

INNOVATIVE SOLUTIONS & SUPPORT INC

Form 10-K

December 21, 2018

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**UNITED STATES**  
**SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

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**FORM 10-K**

**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended September 30, 2018

OR

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from \_\_\_\_\_ to \_\_\_\_\_.

Commission File No. 000-31157

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**INNOVATIVE SOLUTIONS AND SUPPORT, INC.**

(Exact name of registrant as specified in its charter)

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**Pennsylvania**  
(State or other jurisdiction of incorporation)

**23-2507402**  
(IRS Employer Identification No.)

**720 Pennsylvania Drive, Exton, Pennsylvania**  
(Address of principal executive offices)

**19341**  
(Zip Code)

**(610) 646-9800**  
(Registrant's telephone number, including area code)

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

**Title of each class:**  
Common Stock par value \$.001 per share

**Name of each exchange on which registered**  
NASDAQ Global Market

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  No

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

Note: Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or section 15(d) of the Exchange Act from their obligations under those sections.

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  No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted 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 such files). Yes  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405) is not contained herein, and will not be contained, to the best of the 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.

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

Large accelerated filer <input type="radio"/>	Accelerated filer <input type="radio"/>
Non-accelerated filer <input type="radio"/>	Smaller Reporting Company <input checked="" type="radio"/>
Emerging growth company <input type="radio"/>	

If an emerging growth company, indicate by check mark if the Registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

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

The aggregate market value of the Registrant's common stock held by non-affiliates of the Registrant as of March 31, 2018 (the last business day of the registrant's most recently completed second quarter) was approximately \$44.7 million (based on the closing sale price of the registrant's common stock on the NASDAQ Global Market on such date). Shares of common stock held by each executive officer and director and by each person who owns 10% or more of the Registrant's outstanding common stock have been excluded since such persons may be deemed affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of November 30, 2018, there were 16,840,599 outstanding shares of the Registrant's Common Stock

### Documents Incorporated by Reference

Portions of the Registrant's Proxy Statement for the 2019 Annual Meeting of Shareholders to be filed prior to January 28, 2019 are incorporated by reference into Part III of this Report. Such Proxy Statement, except for the parts therein which have been specifically incorporated by reference, shall not be deemed filed for the purposes of this Report on Form 10-K.

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INNOVATIVE SOLUTIONS AND SUPPORT, INC.

2018 Annual Report on Form 10-K

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**FORWARD LOOKING STATEMENTS**

*This report contains forward looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (the Exchange Act ). These forward looking statements are based largely on current expectations and projections about future events and trends affecting the business, are not guarantees of future performance, and involve a number of risks, uncertainties and assumptions that are difficult to predict. In this report, the words anticipates, believes, may, will, estimates, continues, anticipates, intends, forecasts, expects, plans, could, should, would, is likely and similar expressions, as they relate to the business or to its management, are intended to identify forward looking statements, but they are not exclusive means of identifying them. Unless the context otherwise requires, all references herein to IS&S, the Registrant, the Company, we, us or our are to Innovative Solutions and Support, Inc. and its consolidated subsidiaries.*

*The forward looking statements in this report are only predictions, and actual events or results may differ materially. In evaluating such statements, a number of risks, uncertainties and other factors could cause actual results, performance, financial condition, cash flows, prospects and opportunities to differ materially from those expressed in, or implied by, the forward looking statements. These risks, uncertainties and other factors include those set forth in Item 1A (Risk Factors) of this Annual Report on Form 10-K and the following factors:*

- *market acceptance of the Company s ThrustSense® Integrated PT6 Autothrottle, flat panel display systems, NextGen Flight Deck and COCKPIT/IP® or other planned products or product enhancements;*
- *continued market acceptance of the Company s air data systems and products;*
- *the competitive environment and new product offerings from competitors;*
- *difficulties in developing and producing the Company s ThrustSense® Integrated PT6 Autothrottle, NextGen Flight Deck, COCKPIT/IP® Flat Panel Display System or other planned products or product enhancements;*
- *the deferral or termination of programs or contracts for convenience by customers;*
- *the ability to service the international market;*
- *the availability of government funding;*
- *the impact of general economic trends on the Company s business;*
- *the ability to gain regulatory approval of products in a timely manner;*
- *delays in receiving components from third party suppliers;*
- *the bankruptcy or insolvency of one or more key customers;*
- *protection of intellectual property rights;*
- *the ability to respond to technological change;*

