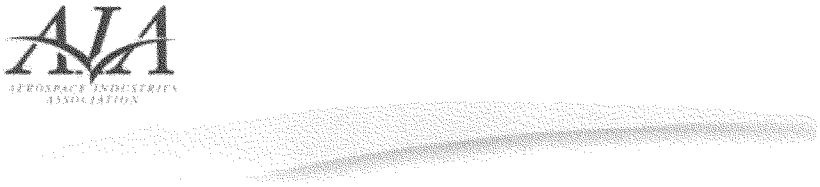
[16] Aircraft Certification Process Review and Reform Aviation Rulemaking Committee, *Recommendations on the Assessment of the Certification and Approval Process* (Washington, D.C.: May 22, 2012), p. 18.
[17] Id., p. vii.
[18] Paul Lowe, "OEMs: FAA needs more certification engineers," AINonline, September 18, 2006.
[19] Department of Transportation Inspector General, *FAA Lacks a Reliable Model for Determining the Number of Flight Standards Inspectors It Needs*, AV-2013-099 (Washington, D.C.: June 20, 2013, 2013), pp. 5–6.

occurring in 2011, an inspector responsible for oversight of the company reported he was not able to visit the facility until last week. He discovered that the list of suppliers had not been updated since 2009 and the company was using parts from a supplier not on the list. Furthermore, examining this list of suppliers was only one out of approximately 60 items the inspector is responsible for overseeing during a single visit. And, due to sequestration, the hiring freeze is preventing the hiring of additional inspectors and engineers in locations where staffing is inadequate. While staffing is dropping in many locations due to retirement or other factors, the work is increasing and inspectors actually have more oversight responsibility than they did when they were staffed at the higher level. Without a doubt, in order to ensure a safe and efficient certification process, there must be an adequate number of FAA inspectors in place to oversee these important functions.

Conclusion

The FAA's certification program continues to face significant challenges. Most recently, the government shutdown and the impacts of sequestration are taking its toll on the process critical to aviation safety and efficiency. For 16 days, oversight of important certification work was put on hold; in other words, the economic impact of this shutdown resulted in an approximately 8 percent delay in the yearly aircraft and design approvals. During the shutdown, no new safety design approvals were addressed, which impacted many companies relying on the FAA; quality system audits and supplier control audits were delayed; investigations were halted; safety data was not evaluated; this list goes on. When a limited number of inspectors were called back during the shutdown, they were directed to focus only on "continued operational safety issues" and stop all FAA certification work on new aviation products. Aircraft manufacturers depend on FAA inspectors and engineers being on the job to review and certify new equipment on a timely basis. Inadequate funding or a lapse in government operations has the potential to seriously affect the FAA's ability to continue to issue its thousands of design approvals and type certificates on an annual basis, along with the ability to conduct safety-required surveillance and oversight necessary in such a technologically complex system.

PASS looks forward to continuing to work with this committee and the FAA to make improvements to the certification process in order to ensure a thorough and safe system that benefits the aviation industry now and in the future.



TESTIMONY OF MR. ALI BAHRAMI

Vice President – Civil Aviation

Aerospace Industries Association of America

"REVIEW OF FAA'S CERTIFICATION PROCESS:
ENSURING AN EFFICIENT, EFFECTIVE AND SAFE PROCESS"

SUBCOMMITTEE ON AVIATION

HOUSE COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

OCTOBER 30, 2013

Introduction

Chairman LoBiondo, Ranking Member Larsen, thank you for allowing the Aerospace Industries Association (AIA) to submit testimony in support of this important hearing. I am Ali Bahrami, Vice President for Civil Aviation Programs at AIA, the nation's premier trade association representing aerospace and defense manufacturers. Before coming to AIA earlier this year, I spent 24 years working in the Federal Aviation Administration's Aircraft Certification Service. In my last position before leaving the agency, I served in Seattle as lead executive for the Transport Airplane Directorate, which handles certification for most of the industry's commercial aircraft. In 2012, I also served as the Designated Federal Official (DFO) and co-chair of the agency's Aviation Rulemaking Committee (ARC) in response to section 312 of the FAA Modernization and Reform Act.

