

AIR SAFETY INSTITUTE YEAR END REPORT, 2017

In 2017 ASI introduced its “Forward Vector” strategy to help further expand our reach into the general aviation (GA) community to make a positive influence on pilot behavior and policy that affects GA safety.

The multi-part strategy includes reaching more pilots by exploiting modern content formats and outreach channels, expanding our research and analysis, leveraging the ASI brand authority to influence and harmonize industry efforts, and developing synergies with the You Can Fly team to help further AOPA’s mission of building a bigger, stronger, more vibrant, and more resilient pilot community.

3.6 MILLION

40%



2017 was a record-breaking year with more than 3.6 million uses of online and in-person safety programs—a 40 percent increase from the year before. What’s more, the GA accident rate experienced an all-time low of 0.84 per 100,000 flight hours in fiscal year 2017 for fixed-wing aircraft in non-commercial activity.



The Air Safety Institute is grateful for the generous support of its donors who make the work, highlighted in this report, possible.

ASI OUTREACH ACCOMPLISHMENTS

	2017 Goals	2017 Actuals	Variance	Prior Year
Roll-Up	2,843,349	3,612,405	27%	2,586,380
Online Education	2,811,975	3,583,036	27%	2,556,341
Safety Seminars	22,807	21,048	(8%)	21,721
In-Person FIRC	2,176	2,098	(4%)	2,113
eFIRC	6,391	6,223	(3%)	6,205

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REACHED MORE PILOTS BY EXPLOITING MODERN CONTENT FORMATS AND OUTREACH CHANNELS

Videos - ASI's YouTube views reached nearly 3.3 million, validating our decision to focus on more video production to expand outreach. In 2017 ASI launched the following videos:

- **Accident Case Study: Single-Point Failure** – This latest addition to ASI's most popular video series reviews what happen when a pilot experienced a vacuum pump failure in instrument meteorological conditions without backup instrumentation.
- **NEW SERIES: ASI Safety Tips** – Short videos designed for mobile learning when time is limited. Titles include: *Box the Controls*, *The Four Ws of Radio Communication*, *Crosswind Taxiing*, *Aiming Point*, and *Greasing the Landing*.
- **NEW SERIES: Ask ATC** – A collaborative effort with the National Air Traffic Controllers Association (NATCA) and the FAA – this series of videos, which are intended to debunk ATC myths, included *Bothering ATC*, *Traffic Conflicts*, *Fast Talkers*, *Flight Following vs. Flight Plans*, and *Calling Up a Busy Controller*.
- **Fuel Management Made Easy** – Sponsored by Air BP, this video reviews various techniques to avoid fuel mismanagement and how to spot fuel contamination.
- **Fly-in procedures** – To help provide safe, efficient flow of inbound traffic for each of AOPA's four regional fly-ins, ASI created videos that graphically depicted the NOTAM procedures and gave pilots a step-by-step guide to flying to the events.
- **NEW PROCESS: BasicMed** – ASI created an animated video to help explain the entire BasicMed process. In addition to the tools and information available on AOPA's website, the video serves as a supplemental resource that packages an abundance of helpful information into one convenient format.



NEW Podcast Series – ASI succeeded in creating and delivering to over 43,000 listeners its first podcast series titled, "There I was..." The podcasts invite listeners into the cockpit with pilots across the aviation community as they encounter unpredictable in-flight scenarios and share the knowledge and skills they utilized to fly safely out of them.



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- **Episode 1: Patty Wagstaff** – This U.S. National Aerobatic Champion recounts a Cessna 185 flight in southwest Alaska where she loses her bearings and encounters IMC.
- **Episode 2: Lee Lauderback** – Owner, founder, chief instructor, and demo pilot for Stallion 51 (a P-51 operation in Orlando), and former chief pilot for Arnold Palmer, Lee recalls a landing gear emergency in a TF-51 Mustang.
- **Episode 3: Sean D. Tucker** – Renowned aerobatic pilot and airshow performer recalls a life-threatening emergency he faced in 2006 when he lost elevator control in his airplane and was forced to bail out.
- **Episode 4: Kenny G.** – World-famous saxophonist and owner of a de Havilland DHC-2 Beaver shares interesting stories about flights he took all over the country, including a high density altitude departure that taught him a valuable safety lesson.

