



SAN DIEGO AIR & SPACE MUSEUM
“Creating Memories Worth Repeating”

2017 ANNUAL REPORT

SAN DIEGO AIR & SPACE MUSEUM CONNECTIONS

The San Diego Air & Space Museum enjoys a wide range of affiliations and associations with a growing number of important organizations recognized locally, nationally and internationally.



MISSION STATEMENT

VISION

The San Diego Air & Space Museum, one of the world's premier air and space-themed science centers and museum, inspires our next greatest generations to achieve excellence in their lives by challenging their innate human pioneering spirit and encouraging the necessary risk-taking required to achieve global innovation success.

MISSION

PRESERVE...INSPIRE...EDUCATION...CELEBRATE!

PRESERVE significant artifacts of air and space history and technology.

INSPIRE excellence in science, technology, engineering and mathematics.

EDUCATE the public about the historical and social significance of air and space technology and its future promise as a pathway to advanced innovations.

CELEBRATE aviation and space flight history and technology.

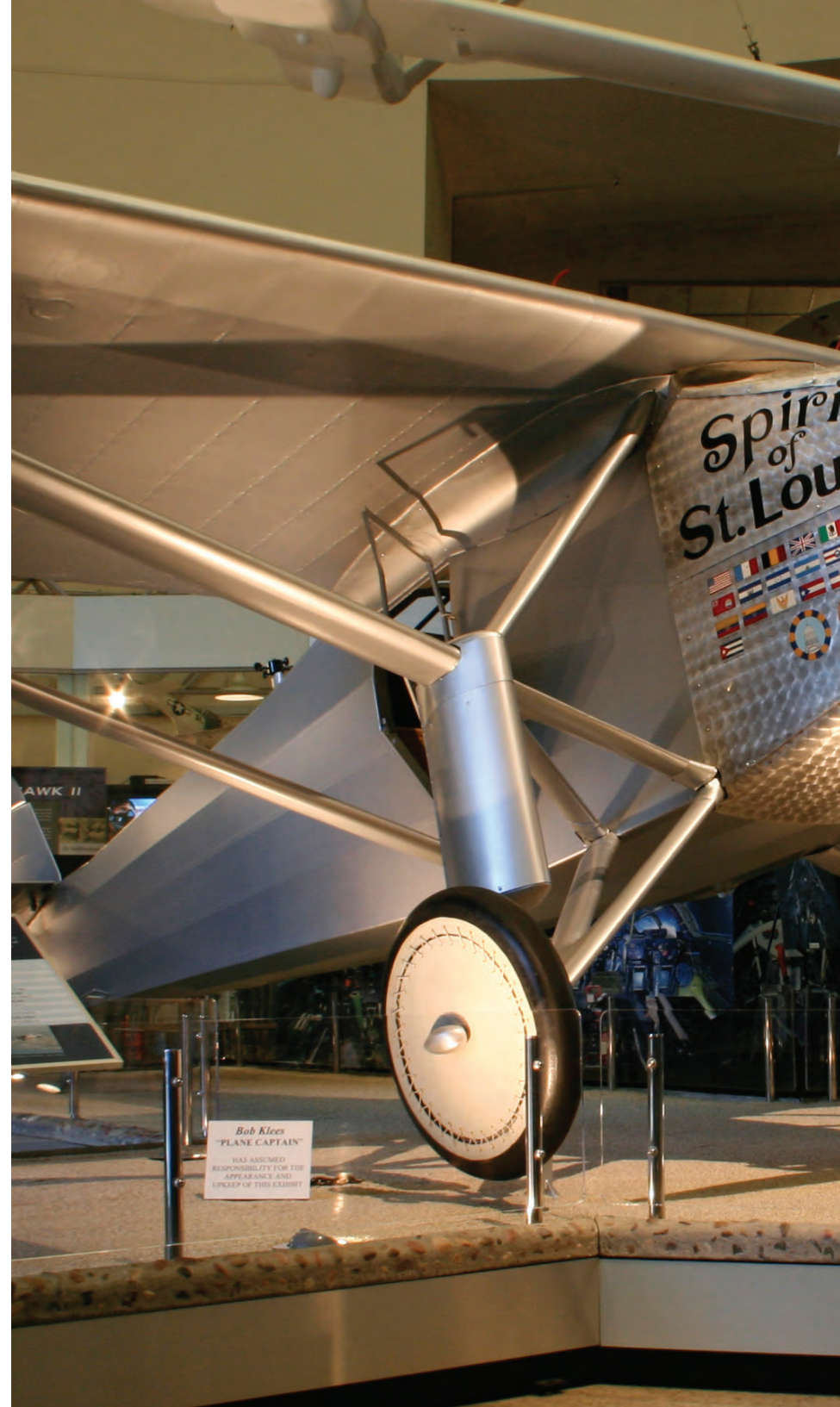
VALUES

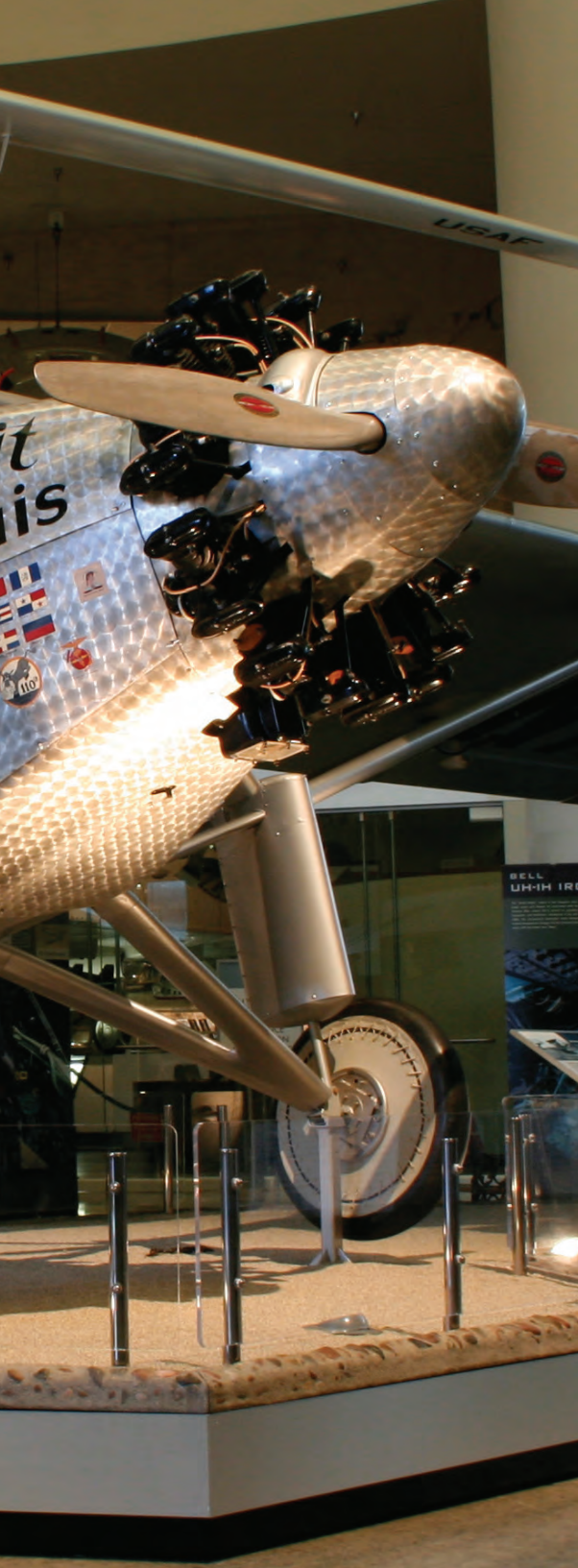
The San Diego Air & Space Museum adheres to impeccable professional standards as it preserves, interprets, educates and shares its rich aviation and space resources:

- To act as exceptional stewards on behalf of the general public and earn the trust of our donors and members by caring for our collections. Interpret our collections accurately and using society's generosity in a beneficial manner conducive to the spirit of excellence on behalf of the common good for all.
- To inspire an interest in science, technology, engineering, mathematics, and innovation, as well as history. Inspire the necessary risk-taking in future generations to ensure continued exploration of the outer bounds of what can be.
- To educate through public outreach and engagement.
- To honor the legacy of aviation and space flight technology and the men and women who forged the path for others to emulate.

