Mission, Vision and Values
drive our daily activities and long-term plan.

Mission
Inspiring minds to innovate through STEM

Vision
The premier organization for transforming communities through STEM

Values
Innovation, Teamwork, Stewardship, Accountability, Diversity, and Integrity
2019 Highlights

14,078 Community Members Served
SAMSAT’s programs served students, teachers, administrators, and parents in our K-12 school programs, and adults from our community through SAMSAT Family Days, our lecture series, and special events.

126 School Visits
We took STEM lessons to local schools, and we hosted area schools at SAMSAT for tours, hands-on activities, summer camps and special events.

Partnerships
SAMSAT built on existing partnerships with The Boeing Company, the San Antonio Housing Authority, Bibliotech, and Communities in Schools of San Antonio. We built new partnerships with Impact San Antonio and with UTSA’s Center for Infrastructure Assurance and Security. SAMSAT and SASTEMIC completed a merger, and the Museum of Computer Culture donated their artifacts and more to SAMSAT.
Keeping It Real World

Whether it’s our museum content, educational programs, lecture series, or special programs, our philosophy is to use the real-world to inspire minds to innovate through STEM.

**Authentic Education Experiences**
*Robotics design challenge*

**Authentic Artifact**
*WWII German encoder*

**What’s Happening in the World**
*Lecture on active projects in space exploration*

**School to College to Career**
*Promoting the STEM high school diploma endorsement to 8th graders*

**Real-World Challenge**
*SA Smart pitch panel, addressing challenge’s from San Antonio’s SA Tomorrow plan*
Saturdays are

**SAMSAT Family Day**

*Why did Edison make a light bulb using horse hair?*

*Why did Edison and Tesla argue about how to distribute electricity?*

*Why was Dynamo Tender a 1910 STEM job?*

*Why does a Tesla coil spark and make a bulb light up?*

*Was the personal computer really invented in San Antonio?*

Visitors to Family Day, every Saturday at SAMSAT, get more than answers to these questions. They learn lessons about the innovation mindset and about the education opportunities and STEM careers available in San Antonio.

SAMSAT welcomed **5,473** Family Day visitors to the Museum Preview Center in 2019, **3,306** adults, and **2,167** children.
Innovation and invention...who’s done it before? What’s the mindset and important lessons? How does coding, building a robot, capturing wind energy, or securing a computer network relate to invention and innovation? What further education is available, and can students get a job that uses these skills in San Antonio? (Yes!). Students learn these things in our Explore and Do™ tours. They hear lessons of invention and innovation and participate in complementary hands-on STEM activities.

1,361 students joined Explore and Do™ tours in 2019
The Geekbus™ is SAMSAT’s outreach vehicle and mobile STEM space. Since 2012, the Geekbus has visited schools in the Greater San Antonio area and throughout south and central Texas. Anytime we visit a school, we also visit classrooms and deliver hands-on STEM lessons to students.

**5,855 students were served by the Geekbus and by SAMSAT school visits in 2019.**
Museum and Geekbus™ Curricula

Wind energy
Finch
micro:bit Block Coding
Cyber Threat Defender
Sphero Robots
Forensics
Drones
Structural Engineering

MagLev
Video Game Design I
Zu3D
Cyber Security
EV3 Robotics
Rockets
SAMSAT STEM Camps

SAMSAT operated 10 STEM Summer Camps at the museum in 2019. Topics were: *Space Camps*, *STEM to STEAM through 3D Geometry*, *Robots!*, *Let’s Communicate*, *Breaking the Code*, and *Movie Making*. Many other camps were conducted at school partner sites.

1,389 students attended one-week summer camps in 2019.
In 2019, SAMSAT started its monthly Lecture Series. The first theme was Space Exploration. Among the things attendees learned...humans on the Moon and Mars is becoming more and more real thanks to work happening in San Antonio.

Deep Space Exploration from a Personal Perspective
Ms. Susan Pope, Director, Department of Space Instrumentation, SwRI

Space Architecture
Mr. Samuel W. Ximenes, Space Architect

50 Years of Lunar Exploration
Dr. Cesare Grava, Research Scientist
Events @ SAMSAT

SAMSAT was the venue for dozens of adult events—lectures, company meetings, celebrations, birthday parties, military promotions...even a fashion show! Adult events at SAMSAT strengthened the networks between people and organizations, inspired adult’s interest in science and technology, and spread the word about the importance of great STEM education experiences and the availability of high-wage jobs in San Antonio.
Recent studies suggest San Antonio is one of the most economically segregated cities in the United States. What is SAMSAT doing about it? We are partnered with The Boeing Company and the San Antonio Housing Authority (SAHA), and we made 24 visits to SAHA properties in 2019 as part of the Geekbus™ STEM Club. We want these students to know they can become scientists, engineers, or anything they put their mind to, and if they do, there are great opportunities for education and careers in San Antonio.
SA Smart: The Mayor’s K-12 Smart City Challenge

A partnership with the San Antonio Office of the Mayor, Communities in Schools of San Antonio, and many more

Over 100 students learned there is a plan in San Antonio—the SA Tomorrow Plan—and they conducted technical research, market research, developed a pitch, and shared their ideas for addressing challenges with a Mayor’s Blue Ribbon panel.
More Metrics

Elementary  13%
Middle School  42%
High School  45%
Economically disadvantaged  91%
Female  51%
Male  49%

Post-event:

Engaged by STEM content  87%
Interest in STEM Careers  78%
Interest in STEM Content & Tech  79%
Want to learn more STEM  72%
We added five new topics to our curriculum: Drones, Forensics I, Forensics II, Cyber Security, and Ev3 Robotics Programming

**Drones**: Students work in teams to design and build a working drone that can lift off and fly.

**Ev3 Task Mat**: Students use their programming skills to work in teams to complete various tasks. Ev3 Robotics Programming is a mandatory prerequisite to this session.
San Antonio Museum of Science and Technology Centerpiece of Port San Antonio Innovation Hub

TECH SA: SAMSAT adds two more Tesla coils, KSAT 12 receives exclusive look

SA Museum offers free science & tech exhibits, events

Boeing, SAMSAT Expanding Geekbus STEM Club to Serve More Low-Income Students in San Antonio

Rey Feo pushes science, technology at SAMSAT

In the News
www.samsat.org/news
Thank you to our SAMSAT 2019 Sponsors

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