AeroVironment™ PROCEED WITH CERTAINTY

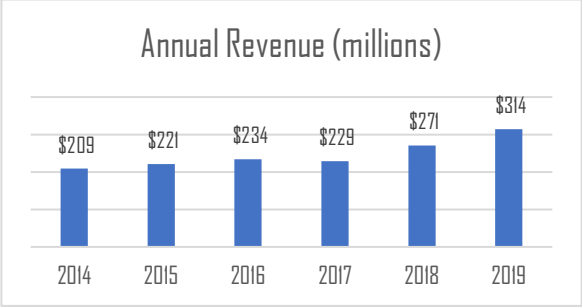
AeroVironment, Inc.
Corporate Overview

Background

AeroVironment (NASDAQ: AVAV) is a technology solutions provider at the intersection of future-defining capabilities that include robotics, sensors, software analytics and connectivity. The company pioneered and is a leader in the markets for tactical Unmanned Aircraft Systems (UAS), Tactical Missile Systems (TMS), High-Altitude Pseudo-Satellites (HAPS) and Commercial Information Solutions (CIS). For more information visit www.avinc.com.

Exchange: Symbol

NASDAQ: AVAV
Initial Public Offering, January 2007



Founded

July 27, 1971
699 full–time employees as of April 30, 2019

Corporate Headquarters

900 Innovators Way
Simi Valley, CA 93065

Executive Management Team

Wahid Nawabi – President and Chief Executive Officer

Kevin McDonnell – Chief Financial Officer

Ken Karklin – Sr. Vice President Operations

Melissa Brown – Vice President and General Council

Steven Gitlin – Chief Marketing Officer, Vice President Investor Relations

Scott Newbern – Vice President and Chief Technology Officer

Richard Pedigo – Vice President of Business Development and Sales

Alison Roelke – Vice President People & Culture

Trace Stevenson – Vice President Emerging Business and Deputy General Manager

Tactical UAS

In the 1980s, AeroVironment created the first portable, hand-launched drone for information collection and transmission. Beginning in the 2000s, the company competed for and won every U.S. Department of Defense competition for tactical UAS programs of record. Today the company develops, supplies and supports an integrated family of tactical UAS for all military services within the U.S. Department of Defense as well as more than 45 allied nations and has delivered more than 30,000 air vehicles to its customers worldwide. AeroVironment's family of tactical UAS includes Raven®, Wasp®, and Puma™. These backpackable, portable, hand-launched unmanned aircraft systems are carried and used by troops and security personnel to deliver front-line, real-time situational awareness to increase combat effectiveness and force protection. By transmitting live, streaming color and infrared video from onboard cameras directly to a hand-held Ground Control System with an embedded color monitor, AeroVironment's UAS provide real-time actionable intelligence that helps U.S. and allied armed forces make more informed decisions that enable them to operate more safely and effectively.

Raven - the World's Most Prolific SUAS

Product	U.S. Defense Customers	Weight	Nominal Endurance	Payload
RQ-11B Raven B®	Army, Marines, Air Force, USSOCOM, National Guard	4.5 lbs.	90 min.	Gimbaled EO and IR video sensors
Wasp® AE	Air Force, Marines	2.85 lbs.	50 min	Gimbaled EO and IR video sensors
RQ-20A, B Puma™ AE	USSOCOM, Army, Navy, Marines, Air Force	13.5 lbs.	210+ min.	Gimbaled EO and IR video sensors
VAPOR 35	Dept. of Defense, Dept. of Interior	35 lbs.	60 min.	EO/IR, LiDAR, Hyperspectral, PPK Mapping
VAPOR 55	Dept. of Defense, Dept. of Interior	35 lbs.	60 min.	EO/IR, LiDAR, Hyperspectral, PPK Mapping, Drop Mechanism

Tactical Missile Systems

Switchblade Loitering Munition System

Based on input from troops employing the company's UAS, AeroVironment developed a valuable new capability, the Switchblade® Tactical Missile system (also referred to as a Loitering Munition System). Switchblade provides a portable, high-precision lethal strike capability, creating an entirely new type of smart weapon for force protection.

The backpackable, battery-powered Switchblade launches from a tube, unfolds its tandem wings and transmits streaming video from color and infrared video sensors directly to the AeroVironment Ground Control System. Upon identifying a hostile target on the handheld video monitor, the operator can designate the target and the Switchblade becomes a weapon – autonomously guiding itself onto the target, detonating its small warhead with high precision and low probability for collateral damage.

Procured by the United States Army and Marine Corps, Switchblade can rapidly deliver a powerful but expendable backpackable flying intelligence, surveillance and reconnaissance package on a distant target within minutes. The vehicle's small size and quiet motor make it difficult to detect, recognize and track even at very close range. The Switchblade is scalable and can be launched from a variety of air, ground and sea-based platforms.

