AeroVironment Inc
Form 10-K
July 01, 2015

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

ý **Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the fiscal year ended April 30, 2015

o **Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the transition period from to

Commission file number 001-33261

AEROVIRONMENT, INC.

(Exact name of registrant as specified in its charter)

Delaware	**95-2705790**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
181 W. Huntington Drive, Suite 202 **Monrovia, CA**	**91016**
(Address of Principal Executive Offices)	(Zip Code)

Registrant's telephone number, including area code: **(626) 357-9983**

Securities registered pursuant to Section 12(b) of the Act:

Title of Class	**Name of each exchange on which registered**
Common Stock, par value $0.0001 per share	**The NASDAQ Stock Market LLC**

Securities registered pursuant to Section 12(g) of the Act:

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes o No ý

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes o No ý

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ý No o

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ý No o

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check One):

Large accelerated filer o	Accelerated filer ý	Non-accelerated filer o (Do not check if a smaller reporting company)	Smaller reporting company o

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes o No ý

The aggregate market value of the voting stock held by non-affiliates of the registrant, based on the closing price on the NASDAQ Global Select Market on October 31, 2014 was approximately $629.2 million.

As of June 19, 2015, the issuer had 23,349,051 shares of common stock, par value $0.0001 per share, issued and outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement to be filed with the Securities and Exchange Commission pursuant to Regulation 14A not later than 120 days after the conclusion of the registrant's fiscal year ended April 30, 2015, are incorporated by reference into Part III of this Form 10-K.

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PART I

Forward-Looking Statements

This Annual Report on Form 10-K, or Annual Report, contains forward-looking statements, which reflect our current views about future events and financial results. We have made these statements in reliance on the safe harbor created by the Private Securities Litigation Reform Act of 1995 (set forth in Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act). Forward-looking statements include our views on future financial results, financing sources, product development, capital requirements, market growth and the like, and are generally identified by terms such as "may," "will," "should," "could," "targets," "projects," "predicts," "contemplates," "anticipates," "believes," "estimates," "expects," "intends," "plans" and similar words. Forward-looking statements are merely predictions and therefore inherently subject to uncertainties and other factors which could cause the actual results to differ materially from the forward-looking statement. These uncertainties and other factors include, among other things:

- unexpected technical and marketing difficulties inherent in major research and product development efforts;
- availability of U.S. government funding for defense procurement and research and development programs;
- the extensive regulatory requirements governing our contracts with the U.S. government and the results of any audit or investigation of our compliance therewith;
- our ability to remain a market innovator and to create new market opportunities;
- the potential need for changes in our long-term strategy in response to future developments;
- unexpected changes in significant operating expenses, including components and raw materials;
- changes in the supply, demand and/or prices for our products and services;
- increased competition, including from firms that have substantially greater resources than we have and in the UAS business from lower-cost consumer drone manufacturers who may seek to enhance their systems' capabilities over time;
- changes in the regulatory environment; and
- general economic and business conditions in the United States and elsewhere in the world.

Set forth below in Item 1A, "Risk Factors" are additional significant uncertainties and other factors affecting forward-looking statements. The reader should understand that the uncertainties and other factors identified in this Annual Report are not a comprehensive list of all the uncertainties and other factors that may affect forward-looking statements. We do not undertake any obligation to update or revise any forward-looking statements or the list of uncertainties and other factors that could affect those statements.

Item 1. Business.

Overview

We design, develop, produce, support and operate a technologically-advanced portfolio of products and services for government agencies, businesses and consumers. We supply unmanned aircraft systems, or UAS, tactical missile systems and related services primarily to organizations within the U.S. Department of Defense, or DoD. We also supply charging systems and services for electric vehicles, or EVs, and power cycling and test systems to commercial, consumer and government customers. We

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derive the majority of our revenue from these business areas and we believe that the markets for these solutions have significant growth potential. Additionally, we believe that some of the innovative potential products and services in our research and development pipeline will emerge as new growth platforms in the future, creating additional market opportunities.

Our success with current products and services stems from our investment in research and development and our ability to invent and deliver advanced solutions, utilizing proprietary and commercially available technologies, to help our government, commercial and consumer customers operate more effectively and efficiently. We develop these highly innovative solutions by working very closely with our key customers in each segment of our business to solve their most important challenges related to our areas of expertise. Our core technological capabilities, developed through more than 40 years of innovation, include lightweight aerostructures; power electronics; electric propulsion systems; efficient electric power generation, conversion, and storage systems; high-density energy packaging; miniaturization; digital data links or DDL; aircraft sensors; controls integration; and systems integration and engineering optimization, hybrid propulsion, vertical takeoff fixed wing flight and autonomy, each coupled with professional field service capabilities.

Our UAS business segment focuses primarily on the design, development, production, marketing, support and operation of innovative UAS and tactical missile systems and the delivery of UAS-related services that provide situational awareness, remote sensing, multi-band communications, force protection and other information and mission effects to increase the safety and effectiveness of our customers' operations. Our Efficient Energy Systems, or EES, business segment focuses primarily on the design, development, production, marketing, support and operation of innovative efficient electric energy systems that address the growing demand for electric transportation solutions.

Our Strategy

As a technology solutions provider, our strategy is to develop innovative, safe and reliable new solutions that provide customers with valuable benefits and enable us to create new markets or market segments, gain market share and grow as market adoption increases. We believe that by introducing new solutions that provide customers with compelling value we are able to create new markets or market segments and then grow our positions within those markets or market segments profitably, instead of entering existing markets and competing against large, incumbent competitors that may possess advantages in scope, scale, resources and relationships.