FIRCS – ASI released an updated, redesigned, and tablet-compatible version of its CFI online renewal course (eFIRC).

NEW Focused Flight Review – Part of expanding ASI's influence and reach into the flight training community includes a new web-based flight review program called *Focused Flight Review* that focuses on six common pilot profiles: instrument flying; takeoffs, landings, and go-arounds; positive aircraft control; weather and controlled flight into terrain (CFIT); fuel, engine, and systems; and mountain and backcountry flying. The program's elements include a dedicated ASI webpage for flight review pilots (clients) and flight instructors, video- and text-based introduction and instructions, guides for each profile that include pre-study items, questions and answers for oral discussion, and suggestions for skills training and flight tasks along with annotated profile guides for flight instructors using the program. ASI released a beta version of the program to NAFI and SAFE in Q4 for their review and feedback. A full release of the program is scheduled for Q2, 2018.

ASI converted the following products to a new technical format to enable iPad compatibility:

- **Online Courses** – *Do the Right Thing: Decision Making for Pilots, Public Benefit Flying: Balancing Safety and Compassion*, and *General Aviation Security*.
- **Safety Quizzes** – All 61 of ASI's safety quizzes were updated for easy access to on-the-go learning.
- **Safety Advisors** – Three Safety Advisors were updated and converted from PDF to a new HTML format for optimal viewing on mobile devices: *Volunteer Pilots: Balancing Safety and Compassion*, *Fueling*, and *Fighting Fatigue*.

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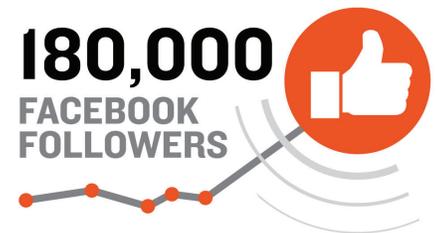


Newsletters – ASI produced and delivered four issues of the *CFItoCFI* and four issues of USAIG’s *Premium on Safety* quarterly newsletters.

Safety Syllabi – ASI introduced a new *Pinch Hitter™* syllabus, which offers an introduction to the principles of flight, a basic overview of instruments and radio communications, and a scenario-based training guide to help non-pilots be more knowledgeable and better prepared to land an aircraft safely in the event of an actual emergency involving pilot incapacitation. ASI also updated its *VFR into IMC Safety Syllabus*, which can be used by flight schools and instructors as an integral part of existing lessons plans for both ground and flight.

ASI Safety Alert – Originally developed in 2014 to help increase safety awareness and reduce possible GA mishaps, ASI’s latest safety alert was redesigned for optimal mobile viewing and distributed to more than 400,000 pilots in response to a critical safety issue caused by the removal of 10,000 instrument approach procedures from some popular flight management systems.

Social Media – ASI energized its Facebook page with a new strategy to boost user engagement with fresh content that invites its 180,000 followers to participate. ASI’s Facebook page is an important avenue for distributing safety education materials since many followers don’t consume ASI content by other means. Frequent postings include ASI quiz questions and stories to engage followers with the goal of creating a safety-minded community while raising ASI’s brand awareness.



BasicMed – ASI played a key role in support of BasicMed that launched on May 1 by creating mobile-friendly online content required for pilots using the program, and continued its support by providing overall program management.

EXPANDED RESEARCH AND ACCIDENT ANALYSIS

Stall and Spin Accidents: Keep The Wings Flying

The most comprehensive report on stalls and spins in the GA industry offers a detailed analysis of 2,015 stall accidents between 2000 and 2014, and concludes with recommendations for prevention, recognition, and recovery from stalls while offering ideas on a shift in focus for stall awareness, prevention, and recovery. The report is stimulating GA to think about more effective ways to conduct stall training.

Cessna 150/152 Safety Highlights

This type-specific series was revitalized after more than a decade of absence, starting with the *Cessna 150/152 Safety Highlights*. The report examines how the accident record of Cessna 150/152—one of history’s most successful two-seat airplane designs—differs by patterns of use (personal vs. instructional) and how they compare to those of other models of similar power and size.