Blackwing™ Loitering Reconnaissance System

The AeroVironment Blackwing is one of several derivatives of Switchblade and carries a payload of extra batteries instead of a warhead to enable longer flight. With greater flight time Blackwing can perform reconnaissance missions and cross-domain command, control and communication linking manned vessels and Unmanned Underwater Vehicles (UUVs).

Initially developed for launch from submerged submarines or unmanned underwater vehicles, Blackwing could also provide reconnaissance capabilities for other naval vessels as well as land and air vehicles.

Blackwing Loitering Reconnaissance System

Commercial UAS Information Solutions

The same characteristics that make AeroVironment tactical UAS critical tools for tactical situational awareness, namely, portability, ruggedness, ease of use and reliability, also support information collection for commercial applications. AeroVironment's Quantix™ is a simple-to-use VTOL UAS that delivers rapid, fully automated high-resolution georeferenced imagery, providing on-demand actionable intelligence customers need to proceed with certainty into a safer, more efficient, more profitable operation.

Ground Control System

AeroVironment's Ground Control System provides a common command, control and information solution for the company's family of tactical UAS. Small, lightweight, and combat proven, the Ground Control System enables the system operator to monitor and control the air vehicle while also displaying real-time video from its onboard cameras to personnel on the ground. In addition, it allows the operator to capture screen images and view other data, while also facilitating real-time re-transmission of video and metadata to an operations network.

Common Ground Control System

When embedded at remote locations, the Ground Control System also can operate as a remote video terminal, providing command centers or monitoring stations with the same viewing and analysis capability as the unmanned aircraft system operator. It is compact and portable, taking up only a portion of a small backpack, and can be assembled in less than two minutes.

Digital Communications Architecture

Raven, Puma AE , and Wasp AE systems come equipped with a Digital Data Link™ (DDL™) developed by AeroVironment. With digital Raven, Puma AE, and Wasp AE systems, users can operate up to 10 times as many air vehicles in the same geographic area as compared to previous analog systems. Digital tactical UAS also permit beyond line-of-sight operation, the creation of an ad-hoc wireless data network for the battlefield (turning the system into a "flying hotspot") and encrypted communications. AeroVironment's Pocket RVT video receiver enables access to video and data anywhere within the Digital Data Link (DDL) network utilizing any USB display device for a wide range of applications.

Training Services

AeroVironment develops and delivers training courses for its customers to support a wide range of applications and tactical situations. Courses are designed to give students a comprehensive understanding of the selected unmanned aircraft system solution, including safety, operational proficiency, aircraft maintenance and air space management, that when applied "in theater" will enable them to accomplish their mission objectives.

Logistics Services

AeroVironment's UAS Logistics services ensure mission success by providing quality products and logistics support anywhere in the world. AeroVironment's UAS logistics support solutions include planning, upgrades, UAS spares and repair services. Support also is provided in the areas of technical expertise, material management, supply chain management, and military and commercial logistics.

Solutions In Development

AeroVironment is a technology innovator focused on solving important customer problems with practical, new solutions. In addition to a growing product line supporting demand for UAS solutions, AeroVironment cultivates a robust pipeline of new solutions under development to drive growth.

High Altitude Pseudo-Satellite (HAPS) System

Building on decades of experience developing and demonstrating high altitude solar powered unmanned aircraft systems, AeroVironment established its HAPSMobile, Inc. joint venture with partner SoftBank Group in January 2018. AeroVironment is developing the solar HAPS system for adoption by HAPSMobile as a platform for global broadband telecommunications services, including 5G mobile communication delivery.

A Proven Track Record of Innorvation

The innovations of the company and its founder that form the foundation for today's leading market positions and tomorrow's new opportunities include:

- The most prolific unmanned aircraft system in the world: RQ-11B Raven
- The world's first hummingbird-like UAV, the Nano Hummingbird
- The first loitering munition/tactical missile systems deployed by the United States Department of Defense (Switchblade)
- The first submarine launched loitering UAS for reconnaissance (Blackwing)

The company was founded in 1971 by the late Dr. Paul B. MacCready, an internationally renowned innovator whose approach to problem solving and engineering remains central to AeroVironment's culture. Among a number of accolades, Dr. MacCready was selected as one of Time Magazine's "20th Century's Greatest Minds." Other innovative firsts include:

- The world's first effective human-powered and manned solar-powered airplanes
- The first modern consumer electric car (the EV-1 prototype for General Motors)
- The world's highest flying airplane in level flight, Helios, a solar-powered unmanned aircraft that reached more than 96,000 feet in 2001

- The world's first liquid hydrogen-powered unmanned aircraft system (Global Observer prototype)

Seven AeroVironment innovations are part of the Smithsonian Institution's collection.

More information about AeroVironment is available at avinc.com.