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FROM THE COCKPIT



Dear Friends:

The San Diego Air & Space Museum celebrated another remarkable year thanks to the generosity and commitment of our valued donors, partners, staff and volunteers. We're very grateful to those who support our work every day to ensure the successful achievement of our mission to preserve, inspire, educate and celebrate.

We pride ourselves in preserving significant artifacts of air and space history, offering comprehensive STEM learning, providing access both inside and outside our walls through innovative technology. The incredible investments by our supporters has heightened our reputation as a state-of-the-art, world-class experience.

As you'll read in the following pages, we've acquired new collections, improved and expanded educational programs and added an extraordinary exhibit, *Be the Astronaut*, putting visitors in control of the spaceships of tomorrow!

Last fiscal year, the Museum experienced tremendous growth in technological innovation. A life-size animatronic of Charles Lindbergh standing next to his "Spirit of St. Louis" now greets visitors just inside our main entrance. What an interactive and realistic attraction for guests of all ages!

New simulators offer the utmost experience in immersive virtual reality entertainment – a thrill of a lifetime! Our restoration department volunteers are working on very exciting projects

both in Balboa Park and at our Gillespie Field Annex. And our Library & Archives continued to digitize more of our collections for improved online access.

The annual International Air & Space Hall of Fame Celebration was again a huge success as we honored eight deserving people and organizations whose efforts made significant contributions in the fields of air and space. We also celebrated an important time in history – the 45th anniversary of Apollo 16.

Please enjoy this Annual Report – and its new design! As we look forward to next fiscal year, we thank you for your continued support so we may continue to enhance the visitor experience, pursue groundbreaking exhibits, and inspire generations to come.

A handwritten signature in blue ink, appearing to read "Jim", with a stylized flourish.

James G. Kidrick
President & CEO

FISCAL YEAR 2017: BY THE NUMBERS

ATTENDANCE

- More than 270,000 visitors
- More than 76,000 people visited the Museum at no cost on Free Tuesdays, December Nights, through Title One school groups and as active duty military, (free entry, the only Balboa Park attraction to do so) a 2.4% increase over the previous fiscal year

EDUCATIONAL PROGRAMMING

- The Education department enriched the lives of 20,256 students through its onsite programming
- The Museum's 25 education events drew 8,581 participants

STAFF AND VOLUNTEERS

- 80 paid staff, including 38 full-time and 42 part-time or on-call
- Dedicated volunteer workforce of 133
- Volunteers provided 30,708 hours of service
- Volunteers ranged in age from 15 to over 97

ONLINE & SOCIAL MEDIA

- In FY17, the Museum's website received 866,346 views
- Website Sessions/Visits – 266,994
- Website Unique Visitors – 213,623
- More than **36 million** views of the Museum's digital images on Flickr
- Flickr – Library & Archives, 7,500 Followers
- 963,000 views of the Museum's films on YouTube
- Facebook – 14,882 Likes
- Twitter – 5,496 Followers
- YouTube – Library & Archives, 5,704 subscribers
- Instagram – 772 Followers
- Pinterest – 1,056 Followers



EXHIBITIONS

- *Da Vinci: The Ultimate Innovator* (July 2016 – December 2016)
- *Be the Astronaut* (February 2017 to June 2017)
- New exhibit celebrating legendary San Diego aviation pioneer Reuben H. Fleet
- Life-size Charles Lindbergh animatronic next to the “Spirit of St. Louis”
- Interactive smart board dedicated to the International Air & Space Hall of Fame
- Exhibit of Neil Armstrong’s personal items, including handwritten letter from Charles Lindbergh and Apollo 11 Mission Patch

“THIS MUSEUM AND THEIR ACTIVITIES NEVER CEASES TO AMAZE ME. SAN DIEGO IS VERY LUCKY TO HAVE SUCH A WORLD-CLASS ORGANIZATION.”

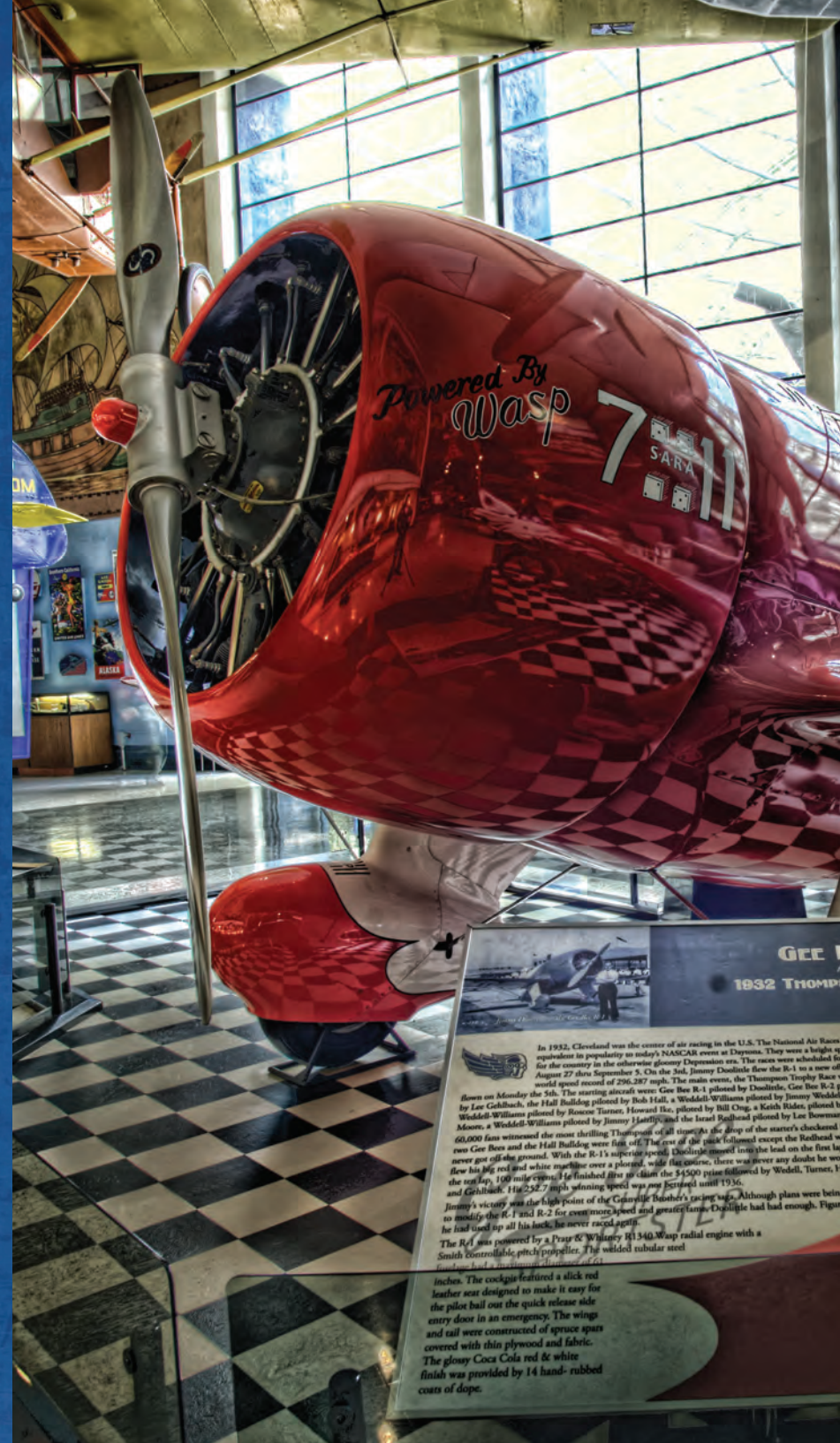
*Colonel Walter Cunningham, USMCR, (Ret.)
NASA Astronaut
Lunar Module Pilot, Apollo 7*

COLLECTIONS

The San Diego Air & Space Museum (SDASM) is a 501 (c) (3) non-profit organization. Established in 1961, SDASM was the first aero-themed museum to be accredited by the American Association of Museums in 1981 (now the American Alliance of Museums), and only the twelfth institution in California to be awarded Smithsonian Affiliate status. In 2007, the Museum was designated by the California State Legislature as the official Air & Space Museum and Education Center of California.