We intend to grow our business by maintaining market leadership in UAS, tactical missile systems, electric vehicle charging systems and power cycling and test systems, and by creating new solutions that enable us to create and lead new markets. Key components of this strategy include the following:

Expand our market leadership to grow existing markets and create new adjacent markets. Our small UAS, tactical missile systems, electric vehicle charging systems and power cycling and test systems enjoy leading positions in their respective markets. We intend to increase the penetration of our small UAS products and services and tactical missile systems within the U.S. military, the military forces of allied nations, other government agencies and non-government organizations, including commercial entities. We believe that the broad adoption of our small UAS by the U.S. military will continue to spur demand by allied nations, and that our efforts to pursue new applications are creating opportunities beyond the early adopter military market. We similarly intend to increase the penetration of our electric vehicle charging systems and services, and our power cycling and test systems, into existing and new customer segments globally.

Deliver innovative new solutions. Customer-focused innovation is the primary driver of our growth. We plan to continue pursuing internal and customer-funded research and development to develop better, more capable products, services and business models, both in response to and in anticipation of emerging customer needs. In some cases these innovations result in upgrades to existing

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offerings, expanding their value among existing customers and markets. In other cases these innovations become entirely new solutions that position us to address new markets, customers and business opportunities. We believe research and development investments will allow us to deliver innovative new products and services that address market needs within and outside of our current target markets, and enable us to create new opportunities for growth. We view strategic partners as a means by which to further the reach of our innovative solutions through access to new markets, customers and complementary capabilities.

Foster our entrepreneurial culture and continue to attract, develop and retain highly-skilled personnel. Our company culture encourages innovation and an entrepreneurial spirit, which helps to attract and retain highly-skilled professionals. We intend to preserve this culture to encourage the development of the innovative, highly technical system solutions and business models that give us our competitive advantage. A core component of our culture is our intent to demonstrate trust and integrity in all of our interactions, contributing to a positive work environment and engendering loyalty among our employees and customers. We survey our employees to identify opportunities to increase employee engagement and to create a better workplace.

Preserve our agility and flexibility. We respond rapidly to evolving markets, solve complicated customer problems, and deliver new products, services and capabilities quickly, efficiently and affordably relative to available alternatives. We believe our agility and flexibility help us to strengthen our relationships with customers and partners. We intend to maintain our agility and flexibility, which we believe to be important sources of differentiation when we compete against organizations with more extensive resources.

Effectively manage our growth portfolio for long-term value creation. Our production and development programs and services provide us with investment opportunities that we believe will deliver long-term growth by providing our customers with valuable new capabilities. We evaluate each opportunity independently and within the context of all other investment opportunities to determine its relative timing and potential, and thereby its priority. This process allows us to make informed decisions regarding potential growth capital requirements and ensures that we allocate resources based on relative risks and returns to maximize long-term value creation, which is a key element of our growth strategy.

Customers

We sell the majority of our UAS and tactical missile systems and services to organizations within the DoD, including the U.S. Army, Marine Corps, Special Operations Command and Air Force. Our EES business segment generates revenue from commercial, consumer and, to a lesser extent, government customers.

During our fiscal year ended April 30, 2015, we generated approximately 47% of our revenue from the U.S. Army pursuant to orders placed under contract by the U.S. Army on behalf of itself as well as several other organizations within the DoD. Other U.S. government agencies and government subcontractors accounted for 33% of our sales revenue, while purchases by foreign, commercial customers and consumers accounted for the remaining 20% of sales revenue during our fiscal year ended April 30, 2015.

Technology, Research and Development

Technological Competence and Intellectual Property

Our company was founded by the late Dr. Paul B. MacCready, the former Chairman of our board of directors and an internationally renowned innovator who was instrumental in establishing our entrepreneurial and creative culture. This culture has consistently enabled us to attract and retain

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highly-motivated, talented employees and has established our reputation as an innovative leader in the industries in which we compete.

The innovations developed by our company and our founder include, among others: the world's first effective human-powered and manned solar-powered airplanes; the first modern passenger electric car, the EV1 prototype for General Motors; the world's highest flying airplane in level flight, Helios , a solar-powered unmanned aircraft system that reached over 96,000 feet in 2001; and, more recently, Global Observer, the world's first liquid hydrogen-fueled unmanned aircraft system; the Nano Hummingbird , the world's first flapping wing unmanned aircraft system capable of precise hover and omni-directional flight; and TurboCord , the smallest, most portable UL-listed 240-volt EV charger. The Smithsonian Institution has selected seven vehicles developed by our company or our founder for its permanent collection. Our history of innovation excellence is the result of our talented, creative and skilled employees whom we encourage to invent and develop innovative new solutions.

A component of our ongoing innovation is a screening process that helps our business managers identify early market needs, which assists us in making timely investments into critical technologies necessary to develop solutions to address these needs. Similarly, we manage new product and business concepts through a commercialization process that balances spending, resources, time and intellectual property considerations against market requirements and potential returns on investment. Strongly linking our technology and business development activities to customer needs in attractive growth markets constitutes an important element of this process. Throughout the process we revisit our customer requirement assumptions to evaluate continued investment and to help ensure that our products and services deliver high value.

As a result of our commitment to research and development, we possess an extensive portfolio of intellectual property in the form of patents, trade secrets, copyrights and trademarks across a broad range of UAS and advanced energy technologies. As of April 30, 2015, we had 125 U.S. patents issued; 93 U.S. patent applications pending; 6 active Patent Cooperation Treaty applications; and numerous foreign patents and applications. In many cases, when appropriate and to preserve confidentiality, we opt to protect our intellectual property through trade secrets as opposed to filing for patent protection.