Mr. Chairman, before getting into specifics about improvements and reforms, I think it is appropriate to recognize the tremendous work of the FAA certification staff. Our system is the safest in the world, and this did not happen by accident. It is not by accident that domestic and foreign airlines trust the safety and reliability of our aircraft. It is an ongoing partnership between the aircraft manufacturing industry and the nearly 1,300 personnel in the FAA's certification offices around the country. I worked there for more than two decades, in the field, so I can attest personally to the dedication and technical expertise of these staff.

We should also recognize that FAA's staff is already being asked to do more with less. In the past year alone, the certification office lost resources due to the sequester, instituted a hiring freeze, and had staff furloughed for more than two weeks due to the government shutdown. Meanwhile, the aviation industry continues to grow, responding to the demand of a global economy. With the continued budget challenges, expecting FAA to keep pace with industry, while conducting business as usual, is not in the realm of possibilities. Such an unrealistic expectation means only one thing -- we will simply fall behind our global competitors. While ensuring that safety for the flying public remains paramount, the FAA needs streamlining and efficiencies now more than ever.

Implementing Certification Streamlining (Sec. 312)

When still at the FAA, I co-chaired the Aircraft Certification Process Review and Reform ARC, the advisory body responding to section 312. We had an excellent team with wide representation from industry. We reported our findings to the FAA in May 2012, only four months after enactment, and the FAA began implementing those recommendations this past February as required by the statute. The "312 ARC" made six recommendations to the FAA, and AIA believes all of them are important and should be implemented. I would like to highlight a couple of them as being particularly important to our industry.

One of the main industry concerns was the FAA's certification project sequencing. The process lacked transparency and predictability with respect to the initiation of new certification projects. There were cases in which applicants had to wait over a year before the FAA would begin the certification process. During that time, applicants had no idea when the agency would be ready to initiate the certification work. Consequently, industry was not able to make business commitments and schedule aircraft modification work during that time.

Industry recognizes the importance of data-driven decision making and the FAA's ability to prioritize workload in a logical and reasonable fashion. Our goal is to have an efficient and effective certification process. The ARC recommended the process be changed to include a more collaborative approach between the applicants and the FAA's aircraft certification offices, make better use of existing best practices, and rely on existing tools, such as delegation and risk management principles.

Last May, the FAA published a new project sequencing process that satisfies the intent of the ARC recommendation. The new procedure adds transparency and makes maximum use of the existing tools. The initial reaction from AIA's members has been positive. We are anxiously waiting for successful implementation of this procedure nationwide.

Another recommendation was designed to bring about systemic change in the way new approaches, tools, and practices are introduced within the Aircraft Certification Service. Introducing effective and long lasting change within an organization is challenging, and the FAA

is not unique in facing these challenges. This recommendation was aimed at influencing the change management process and stimulating real cultural change in the workforce. Often strategic goals and objectives look promising on paper, yet later fall short due to ineffective implementation and a lack of ownership by the staff and employees who are conducting the day to day activities.

We urge the FAA to follow through on implementation of this particular recommendation with the utmost diligence. Why did I elect to highlight this particular recommendation? Because looking at the horizon, we see many changes coming our way. Implementation of the Safety Management System, the introduction of Certificated Design Organizations, and the continued expansion of global manufacturing are just a few of the major changes facing our industry and the FAA over the next few years. With a systemic approach to managing the change process, there would be a greater chance of successful implementation and acceptance by FAA inspectors and engineers. Without such a change process, we may be in for a rough ride.