The Museum is known throughout the world for its collection of extraordinary and historically significant aircraft, spacecraft and research materials. More than 120 aircraft and space vehicles are on exhibit at the Museum's three locations. The exhibits include an amazing collection of rare and unique aircraft engines, instruments, models and equipment, as well as aviation-related medals, trophies, art, uniforms and spacesuits. The more than two million artifacts in the Museum's collection allow visitors to immerse and engage in a rich array of stories from the lives of the men and women who changed the world through flight.

Each exhibit and artifact has a story to tell, and the Museum's Library & Archives collections are essential to the telling of these narratives. The Library & Archives collection is



Gee Bee R-1
1932 THOMPSON TROPHY RACE

In 1932, Cleveland was the center of air racing in the U.S. The National Air Races equivalent in popularity to today's NASCAR event at Daytona. They were a highlight for the country in the otherwise gloomy Depression era. The races were scheduled for August 27 thru September 5. On the 3rd, Jimmy Doolittle flew the R-1 to a new world speed record of 296.287 mph. The main event, the Thompson Trophy Race was flown on Monday the 5th. The starting aircraft were: Gee Bee R-1 piloted by Doolittle, Gee Bee R-2 piloted by Lee Gehlbach, the Hall Biplane piloted by Bob Hall, a Waddell-Williams piloted by Jimmy Weddel, a Waddell-Williams piloted by Roscoe Turner, Howard Hoke, piloted by Bill Cogg, a Keith Haden, piloted by Waddell-Williams piloted by Jimmy Hantel, and the best Redhead piloted by Lee Seaman Moore, a Waddell-Williams piloted by Jimmy Hantel. The best of all aircraft, the group of the starter's checked 60,000 fans witnessed the most thrilling. The group of all aircraft, the group of the starter's checked two Gee Bees and the Hall Biplane were both off. The rest of the pack followed except the Redhead never got off the ground. With the R-1's superior speed, Doolittle moved into the lead on the first lap. He flew his big red and white machine over a plywood, wide flagstone, there was never any doubt he would win the 100 mile event. He finished first in about the 5:50:00 time followed by Weddel, Turner, Hoke and Gehlbach. His 296.287 mph winning speed was not increased until 1936.

Jimmy's victory was the high point of the Grinnell Baber's racing saga. Although plans were being made to modify the R-1 and R-2 for even more speed and greater range, Doolittle had had enough. Flight he had used up all his luck, he never raced again.

The R-1 was powered by a Pratt & Whitney R1340 Wasp radial engine with a Smith controllable pitch propeller. The welded tubular steel fuselage had a maximum length of 27 feet 6 inches. The cockpit featured a stick red leather seat designed to make it easy for the pilot bail out the quick release side entry door in an emergency. The wings and tail were constructed of spruce spars covered with thin plywood and fabric. The glossy Coca Cola red & white finish was provided by 14 hand-rubbed coats of dope.

one of the largest of its type in the nation, containing books periodicals, archival records, films, oral histories and more than four million images. These materials support the Museum's education, exhibition, and aircraft restoration projects, as well as providing support to authors, historians and researchers from around the world. A huge portion of the historical archives – the largest collection of its kind in the southwestern United States – has been digitized and placed online for easier access.

CARING FOR THE COLLECTIONS

The Museum adheres to the highest Alliance of American Museum standards and maintains extensive internal policies and procedures outlined as best business practices for the preservation of its collections. The Museum has continued to develop and extend its collection care activities to help prevent damage to vulnerable parts of the collections. During the year, the first stages of renovation work were completed on the Museum's archives storage room. Construction started in July and will be completed in November of 2017. The first phase of the renovation was the enclosure of the storage area with 16-foot walls complete with environmental controls. The second phase will be the addition of moveable compact shelving. Once the work is completed, the archives storage space will increase by 50 percent, ensuring the Museum's collections are properly stored and accessible in a climate-controlled setting.

NOTABLE ACQUISITIONS

The Curatorial Department received 77 donations in FY17. The Library & Archives processed 44 donations in FY17, including two new critically important additions:

Reuben H. Fleet Family Donation

Reuben H. Fleet's family recently donated his personal book

collection to the Museum, which includes 20 volumes, many of which are first editions, autographed by many prominent early aviation leaders, including several company founders. The family also loaned three of Fleet's personal scrapbooks to the Museum, which contain many important original newspaper articles and company records from the late 1930s and early 1940s. A generous Fleet family donation is providing for future digitization of these records.

Theodore Bolduc Photo Collection

Theodore "Ted" Bolduc enlisted in the Navy at the start of World War II, serving throughout the war as an aviation photographer, assigned primarily to lighter than air (blimp) squadrons in Georgia and Florida. He married Navy nurse Bernice Fournier in 1946. Their daughter and son recently donated 30 of their father's original photographs to the Museum. The photographs were digitized and uploaded in April, and have already received more than 50,000 views.

“I’VE ALWAYS ENJOYED VISITING THE SAN DIEGO AIR AND SPACE MUSEUM AND ATTENDING ITS FIRST-CLASS CELEBRATIONS. IT DOES A SUPERB JOB IN RELATING THE HISTORY OF AVIATION AND SPACE EXPLORATION.”

Captain James A. Lovell, USN, (Ret.)

NASA Astronaut

Pilot, Gemini 7; Command Pilot, Gemini 12; Command Module Pilot, Apollo 8; and Commander, Apollo 13

EXHIBITIONS

The Museum's wide-ranging, interactive, fun and educational exhibitions focus on two critically and equally-important narratives: How great teams of dedicated men and women displayed pioneering leadership throughout the meteoric advances in air and space technologies; and how the progressive leaps in air and space innovations have impacted virtually every other industry worldwide in the 114 years since Orville and Wilbur Wright invented powered flight.

In addition to its permanent exhibitions, the Museum continues to add new exhibitions on a regular basis. The Museum also hosts special traveling exhibitions, which are constantly changing and rotated out on a regular basis. A new exhibition featuring never-before-displayed artifacts about Reuben H. Fleet was unveiled in FY17, and planning was finalized to unveil a second exhibition featuring Wally Schirra on display in FY18.

Reuben H. Fleet/Consolidated Aircraft Exhibit, December 2016

The Museum continues to acknowledge the contributions of San Diego-area aviation pioneers, industrialists, and personalities. In December 2016, the Museum unveiled a Reuben H. Fleet/Consolidated Aircraft exhibit. Located

in the Golden Age of Flight Gallery adjacent to the Museum's Consolidated PT-1 "Trusty," the company's first commercial success story, the exhibit features unique artifacts, photographs, models, and textural descriptions of Fleet and his company spanning the years from its beginnings in New York to present day. A giant in the aviation industry, and a significant influence in San Diego's aviation history, the "Major" -- as Fleet was known -- will be celebrated by visitors for years to come. The exhibit was made possible by a generous donation from the Fleet Family Foundation.

Wally Schirra, December 2017

In December 2017, the Museum debuted an exhibit dedicated to the life and accomplishments of Walter M. Schirra. Walter "Wally" M. Schirra, Jr. (Captain, USN, Ret.) is one of the most notable pioneer astronauts in the history of American spaceflight. Schirra was born March 12, 1923, in Hackensack, New Jersey and graduated from the U.S. Naval Academy in 1945. During the Korean War, he flew 90 combat missions for the U.S. Air Force as an exchange pilot, and was awarded the Distinguished Flying Cross. In 1959, Schirra was selected as one of the seven original Mercury astronauts and, in 1962, became the fifth American in space, piloting the Mercury-Atlas 8 (Sigma 7) on a six-orbit mission lasting 9 hours, 13 minutes and 11 seconds. Schirra was the only astronaut to fly



in America's first three space programs; the Mercury program as noted, Gemini 6A in 1965 with Tom Stafford, and as commander of the first successful Apollo mission (Apollo 7) in 1968. After retiring from NASA, he spent the rest of his life in San Diego where he wrote several books detailing his experiences.