The U.S. government has licenses to some of our intellectual property that was specifically developed in performance of government contracts, and may use or authorize others to use this intellectual property. In some cases we fund the development of certain intellectual property to maximize its value and limit its use by potential competitors. While we consider the development and protection of our intellectual property to be integral to the future success of our business, at this time we do not believe that a loss or limitation of rights to any particular piece of our intellectual property would have a material adverse effect on our overall business.

Research, Development and Commercialization Projects

A core component of our business strategy is the development and commercialization of innovative solutions that we believe can become new products or services that enable us to create large new markets or accelerate the growth of our current products and services. We invest in an active pipeline of these commercialization projects that range in maturity from technology validation to early market adoption. We cannot predict when, if ever, we will successfully commercialize these projects, or the exact level of capital expenditures they could require, which could be substantial.

For the fiscal years ended April 30, 2015, 2014 and 2013, our internal research and development spending amounted to 18%, 10% and 15%, of our revenue, respectively, and customer-funded research and development spending amounted to an additional 14%, 11% and 16%, of our revenue, respectively.

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Sales and Marketing

Our marketing strategy is based on developing leadership positions in new markets that we create through the introduction of innovation solutions that improve customer operational effectiveness and efficiency. Our ability to operate in an agile, flexible manner helps us achieve first mover advantage and work closely with early customers to achieve successful adoption of our solutions. Once we establish a market position we work to maintain our leadership position while growing our revenue by expanding sales and through continuous innovation and customer support. Our reputation for innovation is a key component of our brand and has been acknowledged through a variety of awards and recognized in numerous articles in domestic and international publications. We have U.S. registered trademarks for AeroVironment, EV Solutions, TurboCord, PosiCharge, PosiNet, Global Observer, Raven, Wasp, Qube and Switchblade, and have submitted several other applications for trademark registration.

International Sales

We contract with international sales representatives and team with domestic organizations in a number of foreign markets and believe that these markets represent growth opportunities for our business. Our international sales accounted for approximately 9%, 14% and 15%, of our revenue for the fiscal years ended April 30, 2015, 2014 and 2013, respectively.

Competition

We believe that the principal competitive factors in the markets for our products and services include product performance; safety; features; acquisition cost; lifetime operating cost, including maintenance and support; ease of use; rapid integration with existing equipment and processes; quality; reliability; customer support; and brand and reputation.

Manufacturing and Operations

We pursue a lean and efficient production strategy across our business segments, focusing on rapid prototyping, supply chain management, final assembly, integration, quality and final acceptance testing. Using concurrent engineering techniques within an integrated product team structure, we rapidly prototype design concepts and products, while optimizing our designs for manufacturing requirements, mission capabilities and customer specifications. Within this framework we develop our products with feedback and input from manufacturing, quality, supply chain management, key suppliers, logistics personnel and customers. We incorporate this input into product designs in an effort to maximize the efficiency and quality of our products. As a result, we believe that we significantly reduce the time required to move a product from its design phase to full-rate production deliveries while achieving high reliability, quality and yields.

We outsource certain production activities, such as the fabrication of structures, the manufacture of electronic printed circuit board subassemblies, payload components and the medium to high volume production of our EV charging products, to qualified suppliers, with many of whom we have long-term relationships. This outsourcing enables us to focus on final assembly, system integration and test processes for our products, ensuring high levels of quality and reliability. We forge strong relationships with key suppliers based on their ability to grow with our production needs and support our growth plans. We continue to expand upon our suppliers' expertise to improve our existing products and develop new solutions. We rely on both single and multiple suppliers for certain components and subassemblies. See "Risk Factors If critical components or raw materials used to manufacture our products become scarce or unavailable, then we may incur delays in manufacturing and delivery of our products, which could damage our business" for more information. All of our production system

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operations incorporate internal and external quality programs and processes to increase acceptance rates, reduce lead times and lower cost.

Contract Engineering Services

We actively pursue externally funded projects that help us to strengthen our technological capabilities. Our UAS business segment submits bids to large research customers such as the Defense Advanced Research Projects Agency, the U.S. Air Force, the U.S. Army and the U.S. Special Operations Command for projects that we believe have future commercial application. Contract engineering services conducted through our EES business segment represent a strategic source of innovation for us, and a portion of our business involves providing advanced battery module and pack testing solutions to automotive and battery manufacturers in support of their electric vehicle development and production programs. Providing these services contributes to the development and enhancement of our technical competencies. In an effort to manage the ability of our key technical personnel to support multiple, high-value research and development initiatives, we attempt to limit the volume of contract engineering projects that we accept. This process enables us to focus these personnel on projects we believe offer the greatest current and future value to our business.

Contract Mix

The table below shows our revenue for the periods indicated by contract type, including both government and commercial sales:

	Fiscal Year Ended April 30,		
	2015	2014	2013
Fixed-price contracts	85%	85%	75%
Cost-reimbursable contracts	15%	15%	25%

Employees

As of April 30, 2015, we had 663 full-time employees, of whom 235 were in research and development and engineering, 58 were in sales and marketing, 213 were in operations and 157 were general and administrative personnel. We believe that we have a good relationship with our employees.

Backlog

We define funded backlog as unfilled firm orders for products and services for which funding currently is appropriated to us under the contract by the customer. As of April 30, 2015 and 2014, our funded backlog was approximately $64.7 million and $65.9 million, respectively. We expect that approximately 95% of our funded backlog will be filled during our fiscal year ending April 30, 2016.