Finally, I applaud the foresight, focus, and outstanding work of this committee. Your focus on implementation of the ARC recommendations will help industry and the FAA reach mutual success. Although your interest in seeing the complete implementation of these recommendations is important, it may not be sufficient to move us forward. I urge the committee to help all of us -- industry, the FAA, and the flying public -- by eliminating non-value added procedures and requirements that force duplication of effort and limit the FAA's ability to become even more efficient. Our collective, limited resources must be used wisely and in a fashion that adds to the safety and security of the U.S. aviation system while responding effectively to growth.

The FAA's 312 implementation plan is clear and specific, listing the offices accountable for specific initiatives and schedules down to the month and year. But any plan is only as good as its implementation. For this reason, it is critical for the FAA to follow through in the development of measures of effectiveness, and for them to establish a regular process for industry to review the progress. The FAA's plan includes the establishment of a joint FAA/industry group to review the status of implementation as it proceeds. We believe this is an essential element of success.

Consistency in Regulatory Interpretation (Sec. 313)

The FAA formed another ARC to address the inconsistencies in regulatory interpretation in response to Section 313 of the FAA Modernization and Reform Act. Compliance and conformance are important to both the FAA and industry. Applicants are responsible for showing compliance with the regulatory requirements. Often, many of the certification plans and means of compliance are defined early in the program. Any surprises midstream or late in the program are costly and unacceptable. Particularly given the overall direction toward a systems approach to product certification, the sooner that standards and means of compliance are defined, the greater the likelihood of a successful certification program.

AIA welcomes the recommendations made by this ARC. We believe that, when fully implemented, they will result in greater communication among FAA inspectors and engineers nationwide, but they will not totally eliminate the inconsistencies. The FAA regulations are generally designed to be performance based as opposed to prescriptive. This approach is needed to provide flexibility for the applicants while maintaining an acceptable level of safety. A prescriptive rule could stifle innovation or dictate a particular design solution. At the same time, excessive emphasis on performance could increase ambiguity and the chances of inconsistent application of the rule. Finding the appropriate balance is challenging, but it is crucial for our industry.

We believe the total elimination of inconsistencies is unrealistic. Instead, it behooves us to establish an agile dispute resolution process to expedite decision making. Having such a process in place, and following through with the ARC recommendations, will allow quick resolution of issues and reduce future occurrences of a similar problem. The industry has yet to see implementation plans for the 313 ARC recommendations. We hope this does not indicate a lower priority for this important work, and we look forward to reviewing detailed implementation plans in the near future.

Importance of Delegated Authorities

There is no question that implementation of the recommendations from the 312 and 313 ARCs will improve the certification process and reduce certification delays. However, the most effective tool that could quickly improve the product certification timeline is delegation. Today, in the U.S., there are approximately 70 engineering and design facilities that are delegated organizations. We have over half a century of successful history with delegation. Enhancing and expanding delegation will improve safety for the traveling public while assisting in the economic growth of the aviation industry. Obtaining an Organization Designation Authorization (ODA) is not easy. It requires a great deal of resources and investment on the part of an applicant. We urge the FAA to allow maximum use of delegation, not only to take full advantage of industry expertise, but to increase the collaboration and partnership that leads to improved aviation safety.

The Act also authorized the FAA, beginning January 1, 2013, to start issuing Certification Design and Production Organization (CDPO) certificates. Certified design organizations provide an ideal way for the FAA to leverage the experience and track record of manufacturers to handle the day-to-day certification activities, thereby allowing the FAA to focus limited resources on safety-critical trends and issues. This approach, now explicitly authorized and encouraged by Congress, is a positive and significant step toward further improving and streamlining today's certification process.

Industry understands that the FAA has regulatory responsibilities, and FAA certification is still the "gold standard" sought by aviation authorities throughout the world. However, with the worldwide market shifting to Asia and the developing world, it would be detrimental to our competitiveness if foreign manufacturers are able to move improved products into the marketplace more quickly. Simply put, the FAA needs to change its approach given today's marketplace. We urge the Congress to ensure the FAA follows through on the certification reforms in Public Law 112-95.