The Walter M. Schirra exhibit will be a tribute to the astronaut's legacy and his important contributions to air and space exploration. Included will be his Mercury spacesuit, flight jacket, medals, a large 38-inch Mercury Atlas model and other artifacts. In addition, the exhibit will feature Schirra's Emmy and the Emmy-award winning video of his interview with Walter Cronkite, played on a black-and-white retro television.

SPECIAL EXHIBITIONS

During FY17, the Museum offered two special exhibitions: *Da Vinci: The Ultimate Innovator*; and *Be the Astronaut*.

Da Vinci: The Ultimate Innovator debuted in September 2015 and ran through December 2016. Leonardo Da Vinci remains one of the most fascinating people in history. The special exhibit brought to life his inventions, artworks, machines, and robotics. While Da Vinci's genius as an artist is well known, the exhibit revealed how his conceptual designs for many technological wonders were envisioned centuries ahead of their time.

Be the Astronaut opened in February 2017 and ran through December 2017. *Be the Astronaut* is an immersive experience teaching STEM-based content via a fusion of physical exhibits and state-of-the-art interactive technologies. Scientifically verified by experts at NASA for accuracy and feasibility, *Be the Astronaut* teaches visitors the concepts, challenges and excitement of spaceflight through the use of touch-screen stations, artifacts and simulators built to look like space capsules. Each activity embodies a particular element necessary for spaceflight – such as propulsion, life support, resources storage, energy and navigation.

RESTORATION

The Museum maintains a robust and vital Restoration department, consisting of 58 volunteers. During FY17, these dedicated men and women contributed 11,424 hours to the restoration and creation of the Museum's most important artifacts. Many of the volunteers are professionals from aerospace companies in the San Diego region; others are from different professions who are willing to learn the requisite skills required to build and restore aircraft, ranging from simple gliders to complicated space vehicles. The quality of the Restoration department is nationally recognized, noted by its previous exceptional projects for the National Museum of Naval Aviation and the Smithsonian's National Air & Space Museum.

BALBOA PARK

In 1935, industrialist Howard Hughes created his H-1 Racer. By attaching an 850 horsepower engine to one of the sleekest and most aerodynamic airframes ever produced, he set records for straight-away speed for short distance flights at 350 mph, as well as a transcontinental flight time of seven hours and 28 minutes, at an average speed of 332 mph, establishing Hughes and his companies as formidable players in aviation innovation.



For the past several years, the Balboa Park restoration team has been constructing a reproduction of the Hughes racer. Due to the complexity of the aircraft, the restoration team is reverse engineering the construction plans because there are no original drawings. Covering the main wing sections, top and bottom, is nearing completion. Building the forward spar support structure also is nearly complete. The next steps are to install the interior components in the aft section of the fuselage before skinning the entire area.

GILLESPIE FIELD ANNEX

The hangars at Gillespie Field house the Museum's second restoration center. Every restoration project completes its journey at the Annex with paint and decals. Restoration work of all kinds, especially wood and fabric construction, takes place at the Annex.

Current projects include the ground-up reproduction of a 1927 Boeing FB-5 bi-plane fighter. The project began four years ago. The large upper wing spar, rib and aileron parts are nearly completed, and portions of the wing are now covered with plywood. The fuselage is nearing completion and the fabrication and installation of the aluminum panels is well along the way.

Volunteers are also restoring to flying condition a 1943 Aeronca L-3. Used by the military as a liaison aircraft during World War II, the craft will be finished in its original olive drab paint scheme with appropriate military markings.

MODEL SHOP

The Museum also hosts an elaborate model shop staffed by talented volunteers at Gillespie Field. The modeling team creates museum-quality models from large scale airliners to rockets and

gliders. The Museum turns to the modelers when it is in need of a specialty, such as a large-scale model of an aircraft too large to fit in the Balboa Park facility. Currently the modelers are working on a 1/9 scale model of a B-17 Flying Fortress which will ultimately hang in the World War II Gallery. In addition to the B-17 project, the shop is nearing completion of a 1/6 scale model of the turbine Bonanza flown around the world by long-time library volunteer Dennis Stewart.

In FY17, Larry Warden, who worked for the Supermarine company during World War II as a design engineer on the fabled Spitfire, crafted six radio controlled mid-war era British fighter aircraft in 1/6 scale. Warden, who is 96 years old, flew all six of the amazingly accurate creations before donating them to the Museum. The collection hangs above the Balboa Park restoration area for basement visitors to enjoy.

“THERE ARE VERY FEW SPACE AND AVIATION MUSEUMS IN THE COUNTRY AND THE SAN DIEGO AIR AND SPACE MUSEUM IS ONE OF THE BEST. THE EXHIBITS ARE EXCEPTIONAL AND THE STAFF IS FRIENDLY AND ACCOMMODATING. A MUST SEE IF IN SAN DIEGO. ONE OF MY FAVORITES!”

Colonel Al Worden, USAF (Ret.)

NASA Astronaut

Command Module Pilot, Apollo 15

LIBRARY AND ARCHIVES

The Museum's Library & Archives (L&A) houses the largest private, nonprofit collection of its type in the nation. The Museum is also widely known for its successful continuing efforts to open its collections for education and research, both on-site and digitally. Open to the public Monday through Friday from 10:00 a.m. to 5:00 p.m., the L&A is an essential and important resource for aviation authors, historians, researchers and the general public.

The L&A processed more than 40 donations in FY17. Along with many books and photographs, there were several special donations, including a magnetic tape recording of John Glenn's Project Mercury launch in 1962; photo albums, notes, sketches and letters regarding the restoration of the March of Transportation mural in the Museum; a CD recording of the fire dispatchers during recovery efforts of PSA Flight 182; a number of books from the personal collection of Reuben H. Fleet, many with inscriptions by the authors; and 3,200 digital scans of the 355th Fighter Group.

The L&A also supports the Museum's education, exhibit and restoration programs by providing historical background, photographs, films and documents. The L&A managed several projects and initiatives in FY17, and assisted an

increased number of outside researchers. The L&A continues to make significant progress in preserving and adding to the Museum's collections, and in providing greater online access for researchers, scholars, educators and students around the world.

The L&A is boosted by the help of more than 30 dedicated technicians, who, during the past fiscal year, contributed 7,098 hours. Volunteers digitized and cataloged more than 27,000 images and 2,000 films; processed, organized and cared for the collections; assisted with book sales and other fundraising activities; and prepared articles for the Museum's website, newsletters and other publications.

RESEARCH

Last year, Library & Archives responded to a growing number of inquiries from all over the world. They answered more than 11,292 telephone and email information requests. There were 32 onsite high-level research specialists, and the global audience increased significantly through improved access and visibility of the L&A's records on the Internet.

In FY17, the Library & Archives department received inquiries from more than 25 states, as well as countries from around the world, including Canada, France, New Zealand, Australia, United



Kingdom, Germany, Russia, Denmark, Japan and China. Many well-known organizations also requested assistance, including Northrop Grumman Corporation, NASA Ames Research Center, NASA Langley Research Center, Naval Warfare Center, Canadian Museum of History, San Diego Public Library, the National World War II Museum and the Aerospace Corporation.

The L&A assisted more than 30 authors in their research and preparation of books, newspaper and magazine articles, as well as with online magazines, multi-media displays and exhibits, promotional catalogs, marketing ads and commercial websites. Topics included the Flying Tigers, Detection Aircraft, 1919 Transatlantic Flight, Flying Car, Richthofen's medals, 345th Bomb Group, the Atlas missile program, Arizona aviation, USS *Yorktown*, USS *Saratoga*, Reims-fort de Pompelle, Joseph Crosson, Karl Bossart, Leroy Grumman and Dieter Dengler.