In addition to our funded backlog, we had unfunded backlog of $19.1 million and $22.9 million as of April 30, 2015 and 2014, respectively. We define unfunded backlog as the total remaining potential order amounts under cost reimbursable and fixed price contracts with multiple one-year options, and indefinite delivery, indefinite quantity, or IDIQ contracts. Unfunded backlog does not obligate the U.S. government to purchase goods or services. There can be no assurance that unfunded backlog will result in any orders in any particular period, if at all. Management believes that unfunded backlog does not provide a reliable measure of future estimated revenue under our contracts. Unfunded backlog does not include the remaining potential value associated with a U.S. Army IDIQ-type contract for small UAS because that contract was awarded to five companies in 2012, including AeroVironment, and we cannot be certain that we will receive all task orders issued against the contract.

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Because of possible future changes in delivery schedules and/or cancellations of orders, backlog at any particular date is not necessarily representative of actual sales to be expected for any succeeding period, and actual sales for the year may not meet or exceed the backlog represented. Our backlog is typically subject to large variations from quarter to quarter as existing contracts expire, are renewed, or new contracts are awarded. A majority of our contracts, specifically our IDIQ contracts, do not obligate the U.S. government to purchase any goods or services. Additionally, all U.S. government contracts included in backlog, whether or not they are funded, may be terminated at the convenience of the U.S. government.

Other Information

AeroVironment, Inc. was originally incorporated in the State of California in July 1971 and reincorporated in Delaware in 2006.

Our principal executive offices are located at 181 W. Huntington Dr., Suite 202, Monrovia, California 91016. Our telephone number is (626) 357-9983. Our website home page is *http://www.avinc.com*. We make our website content available for information purposes only. It should not be relied upon for investment purposes, nor is it incorporated by reference into this Annual Report.

We make our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and proxy statements for our annual stockholders' meetings, as well as any amendments to those reports, available free of charge through our website as soon as reasonably practical after we electronically file that material with, or furnish it to, the Securities and Exchange Commission, or SEC. You can learn more about us by reviewing our SEC filings. Our SEC reports can be accessed through the investor relations page of our web site at *http://investor.avinc.com*. These reports may also be obtained at the SEC's public reference room at 100 F. Street, N.E., Washington, DC 20549. The SEC also maintains a web site at www.sec.gov that contains our reports, proxy statements and other information regarding us.

Unmanned Aircraft Systems

Our UAS business segment addresses the increasing economic and security value of network-centric intelligence, surveillance and reconnaissance, or ISR, communications and remote sensing, with innovative UAS and tactical missile system solutions.

Industry Background

Small UAS

The market for small UAS has grown significantly over the last decade driven largely by the demands associated with the global threat environment and the resulting procurement by military customers, the early adopters for this technology. Small UAS now represent an accepted and enduring capability for the military. The U.S. military's transformation into a smaller, more agile force that operates via a network of observation, communication and precision targeting technologies accelerated following the terrorist attacks of September 11, 2001, as it required improved, distributed observation and targeting of enemy combatants who operate in small groups, often embedded in dense population centers or dispersed in remote locations. We believe that UAS, which range from large systems, such as Northrop Grumman's *Global Hawk* and General Atomics' *Predator*, *Sky Warrior*, *Reaper* and *Gray Eagle*, to small systems, such as our Raven, Wasp AE, Puma AE and Shrike, serve as integral components of today's military force. These systems provide critical observation and communications capabilities serving the increasing demand for actionable intelligence, while reducing risk to individual "warfighters." Small UAS can provide real-time observation and communication capabilities to the small units who control them. As airspace regulations in the U.S. and other nations evolve to

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accommodate the commercial use of small UAS, we are pioneering the application of small UAS technology in new markets such as energy, precision agriculture, natural resource management and public safety. We expect further growth through the introduction of UAS technology and services to these emerging commercial applications.

Large UAS

We believe a market opportunity exists for large UAS that can fly for long periods of time to perform continuous remote sensing and communications relay missions in an affordable manner over great distances. The emergence of distributed military threats in geographic areas with limited communications infrastructure has prompted U.S. military forces to deploy solutions to manage the increasing volume of data generated by their operations in those areas. Existing solutions such as communications satellites and manned and unmanned aircraft address some of this emerging demand for bandwidth, but do so at relatively high financial and resource costs. Given the nature of asymmetrical warfare, with embedded military adversaries operating in population centers, rural areas and remote locations, the ability to observe areas of interest on a continuous basis with high resolution sensors remains a critical and largely unmet need. Geosynchronous satellites provide fixed, continuous communications relay capabilities to much of the globe, but they operate nearly 25,000 miles from the surface of the earth, therefore limiting the bandwidth they can provide and requiring relatively larger, higher power ground stations. Remote sensing satellites typically operate at lower altitudes, but are unable to maintain geosynchronous positions, meaning they are moving with respect to the surface of the earth, resulting in a limited presence over specific areas of interest and significant periods of time during which they are not present over those areas. UAS that are capable of operating in an affordable manner for extended periods of time over an area of interest without gaps in availability while carrying a communications relay or observation payload could help to satisfy this need. Additionally, UAS that can operate for longer durations from smaller naval vessels could enable military forces to project power on a more distributed and flexible basis.

Tactical Missile Systems

The development of weapons capable of rapid deployment and precision strike while minimizing the risk to surrounding civilians, property and operators accelerated in recent years due to advances in enabling technologies. Weapons such as laser-guided missiles, "smart" bombs and GPS-guided artillery shells have dramatically improved the accuracy of strikes against hostile targets. When ground forces find themselves engaged in a firefight or near a target, their ability to deploy and use a precision weapon system quickly and easily can mean the difference between mission success and failure. Such a rapidly deployable solution could also address emerging requirements for use in other types of situations and from a variety of sea, air and land platforms. We believe that embedding a precision lethal payload into a remotely controlled, man-portable delivery system provides warfighters with a valuable and more cost-effective alternative to existing airborne and land-based missile systems.