Conclusion

In summary, we applaud the committee for its leadership in pressing the FAA to make efficiencies in the certification process. Now that the FAA has recommendations for these initiatives, two things are especially important. The first is your continued oversight via periodic reviews, making sure they mature and complete their implementation plans and then stay on track over the coming year or two. We applaud you for holding this hearing, because it demonstrates to the agency that this is a priority for the subcommittee. But equally important is ensuring that the FAA has the resources it needs to maintain momentum. Each of the initiatives outlined in the 312 and 313 reports will require resources. In some cases this will divert staff from attention to the applications themselves, at least in the short term.

We are asking the agency to maintain or improve the current processing times while incorporating new procedures into their work. We are asking them to do this with a reduced budget and morale that is understandably sapped by sequestration, shutdowns, and questions about which employees are "essential" and which are not. These re-engineering initiatives are investments in a future certification process that is more responsive to industry without sacrificing safety. But, like any investments, they take resources to implement properly. The FAA's Section 312 Detailed Implementation Plan does not specifically estimate the budget resources needed to carry out the plan. AIA believes these resources should be clearly identified by the agency and protected in the appropriations process. We do not believe this necessarily requires more funding, but a refocusing of existing resources, and greater reliance on proven delegation and collaborative industry partnerships, to do things in a smarter, more efficient manner.

When an agency is forced to choose between its day-to-day operations and its investments for tomorrow, we know what gets deferred -- the investments. We saw that last year, when the sequester cut the FAA's overall budget by 4 percent, but NextGen was cut by 15 percent. AIA believes if the FAA gets no relief from the sequester in the coming year, the re-engineering of our certification process will take a back seat to more pressing needs in the office. They may shelve or defer many of these improvements just to keep their heads above water. So I urge the subcommittee to help FAA determine its minimum resource requirements for next year, at a

level which is adequate to fund continuing operations *and* the process improvements that are essential to our global competitiveness.

121 North Henry Street
Alexandria, VA 22314-2903
T: 703 739 9543 F: 703 739 9488
arsa@arsa.org www.arsa.org

Statement for the Record

Submitted by the
Aeronautical Repair Station Association

House Transportation & Infrastructure Committee
Subcommittee on Aviation
"Review of FAA's Certification Process: Ensuring an Efficient, Effective, and Safe Process"

October 30, 2013

121 North Henry Street
Alexandria, VA 22314-2903
T: 703 739 9543 F: 703 739 9488
arsa@arsa.org www.arsa.org

October 30, 2013

The Honorable Frank LoBiondo
Chairman
Aviation Subcommittee
2251 Rayburn House Office Building
Washington, DC 20515

The Honorable Rick Larsen
Ranking Member
Aviation Subcommittee
2251 Rayburn House Office Building
Washington, DC 20515

RE: Statement for the Record October 30 Hearing, "Review of FAA's Certification Process: Ensuring an Efficient, Effective, and Safe Process"

Dear Chairman LoBiondo and Ranking Member Larsen:

The Aeronautical Repair Station Association (ARSA) thanks you for the opportunity to submit a statement for the record about the Federal Aviation Administration's certification process.

ARSA is an international trade association with a distinguished record of representing certificated aviation maintenance facilities before Congress, the FAA, the European Aviation Safety Agency (EASA), and other civil aviation authorities (CAAs). ARSA's primary members are companies holding repair station certificates issued by the FAA and other CAAs around the world. These certificates are our industry's "license to do business." They authorize companies to perform maintenance, preventive maintenance and alterations on civil aviation articles, including aircraft, engines, and propellers, and components installed on these products. Repair stations perform this essential work for airlines, the military, and general aviation owners and operators.

ARSA members are routinely plagued by the FAA's inconsistent application of its regulations. Members frequently cite varying interpretation and enforcement as a major problem; the lack of regulatory standardization particularly impairs small businesses, which are predominant in the civil aviation industry.