Drawings, photographs, and basic information about various aircraft are often requested. In FY17 requests for information included the Vultee Model 48, Lockheed L-2000 SST, Ryan SC-W, Ryan ST-A, Convair Model 200, Nieuport 83, F-104, Vought SB2U, Vought O2U-2, Grumman TBF-1, RB-1 Conestoga, P-51 Mustang, Ryan PT-22, Convair XFY-1, Boeing B-29, CH-47 Chinook, Martin Bomber, Fokker E.III and the Ki-61 Tony.

GRANT PROJECTS

National Historical Publications and Records Commission Grant

During the past year, the Library & Archives completed work on a two-year grant received in 2015 from the National Historical Publications and Records Commission to digitize and catalog its Atlas missile and space launch system images. The collection documents all aspects of the Atlas missiles produced in San

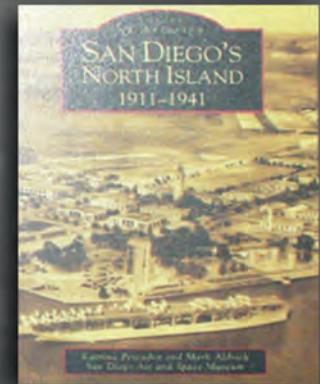
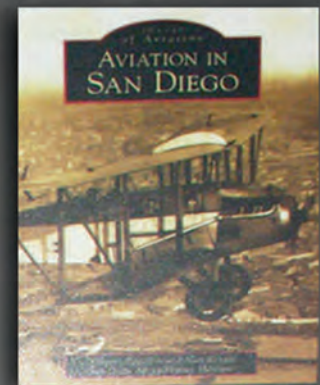
Diego by the General Dynamics Convair Division, later the Astronautics and Space Systems Divisions, from design and development to testing and launching. More than 110,000 Atlas images were cataloged, of which 40,000 were digitized and placed on Flickr. These images have already received more than four million views. As part of this project, the Library & Archives also cataloged thousands of additional Atlas negatives. These negatives, initially unidentified, are housed and cataloged and are available for future research.

Institute of Museum and Library Services Museums for America Grant

In FY17, the Museum received an Institute of Museum and Library Services, Museums for America, three-year grant to increase online access to its renowned aerospace-related collections. The Museum's project was selected from more than 500 applications. It is a joint effort between the Museum's Library & Archives and Curatorial departments.

The first phase of the *Great Explorations* project, a 2010 Museums for America grant, provides online access to more than 170,000 objects, including many photos and films from the Library & Archives' collections. The new grant provides for cataloging, photographing and displaying the additional items so they can be accessed through existing social media sites.

Benefits extend to many audiences, particularly teachers, researchers (including scholars, students, aviation enthusiasts, authors and film producers), as well as other museum professionals. These audiences will be able to use existing online resources to find and access these rare artifacts, without having to physically visit the Museum. The general



public also will be able to tag images with additional information, which will be stored with the objects' metadata.

PUBLICATIONS

The Library & Archives recently updated and combined the original International Air & Space Hall of Fame publication, *These We Honor*, providing both biographies and portrait images for 1965-2006 Hall of Fame honorees. The Addendum documents 2007-2016 honorees. A final, combined publication is planned for 2018 to include 100 percent of the Hall of Fame honorees.

“THE SAN DIEGO AIR & SPACE MUSEUM’S FOCUS ON STEM EDUCATION IS CHANGING LIVES AND MAKING IT EASIER FOR UNIVERSITIES LIKE OURS TO FIND, RETAIN AND GRADUATE INCREDIBLY BRIGHT AND MOTIVATED STUDENTS IN THE AREAS OF AEROSPACE, AVIATION AND TECHNOLOGY. WE VALUE OUR LONGSTANDING RELATIONSHIP WITH THE MUSEUM AND IT’S PROGRAMS BECAUSE IT IS MAKING A DIFFERENCE IN THESE YOUNG PEOPLE’S LIVES.”

*Dr. Frank Ayers
Chancellor, Embry-Riddle Aeronautical
University, Prescott, Arizona*



EDUCATION

The Museum's approach to education encompasses programs for preschoolers, students, teachers, families, everyday visitors and special groups. The Education department stresses STEM education, as well as the history of aviation and spaceflight. In FY17, the Education department enriched the lives of 20,256 students.

The Museum's educational programs include interactive workshops, outreach programs and summer camps. To match the ever-changing needs of schools, the Education department has recalibrated its curriculum, focusing on students directly designing and building engineering projects using deeper, inquiry-based learning practices. The Education department also continues to engage thousands of students through the School in the Park program, where the Museum is a vital part of students' formal academic experience and formative years.

The most familiar educational activity involves visits by classes from local schools, which are central to the Museum's role as an educational institution. During the past year, 127 schools visited the Museum. In an effort to increase the number of students who visit the Museum, the Education Department has continued to develop new programming, including family

days, competitions, special one-day festival-type events such as Space Day and partnerships with local universities. The Museum's 25 education events drew 8,581 participants in FY17.

Within the Park, the Education department partnered with fellow institutions to offer cross-curricular education, including summer camp collaborations. Education also hosted partners such as NASA, local robotics groups, Higher Orbits and Tijuana's El Trompo Interactive Museum to showcase their innovations as part of the Museum's family events. Outside the park, continued participation in collaborations such as local library events and the San Diego Festival of Science and Engineering reached thousands of new families through hands-on educational activities. The Education Department is led by Francis French, a world-renowned space expert and co-author of several books related to the legacy space programs, including *Into that Silent Sea*, *In the Shadow of the Moon* and *Falling to Earth*.

FLY YOUR RIDE! ENGINEERING COMPETITION

The Museum launched the innovative and fun Fly Your Ride! engineering competition in 2013. Middle and high school teams from all over San Diego and nearby counties work to design and build miniature flying cars. Their final products are tested to see



if they can fly over an ever-increasing gap after going down a Museum-built ramp. The competition is fun and creative and also is specifically designed to appeal to students who do not generally excel at science fairs. The final competition day is hosted in the Museum's Pavilion of Flight, and the excitement of the students, their families and other audience members as they watch the cars fly competitively makes for an engaging and enjoyable community event.

A record 344 teams entered Fly Your Ride in FY17, including 272 middle school and 72 high school teams from Southern California, the most since the competition's inception. The 130 teams which ultimately advanced to the finals were chosen based on their blueprints and designs meeting the standards established by the Education Department.

BEAM ACCESSIBILITY TOUR

In the past, for those unable to physically travel, visiting the San Diego Air & Space Museum was not an option. But now, an innovative and exciting program broadens Museum access to previously underserved populations.

Known as the BEAM, the program allows visitors to enjoy the Museum through a virtual presence device. The technology helps visitors telecommute to the Museum, where qualified docents accompany them on walking tours of the Museum's 68,000-square-foot floor, featuring more than 120 full-scale aircraft and replicas, as well as an ever increasing number of special exhibits and galleries.

The BEAM program differs from audio tours and other types of virtual tours as the technology allows for an independent and interactive experience through a self-determined path. For example, virtual visitors are able to interact with an in-house docent as they explore the galleries, seeing the artifacts as clearly as if they were at the Museum. The Beam tour also offers opportunities to interact with onsite visitors. Comments and questions from offsite visitors can be relayed and responded to immediately.

SPECIAL EVENTS

The Museum's Special Events create unique opportunities to introduce new audiences to San Diego's premier venue, while also serving to strengthen ties with diverse communities from throughout the region and beyond.

The Museum hosted four special in-house events in FY17, including:

- 2016 Hall of Fame Celebration (400 attendees)
- Scholarship Awards Event (100 attendees)
- Golf Tournament (144 golfers, 200 attendees)
- America Celebrates the 45th Anniversary of Apollo 16 (250 attendees)

The Museum also is widely-known for its exceptional third-party events. The Special Events department produces numerous corporate and personal events throughout the year, each enjoying the Museum's ambiance, entertainment, and education opportunities. The Museum offers a unique venue for reunions, conventions, holiday parties, corporate events, weddings, receptions, and tradeshow.