Our UAS Solutions

We supply our UAS products and services to multiple customers inside and outside of the United States. For the fiscal years ended April 30, 2015, 2014 and 2013, our UAS segment products and services accounted for 85%, 83% and 81%, of our revenue, respectively.

Small UAS Products

Our small UAS, including Raven, Wasp AE, Puma AE and Shrike, are designed to operate reliably a few hundred feet above the ground in a wide range of environmental conditions, providing a valuable vantage point from which to deliver valuable information. Military forces employ our small UAS to deliver intelligence, surveillance and reconnaissance, or ISR, and communications, including real-time

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tactical reconnaissance, tracking, combat assessment and geographic data, directly to the small tactical unit or individual operator, thereby increasing flexibility in mission planning and execution. In commercial applications, we operate our small UAS as part of a turnkey information solution to deliver advanced analysis and prescriptive actions that can reduce costs, enhance safety and increase revenue. Our small UAS wirelessly transmit critical live video and other information generated by their payload of electro-optical, infrared or other sensors directly to a hand-held ground control unit, enabling the operator to view and capture images, during the day or at night, on the control unit. Certain sensors generate a volume of data significantly larger than wireless bandwidth can accommodate, requiring downloading once the air vehicle has landed. Our ground control systems allow the operator to control the aircraft by programming it for GPS-based autonomous navigation using operator-designated way-points or by manual flight operation. The ground control systems are designed for durability and ease of use in harsh environments and incorporate a user-friendly, intuitive user interface. All of our small UAS currently in production for military customers operate from our common ground control system.

All of our small UAS are designed to be portable by a single person, assembled without tools in less than five minutes and launched and operated by one or two people, with limited training required. The efficient and reliable electric motors used in all of our small UAS are powered by modular battery packs that can be replaced quickly, enabling rapid return to flight. All of our small UAS, other than Switchblade, which we consider a tactical missile system, are designed to be reusable for up to hundreds of flights under normal operating circumstances and can be recovered through an autonomous landing feature that enables a controlled descent to a designated location.

In military applications, our small UAS enable tactical commanders to observe around the next corner, to the next intersection or past a ridgeline in real-time. This information facilitates faster, safer movement through urban, rural and mountainous environments and can enable troops to be proactive based on field intelligence rather than reactive to attack. Moreover, by providing this information, our systems reduce the risk to warfighters and to the surrounding population by providing the ability to tailor the military response to the threat. U.S. military personnel regularly use our small UAS, such as Raven, for missions such as force protection, combat observation and damage assessment. These reusable systems are easy to transport, assemble and operate and are relatively quiet when flying at typical operational altitudes of 200 to 300 feet above ground level, the result of our efficient electric propulsion systems. Furthermore, their small size makes them difficult to see from the ground. In addition, the low cost of our small UAS relative to larger systems and alternatives makes it practical for customers to deploy these assets directly to warfighters.

In emerging commercial applications, our small UAS enable companies to manage valuable natural resources such as endangered species and delicate habitats, more effectively and safely than previously possible. Our commercial information services, consisting of trained operators, advanced sensors, cloud-based data processing and application-specific analysis, provide our customers with more accurate and timely information regarding their infrastructure, such as pipelines, roads and bridges, and can provide companies with agriculture operations with more accurate and timely information regarding their crops. Better and more timely information can translate into more efficient maintenance activities that prevent downtime, in the case of the energy industry, and more efficient use of scarce resources such as water, for agriculture.

Our small UAS offering also includes spare equipment, alternative payload modules, batteries, chargers, repair services and customer support. We provide training by our highly-skilled instructors, who typically have extensive military experience, and continuous refurbishment and repair services for our products. By maintaining close contact with our customers and users in the field, we gather critical feedback on our products and incorporate that information into ongoing product development and research and development efforts. This approach enables us to improve our solutions in response to, and in anticipation of, evolving customer needs.

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Each system in our small UAS portfolio typically includes multiple aircraft, our common and interoperable hand-held ground control system and an array of spare parts and accessories. Our current small UAS portfolio consists of the following aircraft:

Small UAS Product	Wingspan (ft.)	Weight (lbs.)	Recovery	Standard Sensors	Range (mi.)(1)	Flight Time (min.)(1)
Puma AE	9.2	14	Vertical autonomous landing capable (ground or water)	Mechanical pan, tilt, zoom and digital zoom electro-optical and infrared	9.0	210
Raven	4.5	4.5	Vertical autonomous landing capable	Mechanical pan, tilt, zoom and digital zoom electro-optical and infrared	6.0	60 - 90
Wasp AE	3.3	2.8	Vertical autonomous landing capable (ground or water)	Mechanical pan, tilt, zoom and digital zoom electro-optical and infrared	3.0	50
Shrike	3.0	5.5	Vertical takeoff and landing	Mechanical pan, tilt, zoom and digital zoom electro-optical and infrared	3.0	40

(1) Represents point-to-point minimum customer- mandated specifications for all operating conditions. In optimal conditions, the performance of our products may significantly exceed these specifications. Our DDL relay can enable operational modes that can extend range significantly.