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Rounded Base Turn Study – Preliminary Research and Analysis

ASI's ongoing pursuit of learning whether there are safety-related advantages of conducting rounded-base turns in the traffic pattern compared to traditional rectangular traffic patterns included a study from the University of North Dakota (UND). The study, which was inconclusive, demonstrated the feasibility of deriving measures of stability from variables including airspeed, pitch, roll, and descent rate sampled by the avionics suites in UND training aircraft, and constructed an innovative data-editing algorithm to distinguish final approach from the preceding legs. ASI will be expanding the work into a larger-scale research project to address the substantive question of whether the rounded pattern reduces the likelihood of the pitch, roll, and yaw excursions that lead to unintended stalls.

26th Joseph T. Nall Report

ASI put emphasis on a new release strategy of this year's report that resulted in wider distribution and reception. The *Nall Report* is the most widely recognized and referenced analysis of GA accidents in our industry.

2015 – 2016 General Aviation Accident Scorecard

ASI prepared a brief statistical summary of GA accidents in calendar years 2015 and 2016. The Scorecard supplements the full-length *Nall Report* by providing a quick, more current analysis of GA safety performance without the detailed narrative.

Monthly GA Fatal Accident Dashboard

ASI's monthly GA Fatal Accident Dashboard tracks fatal general aviation accidents over the FAA's fiscal year and compares those figures to the FAA's established not-to-exceed (NTE) level.

Accident-to-Safety Content Consumption Correlation

ASI initiated an effort to draw data-supported correlation between pilot fatalities and inattentiveness to safety materials and programs. Early data appears to support a positive relationship. Research is ongoing.

Critical to AOPA's and ASI's success is maintaining and growing meaningful connections with the GA community, donors, industry, and government through positive perceptions, relationships, and experiences that strengthen our brand credibility and authority.

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LEVERAGED OUR BRAND AUTHORITY TO INFLUENCE AND HARMONIZE INDUSTRY EFFORTS

NTSB Meeting – On April 21, AOPA hosted Acting NTSB Chairman Robert L. Sumwalt, Board Member Earl F. Weener, Office of Aviation Safety Director John DeLisi, and Senior Aviation Investigator Tim LeBaron in a visit to AOPA headquarters where they joined AOPA President Mark Baker and a senior management delegation from AOPA and the Air Safety Institute in a wide-ranging discussion of aviation safety. The meeting offered AOPA an opportunity to make NTSB leadership more aware of the potential bias inside the NTSB with regard to probable cause findings. ASI followed up with quarterly sessions in July and November.



In-Person Safety Seminars – ASI delivered over 200 nationwide seminars on two different safety topics in 2017 starting in the spring with *Nontowered Case Studies: What Went Wrong?* which was attended by nearly 11,000 people at 96 locations, followed by *Fly By Night* in the fall, which was attended by 7,500 people at 81 locations. Additional seminars on other safety topics were presented at Sun ‘n Fun, EAA AirVenture, AOPA regional fly-ins, and other locations throughout the U.S.

Speaking Engagements and Industry Participation – ASI leadership provided keynote, safety, and awards presentations at 24 aviation-related events throughout the year.

DEVELOPING SYNERGIES WITH YOU CAN FLY IN FURTHERANCE OF THEIR MISSION

ASI and You Can Fly are working together to grow a stronger community of safety-minded pilots by embedding safety-related information and skills at the outset of training.

Rusty Pilots online course – ASI designed the interface for the new Rusty Pilots online course and completed work on the beta version. The course is scheduled for release in Q1, 2018.

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Safety guidelines for flying clubs – ASI and You Can Fly worked on a joint project to promote and enhance safety at flying clubs through easy-to-access and easy-to-use online resources. Initial work began by identifying the elements of a good flying club safety program and researching best practices and recommendations for implementing those elements.

Integration of ASI safety content into YCF flight training curriculum – ASI worked with the YCF team to discuss and recommend ways of integrating ASI safety programs and content into their new flight training curriculum currently being developed. The goal is to make sure safety is introduced at the outset of flight training instead of becoming a supplemental afterthought.

Drone safety content – In development of AOPA's Part 107 seminars, which launched successfully in late June, ASI produced three short videos to help engage seminar attendees on the various topics within the seminar.