The Museum's accommodations include:

- **Sit-Down Dinners for 700**
- **Standing Reception/Food Stations for 2,000**
- **Stage, Up Lighting and State-of-the-Art Audio-Visual System**
- **Tables, Chairs, Bars, Cocktail Tables and Linens**
- **Full Access to Museum Exhibits**
- **Interactive Flight Simulators**
- **Virtual Reality Experiences**
- **3D/4D Theater (one of only four in San Diego and the only one in Balboa Park)**
- **Interactive Photo Booth**
- **Docent-Led Tours**
- **Special traveling exhibits**
- **Flight Path Grill/Observation Deck**
- **Free Parking**

Thanks to the Special Events staff, the Museum enhanced its community relations efforts, hosting more than 65 special events, reunions, tours and dinners, and drew a total of nearly 14,000 visitors in FY17. Additionally, Special Events often plays an important role in defining the Museum by facilitating the celebration of milestone events or the achievements of pioneering aviators, astronauts, engineers and more.



MUSEUM EVENTS

Through the efforts of its expert Special Events team and dedicated staff, the Museum hosted three memorable events in FY17, including “America Celebrates the 45th Anniversary of Apollo 16,” the always much-anticipated annual International Air & Space Hall of Fame Celebration and the 33rd Annual Charity Golf Tournament. Proceeds from all three events benefit the Museum’s education programs.

AMERICA CELEBRATES THE 45TH ANNIVERSARY OF APOLLO 16

A star-studded forum of key figures from the Mercury, Gemini and Apollo space programs shared a special and historic evening with guests on June 7, 2017, at the Museum. The evening included some of the biggest names in NASA history, including:

- **CHARLIE DUKE** – Apollo 16, the youngest man to walk on the moon and one of only 12 men ever to set foot on the moon
- **WALT CUNNINGHAM** – Apollo 7, the first manned Apollo flight
- **GERRY GRIFFIN** – Lead Flight Director for three moon landings – Apollo 12, 15 and 17

- **FRED HAISE** – Apollo 13, *Space Shuttle Enterprise*
- **AL WORDEN** – Command Module Pilot for Apollo 15

INTERNATIONAL AIR & SPACE HALL OF FAME CELEBRATION

Since 1963, the San Diego Air & Space Museum has welcomed more than 200 of the most famous men and women in aviation and space history into the International Air & Space Hall of Fame. The distinguished class of 2016 included:

- **AIRCRAFT OWNERS AND PILOTS ASSOCIATION (AOPA)** – The world’s largest pilot community, dedicated to making flying safe, fun, and affordable.
- **AL WORDEN** – Command Module Pilot for Apollo 15, the first extended scientific exploration of the Moon.
- **THE BOEING COMPANY – 100TH ANNIVERSARY** – The Boeing Company’s contributions to technology and innovation in aviation and space have contributed to virtually every scientific field.
- **COAST GUARD AVIATION – 100TH ANNIVERSARY** – “Semper Paratus - Always Ready.” The official motto of the United States Coast Guard encapsulates what Coast Guard Aviation does best - being ready for any mission, anytime, anywhere.



- **DALE MYERS** – From 1970 to 1974, Myers was the Associate Administrator for Manned Space Flight at NASA, a period he most often described as the highlight of his career. He was in charge of Apollo 13 to 17, and Skylab, and led the initial planning of the Apollo/Soyuz and Space Shuttle programs.
- **NON-SKEDS** – The “non-skeds airlines” were formed by a group of WWII pilots looking to continue flying after being discharged from the Air Force.
- **ORBIS International Flying Eye Hospital** – ORBIS International is a nonprofit development organization dedicated to saving eyesight worldwide.
- **AMERICA'S AVIATION FAMILY OF EXCELLENCE: THE MALONEYS AND HINTONS, WARBIRD AND AIR RACING LEGENDS** – Planes of Fame Air Museum is the oldest aviation museum west of the Rockies and home to two families who are legendary in warbird, air racing, and airshow circles.

33RD ANNUAL CHARITY GOLF TOURNAMENT

A longstanding tradition – this tournament brings golfers from across Southern California and beyond. Held at Coronado Municipal Golf Course, it’s a day of serious (and not so serious) golf, followed by cocktails, dinner, awards, and fun auction bidding. A dedicated hard-working golf committee ensured the August 2016 tournament was a huge success.

STAFF, VOLUNTEERS, INTERNSHIPS & DOCENTS

Of all of the incredible assets at the Museum, the men and women who make up its core volunteers, docents and staff are easily the most valuable. Together they constitute a remarkable group and are a critical connection to the Museum's distinguished past, a vital part of its every-day activities, and a key force in driving its future success. They truly are the soul of the Museum.

STAFF

The senior staff team remained unchanged during FY17, providing a strong base to support the Museum's commitment to future planning and its goal of overall excellence. As a result, the Museum had the lowest turnover rate of any attraction in Balboa Park. In all, the Museum employed 80 paid staff, including 38 full-time and 42 who were part-time or on-call. The Museum's staff is highly diverse, representing different ages and ethnicities and a wide range of social and economic backgrounds.



VOLUNTEERS

The Museum benefits greatly from the hardworking and unselfish volunteers. In FY17, the volunteer work force was 133 strong and collectively provided 11,424 hours of service. Every area of the Museum – from docent-led tours, restoration efforts, education, special events, Library & Archives, collection care and research – benefits from the support and expertise of the volunteers.

Volunteers by department in FY17 included:

Docents	38
Balboa Park Restoration	41
Gillespie Field Restoration	19
Library & Archives	27
Curatorial	2
Other	6



INTERNSHIPS

The Museum offers internships for undergraduate and graduate level students in both Library & Archives and Restoration. Though interns at the Museum are not paid, the internships can be completed for academic credit, depending upon school policy. Library & Archives internships provide students with an opportunity to test their developing archival skills in a professional environment where they use current best practices and technologies. Interns work with archivists on challenging and rewarding projects and produce final projects which can be used as examples of professional experience. Occasionally, Library & Archives also offers internships for high school students. In addition to the L&A, the Restoration area is a vital and bustling site where capable interns also assist with interesting and unique projects.

DOCENTS

Of all the volunteers who give their time to make the Museum successful, docents most frequently come in contact with visitors. Docents serve as guides and teachers, sharing the excitement and history of flight with Museum guests. They not only guide both scheduled and unscheduled tours through the Museum and the Restoration area, but also make themselves available throughout the exhibit area to enhance the visitor experience.

“THE ONLY THING MORE EXCEPTIONAL THAN THE SAN DIEGO AIR & SPACE MUSEUM IS THE GREAT TEAM OF PEOPLE THAT BRINGS IT TO LIFE EACH AND EVERY DAY.”

Ed Bolen

President/CEO of NBAA in Washington, D.C.

LOW SPEED WIND TUNNEL & TECHNOLOGY CENTER

The San Diego Air & Space Museum continues to expand its horizons into the fields of research and technology through its Low Speed Wind Tunnel & Technology Center.

May 2017 served as the 70th Anniversary of the LSWT, which is located at 3050 Pacific Highway on the east side of Lindbergh Field in downtown San Diego. The Wind Tunnel originally began operations under the direction of Consolidated Vultee (Convair) in May 1947. General Dynamics assumed operations in 1961 when the company acquired Convair. General Dynamics' Convair Division (and later Lockheed) operated the facility until a private company took over in 1994. The Museum took over operations in March of 2006, and it remains the only privately held low-speed aeronautical wind tunnel in the United States.