The ground control system serves as the primary interface between the operator and the aircraft, and allows the operator to control the direction, speed and altitude of the aircraft as well as the orientation of the sensors to view the visual information they produce through real-time, streaming video and metadata. Our common ground control system interfaces with each of our air vehicles, except Qube, providing a common user interface with each of our air vehicles. In addition to the thousands of air vehicles delivered to our customers, thousands of ground control systems are also in our customers' hands.

The Qube is an unmanned aircraft system tailored to the needs of first response professionals such as law enforcement, search and rescue and fire department personnel. Based on the Shrike platform, the Qube incorporates an advanced touch screen interface to control the system and view the information produced by the air vehicle's onboard sensors. Portable and easy to assemble, operate and stow, the Qube is designed to provide rapid airborne information within one kilometer of its launch point in situations where time is short and risk is high.

Our line of miniature gimbaled sensor payloads provides small UAS operators with enhanced observation and target tracking functionality. Our DDL is integrated into Puma AE, Raven and Wasp AE, Shrike and Qube systems, enhancing their capabilities, and ultimately, the utility of our small UAS by enabling more efficient radio spectrum utilization and communications security. Small UAS incorporating our DDL offer many more channels as compared to our analog link, increasing the number of air vehicles that can operate in a given area. Additionally, our DDL enables each air vehicle to operate as an Internet-Protocol addressable hub capable of routing and relaying video, voice and data to and from multiple other nodes on this *ad hoc* network. This capability enables beyond line-of-sight operation of our small UAS, further enhancing their value proposition to our customers.

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UAS Logistics Services

In support of our small UAS we offer a suite of services that help to ensure the successful operation of our products by our customers. These services generate incremental revenue for the company and provide us with continuous feedback to understand the utility of our systems, anticipate our customers' needs and develop additional customer insights. We believe that this ongoing feedback loop enables us to continue to provide our customers with innovative solutions that help them succeed. We provide spare parts as well as repair, refurbishment and replacement services through our services operation. We designed our services operation to minimize supply chain delays and support our customers with spare parts, replacement aircraft and support whenever and wherever they need them. One of our facilities also serves as the primary depot for repairs and spare parts.

We provide comprehensive training services to support all of our small UAS. Our highly-skilled instructors typically have extensive military experience. We deploy training teams throughout the continental United States and abroad to support our customers' wide variety of training needs on both production and development-stage systems.

UAS Mission Services

Customers who require the information generated by our small UAS but who may not wish to purchase, operate and support the equipment themselves can contract with us for turnkey mission services. We deploy qualified operators to locations around the world to provide UAS-generated video, still images and geographic location information to support numerous types of missions.

UAS Contract Engineering Services

We provide contract engineering services in support of customer-funded research and development projects, delivering new value-added technology solutions to our customers. These types of projects typically involve developing new system solutions and technology or new capabilities for existing solutions that we introduce as retrofits or upgrades. We recognize customer-funded research and development projects as revenue.

UAS Technology, Research and Development

Our primary areas of technological competence represent the sum of numerous technical skills and capabilities that help to differentiate our approach and product offerings. The following list highlights a number of our key UAS technological capabilities:

- lightweight, low speed aerostructures and aerodynamic design;
- miniaturized avionics and micro/nano unmanned aircraft systems;
- image stabilization and target tracking;
- autonomous systems;
- payload design, development, miniaturization and integration;
- electric, hydrogen and hybrid propulsion systems and high-pressure-ratio turbochargers;
- high altitude long endurance flight operations;
- fluid dynamics;

miniature, low power wireless digital communications;

vertical takeoff and landing fixed-wing flight unmanned aircraft systems; and

system integration and optimization.

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Four of our UAS and tactical missile systems development initiatives are described below:

Tactical Missile System Variants. We pioneered a rapidly deployable, high-precision tactical missile system, called Switchblade, for defensive use by ground forces. Switchblade is now employed by the U.S. military to provide force protection to its soldiers overseas. During a multitude of demonstrations over the course of several years, multiple potential customers requested modifications to Switchblade to accommodate their specific mission requirements. We performed a number of successful demonstrations and are now developing several variants to Switchblade for new customers and applications, including deployment from sea and air vehicles. We believe these new variants have the potential to expand our tactical missile systems opportunities significantly.

Tern Medium Altitude Long Endurance Unmanned Aircraft System. The Defense Advanced Research Projects Agency, or DARPA, awarded us one of two phase II contracts to develop a new category of unmanned aircraft system capable of operating over long distances and for long durations from small naval vessels such as destroyers. We assembled a team of industry leading partners to design and develop our proposed solution for the Tern requirement and we anticipate DARPA to down-select for a phase III award decision during the 2015 calendar year. If successful, Tern has the potential to establish a new category of unmanned aircraft system that would enable naval forces to project power more flexibly and more effectively.

Commercial Unmanned Aircraft Systems-Based Information Services. In the same way our small UAS provide on-demand situational awareness to military customers, we can employ our small UAS with advanced sensors to scan vast or inaccessible infrastructure, plants or wildlife, then process and analyze the resulting data to produce actionable information for a wide variety of companies in industries that include energy, agriculture and natural resource management. We have deployed this capability with early adopters and continue to gain knowledge and experience that will enable us to further our leading market position as airspace regulations evolve to permit what could be a large market.