ARC 313

In the FAA Modernization & Reform Act of 2012 (P.L. 112-95), Congress mandated that the agency develop plans to streamline its certification process and address regulatory inconsistencies.

Specifically, Sec. 313 required the agency to convene an advisory panel to determine the root causes of inconsistent interpretation of regulations by the FAA Flight Standards Service and Aircraft Certification Service and develop recommendations to standardize the application of its aviation safety rules.

To comply with Sec. 313, the FAA formed the Aviation Rulemaking Committee for the Consistency of Regulatory Interpretation (ARC 313), which was tasked with developing recommendations to:

- Address the findings in the October 2010 report by the Government Accountability Office (GAO) on certification and approval processes (GAO-I 1-14) and other concerns raised by interested parties, including representatives of the aviation industry;

- Improve the consistency of interpreting regulations by the Flight Standards Service and Aircraft Certification Service; and

- Increase communications between the administration's Flight Standards Service and Aircraft Certification Service and applicants, certificate holders, and approval holders for the identification and resolution of potentially adverse issues in an expeditious and fair manner.

On November 30, 2012, ARC 313 submitted its final report, which contained three root causes behind inconsistent regulatory application:

- **Need for Clear Regulatory Requirements**: When a regulation is unclear, its application varies from one inspector to another and compliance differs among certificate holders. Over time, better analytical tools, new technologies and best practices change compliance techniques, creating further ambiguity.

- **Regulatory Application Training**: Training in regulatory development methodology and standard application and resolution protocols have not kept pace with changes either at the FAA or in the stakeholder community.

- **Culture**: General reluctance and/or failure by both industry and the FAA to work issues of inconsistent regulatory application through to a final resolution. Timeliness of decisions and a "fear of retribution" contribute to accepting an inconsistent regulatory application.

After identifying root causes for the inconsistent application of regulations, the ARC developed six recommendations. The primary recommendation was:

> FAA's Flight Standards Service (AFS) and Aircraft Certification Service (AIR) review all guidance documents and interpretations to identify and cancel outdated material and cross-reference (electronically link) material to its applicable rule. Further, the ARC recommends the FAA expand its current Aviation Safety Information Management System (AVSIMS) initiative to consolidate the service organization-level libraries into a single AVS master electronic database resource, organized by rule, to allow agency and industry users access to relevant rules and all active and superseded guidance material and related documents.

Implementation of Recommendation
Despite ARC 313's specific recommendation for a single source of regulatory compliance information that would include not only the regulation and its preamble, but also internal and external guidance (orders, handbooks, advisory circulars, legal interpretations, court decisions, etc.), the FAA's report to Congress merely "kicks the can down the road." The agency states that consolidation of its regulatory compliance information would be problematic due to lack of resources to sort through the existing information and eliminate duplicity and inconsistency. The FAA's wish to "study" methodologies and existing databases to determine which would be most compliant with the recommendation is an example of the agency overcomplicating an ongoing issue rather than seeking an immediate, medium- and long-term solution.

The industry cannot wait for the agency; ARSA has developed a simple excel spreadsheet to test a process of consistent issue resolution. That spreadsheet will be used in conjunction with the FAA's Consistency and Standardization Initiative to refine a regulatory compliance database capable of gathering readily available interpretative material as well as later-discovered information. By constant monitoring and updating, the library will continue to grow while inconsistent, duplicative and incorrect information is identified for change or elimination.

Conclusion

ARSA looks forward to working with Congress and the FAA to achieve consistency to regulatory application through currently available resources. Indeed, the association would be pleased to make a presentation on the simple solution developed by the industry to address the most glaring root cause for the problem.

Contact information:

Mr. Eric Byer
Vice President of Communications, Policy, and Planning
Aeronautical Repair Station Association
121 N. Henry Street
Alexandria, VA 22314
T: 703 739 9543
E: eric.byer@arsa.org

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