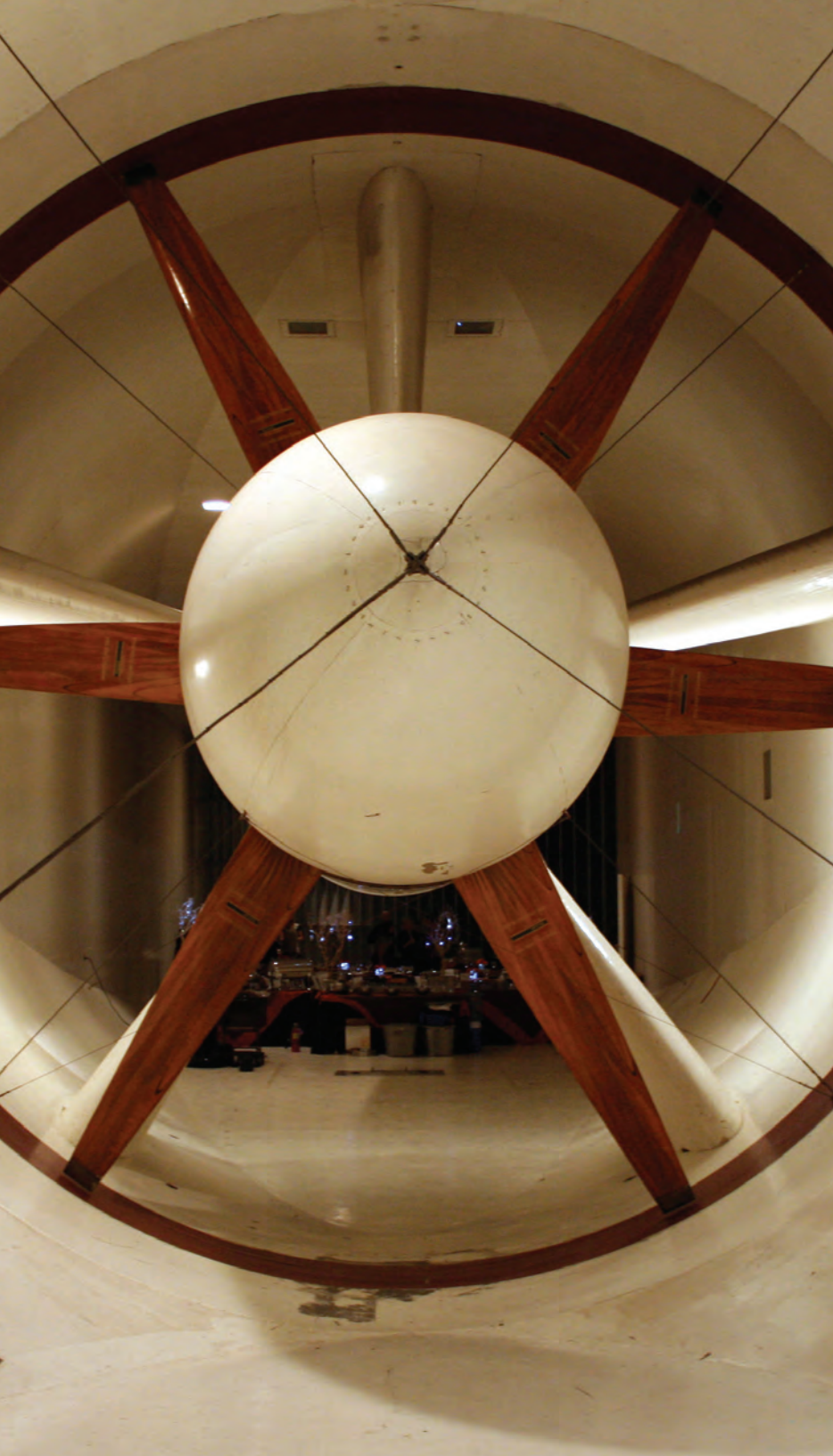
To date, the LSWT has conducted nearly 100,000 hours of testing and has been used extensively in numerous military and civil aerospace development programs, including the F-106, B-58, F-111, F-16, Global Hawk UAV, Tomahawk Cruise Missile and Advanced Cruise Missile. The LSWT also

served the testing needs of Cessna, Boeing, Gulfstream, Northrop Grumman, General Atomics, Raytheon, and Lockheed Martin. As the only wind tunnel in the nation capable of performing low-speed flutter testing, Boeing used the facility extensively to test all its commercial airliners, from the 707 to the 787 Dreamliner.

The facility also provided testing for nearly 300 professional and amateur bicyclists. In addition, the US Olympic Luge Team tested in the Wind Tunnel on multiple occasions.

“THE SAN DIEGO AIR & SPACE MUSEUM IS A GREAT PLACE FOR FAMILY FUN AND LEARNING.”

*Major General William A. Anders, USAFR (Ret.)
NASA Astronaut
Lunar Module Pilot, Apollo 8*



“THE SAN DIEGO AIR AND SPACE MUSEUM IS A NATIONAL TREASURE. IT NOT ONLY PRESERVES HISTORY, BUT MORE IMPORTANTLY IT PROVIDES PROGRAMS FOR YOUTH TO ENGAGE AND ONE DAY BE A PART OF AVIATION’S FUTURE.”

Jack J. Pelton

CEO and Chairman of the Board

Experimental Aircraft Association – The Spirit of Aviation

“THE SAN DIEGO AIR & SPACE MUSEUM IS AN ANCHOR IN BALBOA PARK. FOR ALL AGES, IT PROVIDES A HISTORY OF AVIATION; ADULTS CAN RELATE TO THE AIRCRAFT OF THEIR PAST AND PRESENT EXPERIENCES AND A LOOK INTO THE FUTURE OF SPACE TRAVEL OPENS THE DOOR FOR THE YOUNG TO EXPLORE.”

Betty Peabody

Founder of the Friends of Balboa Park

SCHOLARSHIP PROGRAM

The San Diego Air & Space Museum inspires young people to tackle the challenges of science, technology, engineering and mathematics, and to make a difference in the world through an innovative, adventurous spirit. To further these goals, the Museum selected 12 graduating seniors from San Diego County high schools to receive a total of \$45,000 in scholarships in FY17. Over the past 28 years, 293 talented high school seniors have been awarded a total of \$855,000 through the Museum's scholarship program.

The deserving FY17 scholarship awardees include:

SAN DIEGO AIR & SPACE MUSEUM SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS SCHOLAR

\$4,500

Jared T. Trok, Valley Center High School

- University of California, Davis

BILL GIBBS ENDOWMENT SCHOLARS

\$7,000, Two Awards at \$3,500

Owen R. Cruise, Mt. Carmel High School

- University of California, San Diego



BILL GIBBS ENDOWMENT SCHOLARS (CONT.)

Emma R. Wensley, San Marcos High School

- Columbia University

CONVAIR ALUMNI ASSOCIATION ENDOWMENT SCHOLARS

\$24,000, Six Awards at \$4,000

Teagan J. Ampe, Scripps Ranch High School

- University of Southern California

Bretton R. Benzie, Scripps Ranch High School

- Cal Poly San Luis Obispo

**Karsyn A. Chalfa-Swift, Steele Canyon
Charter High School**

- College of Idaho

Ryan T. Lehmkuhl, Heritage Christian School

- University of California, Berkeley

Shannon R. Linder, Ramona High School

- Yale University

Jeffrey R. Sardina, Carlsbad High School

- University of California, San Diego

R. A. REARWIN ENDOWMENT SCHOLARS

\$7,000, Two Awards At \$3,500

Ethan J. Brandt, Carlsbad High School

- University of California, Los Angeles

**Dominic R. Garza, Steele Canyon
Charter High School**

- University of California, Los Angeles

JENNINGS KELLY SCARBOROUGH SCHOLAR

\$2,500

Ethan G. Eisele, Westview High School

- University of Colorado

Tax deductible contributions are always welcomed to enhance permanent funds used for these scholarships. The Museum's Scholarship Program also offers a unique opportunity to remember loved ones by establishing scholarships in their name.

“WE ARE PROUD OF OUR PARTNERSHIP WITH THE SAN DIEGO AIR & SPACE MUSEUM AND HAVE BENEFITED FROM THE LEADERSHIP ROLE THEY ARE PLAYING IN LEADING MUSEUM EXHIBITS AND MANAGEMENT INTO NEW APPROACHES TO BETTER SERVE OUR GUESTS. THEIR FORWARD THINKING IS SETTING THE PACE FOR THE INDUSTRY.”

General J.R. “Jack” Dailey, USMC (Ret.)