Global Observer. Global Observer is our high-altitude, long-endurance unmanned aircraft system under development to address the need for affordable, 24-hour, 365-days-a-year persistent communications and ISR. Each Global Observer aircraft is designed to operate at up to 65,000 feet for up to a week before landing. A complete system would include at least two aircraft, one flying over a designated area and the other in preparation for takeoff or in transit to or from the designated area, which would alternate positions approximately every week to maintain an uninterrupted presence. Global Observer is the continuation of years of research with both our own and U.S. government development funding. We developed and tested the system under a three-and-one-half-year joint capabilities technology demonstration program, or JCTD, sponsored by several agencies of the U.S. government. We expect the efficiency and endurance of this unmanned aircraft system, three to four times the longest flight time of existing payload-capable fixed-wing aerial options, to provide for dramatically lower operating and total life cycle costs for missions where long distance persistent communications or surveillance is critical. The Global Observer platform is intended to be the low-cost equivalent of a 12-mile-high, redeployable satellite, providing a potential footprint of coverage of up to 600 miles in diameter and capable of providing a broad array of services, including high-speed broadband data, video and voice relay and ISR. We expect these capabilities to provide the foundation for multiple high-value applications including communications relay and ISR missions for defense and homeland security, storm tracking, telecommunications infrastructure, wildfire detection/tracking and disaster recovery services.

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The first Global Observer aircraft developed in the JCTD successfully completed extensive ground testing and then eight test flights at Edwards Air Force Base in California between August 2010 and March 2011, with the last three flights using its liquid hydrogen-fueled propulsion system. More than 18 hours into its ninth flight, after reaching 30,000 feet altitude, the aircraft experienced a mishap that resulted in it impacting the ground on an uninhabited portion of the base and being damaged beyond repair. Our internal analysis quickly determined the cause of the mishap and we subsequently developed and successfully tested a solution designed to prevent it from happening in the future.

UAS Sales and Marketing

We organize our U.S. UAS business development team members by market and customer and we locate team members in close proximity to the customers they support, where possible. Our program managers are organized by product and focus on designing optimal solutions and contract fulfillment, as well as internalizing feedback from customers and users. By maintaining assigned points of contact with our customers, we believe that we are able to maintain our relationships, service existing contracts effectively and gain vital feedback to improve our responsiveness and product offerings.

UAS Manufacturing and Operations

Continued investment in infrastructure has established our manufacturing capability to meet demand with scalable capacity. We have the manufacturing infrastructure to produce UAS products at high rates, support initial low rate production for new UAS development programs and tactical missile systems and execute initial low-rate production of large UAS. By drawing upon experienced personnel across various manufacturing industries including aerospace, automotive and volume commodities, we have instituted lean production systems and leverage our International Organization for Standardization, or ISO, certification, integrated supply chain strategy, document control systems, and process control methodologies for high volume, efficient production. Presently, we perform small UAS manufacturing at the 85,000 square foot manufacturing facility we established in 2005. This ISO 9001:2008 certified manufacturing facility is designed to accommodate demand of up to 1,000 aircraft per month. ISO 9001:2008 refers to a set of voluntary standards for quality management systems. These standards are established by the ISO to govern quality management systems used worldwide. Companies that receive ISO certification have passed audits performed by a Registrar Accreditation Board-certified auditing company. These audits evaluate the effectiveness of companies' quality management systems and their compliance with ISO standards. Some companies and government agencies view ISO certification as a positive factor in supplier assessments. Our 105,000 square foot facility housing the Global Observer and Tern programs is equipped with specialized testing and production capabilities to enable low rate production of these unique systems.

UAS Competition

The market for military small UAS continues to evolve in response to changing technologies, shifting customer needs and expectations and the potential introduction of new products. We believe that a number of established domestic and international defense contractors have developed or are developing small UAS that will continue to compete directly with our products. Some of these contractors have significantly greater financial and other resources than we possess. Our current principal small UAS competitors include Elbit Systems Ltd., L-3 Communications Holdings, Inc. and Lockheed Martin Corporation. We do not view large UAS such as Northrop Grumman Corporation's *Global Hawk*, General Atomics, Inc.'s *Predator* and its derivatives, The Boeing Company's *ScanEagle* and Textron Inc.'s *Shadow* as direct competitors to our small UAS because they perform different missions, do not typically deliver their information directly to front-line ground forces and are not hand-launched and controlled. However, we cannot be certain that these platforms will not become

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direct competitors in the future. The market for long endurance UAS is in an early stage of development. As a result, this category is not well defined and is characterized by multiple potential solutions. An existing contractor that claims to provide long endurance UAS is Northrop Grumman Corporation with its Global Hawk. Several aerospace and defense contractors are pursuing this market opportunity with proposed very long duration UAS, including The Boeing Company, Qinetiq Group PLC, Aurora Flight Sciences Corporation, Lockheed Martin Corporation and Northrop Grumman Corporation. Some internet technology companies have acquired small firms that focus on this type of capability and represent potential future competitors. Companies pursuing airships as a solution for this market include Lockheed Martin Corporation and Northrop Grumman Corporation. Companies pursuing satellites as a solution for this market include The Boeing Company, Lockheed Martin Corporation, General Dynamics Corporation, EADS N.V., Ball Corporation and Orbital Sciences Corporation.

The suppliers of UAS mission services include some competitors in the small UAS market as well as companies focused on delivering UAS related services. UAS manufacturers such as The Boeing Company's Insitu Business and Textron Inc.'s AAI Corporation currently provide UAS mission services to military customers while other companies such as ISR Group Inc. and VT Group plc focus on providing UAS related services.

The market for tactical missile systems is in an early stage of development, but it is evolving rapidly. Potential competitors in this market include Textron Inc. and Lockheed Martin Corporation.