John and Adrienne Mars Director

National Air and Space Museum

Smithsonian Institution

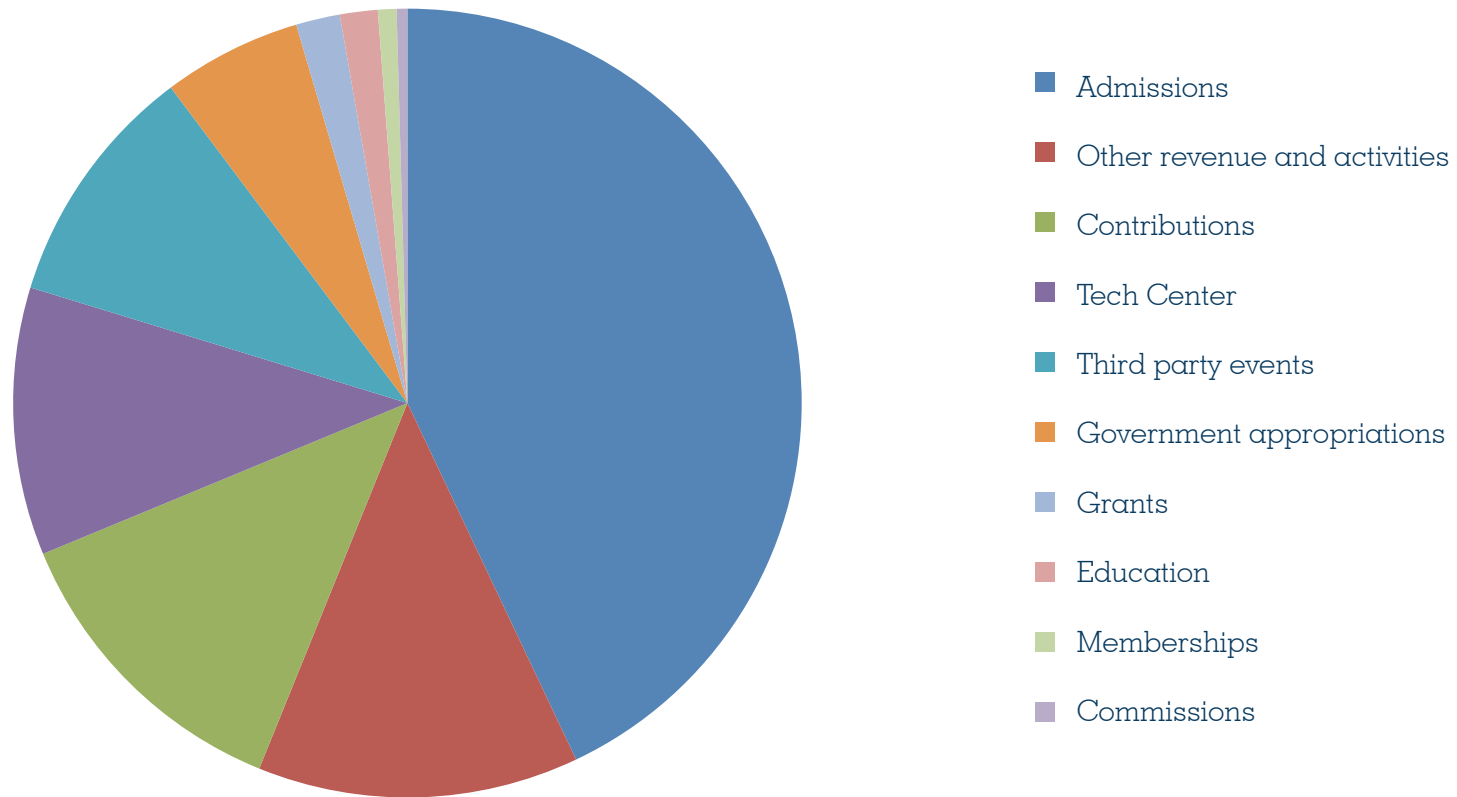
FINANCIAL REVIEW

CONSOLIDATE STATEMENT OF ACTIVITIES JUNE 30, 2017 AND 2016

	2017	2016
Operating Revenue and Support:		
Admissions	\$ 2,871,370	\$ 3,100,899
Other revenue and activities	880,102	682,275
Contributions	843,902	564,762
Tech Center	733,491	1,145,949
Third party events	670,077	769,546
Government appropriations	380,352	286,893
Grants	120,604	186,320
Education	103,508	89,348
Memberships	50,879	61,360
Commissions	29,240	108,390
Net assets released from restrictions, satisfaction of program restrictions	-	-
Total Operating Revenue and Support	6,683,525	6,995,742
Operating Expenses:		
Program services	5,389,469	5,390,040
Supporting services:		
Management and general	976,176	957,201
Fundraising	387,254	396,422
Total Operating Expenses	6,752,899	6,743,663
Increase (decrease) in Operations	(69,374)	252,079
Non-Operating Revenue:		
Investment return	(14,288)	50,273
Increase/decrease in Net Assets	(83,662)	302,352
Net Assets, beginning	7,301,923	6,999,571
Net Assets, ending	\$ 7,218,261	\$ 7,301,923

Accompanying notes to consolidated financial statements can be found in the Museum's Annual Independent Audit Report.

2017 Operating Revenue & Support



FUNDING/CORPORATE SPONSORS





Association of Air Force Missileers



Beyster Family Foundation

Bill Gibbs Endowment Fund



County of San Diego Community Enhancement Program

County of San Diego Neighborhood Reinvestment Program

Coast Catering By Barry Layne



Continental Catering

Creative Catering and Events

Crown Point Catering

Culinary Concepts



The Distinguished Flying Cross Society



Event Supplier, Inc.

George & Germaine Fusenot Foundation



Harbaugh Charitable Foundation



theISTATFoundation

jetBlue



Joan & Herb Kelleher Foundation



Mark Larson Media Services

LAS PATRONAS
Partnering with the San Diego Community since 1946

The Legler Benbough Foundation

NBC Universal Foundation



The Kenneth T. & Eileen L. Norris Foundation



The Parker Foundation

Personal Touch Dining

Price Philanthropies Foundation

The Reuben H. Fleet Foundation

Robertson Fuel Systems

Ryan Family Charitable Foundation



The San Diego Wind Tunnel

Sensor Systems, Inc.

The Charles H. Stout Foundation

The Thursday Club



Wilson Air Center

Kemmons Wilson Companies

Walter J. & Betty C. Zable Foundation

YOU CAN MAKE A DIFFERENCE: JOIN THE TEAM

Contributions to the Museum ensure both present and future generations will remember the sacrifices and accomplishments of the pioneers of aviation and space history. Financial gifts from donors, members, and other friends help support the Museum's exhibits, collections and education programs.

There are many ways to support the Museum. Your donation can be made in the following ways:

CASH DONATIONS

It's easy to support the Museum by mail or online. You can designate your gift to a project or program, or make a gift in memory of a loved one at <http://sandiegoairandspace.org/support/donate/donate>.

MEMBERSHIP

Become a member – a real value for unlimited visits and great benefits, including invitations to members only events, free admission to special exhibitions and discounts on ticketed events such as the Hall of Fame Celebration. Select your membership level and start enjoying at <http://sandiegoairandspace.org/support/become-a-member>.

ESTATE PLANNING

Enjoy the prestige and deep personal satisfaction of making a gift through your estate. You don't need to be wealthy to establish a tax-advantaged gift. Some of the ways you can make a significant gift now or later are through Wills/Bequests - Appreciated Assets - Life Insurance - Retirement Plans - Charitable Trusts.

IN-KIND DONATIONS & VOLUNTEER OPPORTUNITIES

Donations of aviation-related materials are also welcome. Potential donations will be screened and accepted in accordance with the Museum's Collection Management Policy. Gifts are considered outright donations, to be used in the best interest of the Museum and the public, and they become the sole and irrevocable property of the San Diego Air & Space Museum.

All gifts to the Museum are tax deductible.

If you're interested in learning more, please call the Museum at (619) 234-8291, Ext. 109.

2001 Pan American Plaza • Balboa Park
San Diego, California • 92101

sandiegoairandspace.org



California's "Official Air & Space Museum and Education Center"



Smithsonian Institution
Affiliations Program



Commission for
Arts and Culture