The market for commercial UAS products and services is in an early stage of development, but is evolving rapidly, generating a great deal of interest as government regulations evolve to accommodate commercial UAS operations in the National Airspace System and in the airspace of other countries. Given the breadth of applications and the diversity of industries that could benefit from UAS technology, a growing number of potential competitors in this market include consumer drone manufacturers who seek to enhance their systems' capabilities over time; other small UAS manufacturers, including large aerospace companies; aerial surveying and mapping service providers; ground-based surveying and mapping service providers; satellite imagery providers and specialty system manufacturers and service providers aiming to address specific market segments. The emerging non-military market is attracting numerous additional competitors given perceived lower barriers to entry and a much more fragmented marketplace as compared to the military market. Potential additional competitors include start-up companies providing low cost solutions.

We believe that the principal competitive factors in the markets for our UAS products and services include product performance, features, acquisition cost, lifetime operating cost, including maintenance and support, ease of use, integration with existing equipment and processes, quality, reliability, customer support, brand and reputation.

UAS Regulation

Due to the fact that we contract with the DoD and other agencies of the U.S. government, we are subject to extensive federal regulations, including the Federal Acquisition Regulations, Defense Federal Acquisitions Regulations, Truth in Negotiations Act, Foreign Corrupt Practices Act, False Claims Act and the regulations promulgated under the DoD Industrial Security Manual, which establishes the security guidelines for classified programs and facilities as well as individual security clearances. The federal government audits and reviews our performance on contracts, pricing practices, cost structure, and compliance with applicable laws, regulations and standards. Like most government contractors, our contracts are audited and reviewed on a continual basis by federal agencies, including the Defense Contract Management Agency, or DCMA, and the Defense Contract Audit Agency, or DCAA.

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Certain of these regulations impose substantial penalties for violations, including suspension or debarment from government contracting or subcontracting for a period of time. We monitor all of our contracts and contractual efforts to minimize the possibility of any violation of these regulations.

In addition, we are subject to industry-specific regulations due to the nature of the products and services we provide.

For example, we are subject to further U.S. government regulation, including by the FAA, which regulates airspace for all air vehicles in the U.S. National Airspace System, by the National Telecommunications and Information Administration and the Federal Communications Commission, which regulate the wireless communications upon which our UAS depend in the United States, and under the International Traffic in Arms Regulations, which regulates the export of controlled technical data, defense articles and defense services. In 2006, the FAA issued a clarification of its existing policies stating that, in order to engage in public use of small UAS in the U.S. National Airspace System, a public (government) operator must obtain a Certificate of Authorization, or COA, from the FAA or fly in restricted airspace. The FAA's COA approval process requires that the public operator certify the airworthiness of the aircraft for its intended purpose, that a collision with another aircraft or other airspace user is extremely improbable, that the small unmanned aircraft system complies with appropriate cloud and terrain clearances and that the operator or spotter of the small unmanned aircraft system is generally within one half-mile laterally and 400 feet vertically of the small unmanned aircraft system while in operation. Furthermore, the FAA's clarification of existing policy states that the rules for radio-controlled hobby aircraft do not apply to public or commercial use of small UAS. In 2012, the U.S. Congress mandated that the FAA develop rules that provide for the integration of small UAS into the U.S. National Airspace System by September 30, 2015.

The FAA issued the first restricted type certificate for the commercial operation of an unmanned aircraft over American soil to our Puma AE system in 2014. Under a COA, we are operating Puma AE systems in the Prudhoe Bay area of Alaska to support a major oil and gas customer. The Secretary of Transportation has the authority to determine whether an airworthiness certificate is required for a UAS to operate safely in the U.S. National Airspace System. On September 25, 2014 the FAA began issuing case-by-case authorization for certain unmanned aircraft to perform commercial operations prior to the finalization of the rules providing for the integration of small UAS into the U.S. National Airspace System. As of May 11, 2015 the FAA had granted us four exemptions for the use of our Puma AE and Shrike systems for agriculture, aerial survey, and patrol operations and for inspections of fixed infrastructures in controlled environments. On February 15, 2015 the FAA proposed a framework of regulations that would allow routine use of certain small unmanned aircraft systems (UAS) in the U.S. National Airspace System. The FAA proposal offers safety rules for small UAS (under 55 pounds) conducting non-recreational operations. The rule would limit flights to daylight and visual-line-of-sight operations. The rule also addresses height restrictions, operator certification, optional use of a visual observer, aircraft registration and marking, and operational limits. The FAA requested and is reviewing public comments to the notice of proposed rulemaking with the intent of proposing final rules at some point in the future. Until the FAA finalizes the rules respecting UAS in the U.S. National Airspace System, the prior rules remain in effect.

Furthermore, our non-U.S. operations are subject to the laws and regulations of foreign jurisdictions, which may include regulations that are more stringent than those imposed by the U.S. government on our U.S. operations.

UAS Government Contracting Process

We sell the significant majority of our small UAS products and services as the prime contractor under contracts with the U.S. government. Certain important aspects of our government contracts are described below.

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UAS Bidding Process

Most of our current government contracts were awarded through a competitive bidding process. The U.S. government awards competitive-bid contracts based on proposal evaluation criteria established by the procuring agency. Competitive-bid contracts are awarded after a formal bid and proposal competition among providers. Interested contractors prepare a bid and proposal in response to the agency's request for proposal or request for information. A bid and proposal is usually prepared in a short time period in response to a deadline and requires the extensive involvement of numerous technical and administrative personnel. Following award, competitive-bid contracts may be challenged by unsuccessful bidders.

UAS Funding

The funding of U.S. government programs is subject to congressional appropriations. Although multi-year contracts may be authorized in connection with major procurements, Congress generally appropriates funds on a fiscal year basis, even though a program may continue for many years. Consequently, programs are often onl