- *failure to retain/recruit key personnel;*
- *a cyber security incident;*
- *risks related to our self-insurance program;*
- *potential future acquisitions;*
- *changes in law, including changes to corporate tax laws in the United States and the availability of certain tax credits; and*
- *other factors disclosed from time to time in the Company's filings with the United States Securities and Exchange Commission (the SEC).*

*Except as expressly required by the federal securities laws, the Company undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events, or otherwise after the date of this report. Results of operations in any past period should not be considered indicative of the results to be expected for future periods. Fluctuations in operating results may result in fluctuations in the price of the Company's common stock.*

*Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this Annual Report on Form 10-K. The Company does not undertake any obligation to publicly release any revisions to these forward-looking statements to reflect events, circumstances or changes in expectations after the date of this Annual Report on Form 10-K, or to reflect the occurrence of unanticipated events. The forward-looking statements in this document are intended to be subject to the safe harbor protection provided by Sections 27A of the Securities Act of 1933, as amended (the Securities Act), and 21E of the Exchange Act.*

*Investors should also be aware that while the Company, from time to time, communicates with securities analysts, it is against its policy to disclose any material non-public information or other confidential commercial information. Accordingly, shareholders should not assume that the Company agrees with any statement or report issued by any analyst irrespective of the content of the statement or report. Furthermore, the Company has a policy against issuing or confirming financial forecasts or projections issued by others. Thus, to the extent that reports issued by securities analysts contain any projections, forecasts or opinions, such reports are **not** the responsibility of the Company.*

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**PART I**

**Item 1. Business.**

**Overview**

Innovative Solutions and Support, Inc. (the Company, IS&S, we or us ) was incorporated in Pennsylvania on February 12, 1988. The Company operates in one business segment as a systems integrator that designs, develops, manufactures, sells, and services air data equipment, engine display systems, standby equipment, primary flight guidance, autothrottles and cockpit display systems for retrofit applications and original equipment manufacturers ( OEMs ). The Company supplies integrated Flight Management Systems ( FMS ), Flat Panel Display Systems ( FPDS ), FPDS with Autothrottle, air data equipment, Integrated Standby Units ( ISU ), ISU with Autothrottle and advanced Global Positioning System ( GPS ) receivers that enable reduced carbon footprint navigation.

The Company has continued to position itself as a system integrator, which capability provides the Company with the potential to generate more substantive orders over a broader product base. The strategy, as both a manufacturer and integrator, is designed to leverage the latest technologies developed for the computer and telecommunications industries into advanced and cost-effective solutions for the general aviation, commercial air transport, United States Department of Defense ( DoD )/governmental, and foreign military markets. This approach, combined with the Company's industry experience, is designed to enable IS&S to develop high-quality products and systems, to reduce product time to market, and to achieve cost advantages over products offered by its competitors.

For several years the Company has been working with advances in technology to provide pilots with more information to enhance both the safety and efficiency of flying, and has developed its COCKPIT/IP® Cockpit Information Portal ( CIP ) product line, that incorporates proprietary technology, low cost, reduced power consumption, decreased weight, and increased functionality. The Company believes the CIP product line is suited to address market demand that will be driven by regulatory mandates, new technologies, and the high cost of maintaining aging/obsolete equipment on airplanes that have been in service for up to fifty years. The Company has incorporated Electronic Flight Bag ( EFB ) functionality, such as charting and mapping systems, into its FPDS product line.

The Company has developed an FMS that combines the savings long associated with in flight fuel optimization in enroute flight management combined with the precision of satellite-based navigation required to comply with the regulatory environments of both domestic and international markets. The Company believes that the FMS coupled with its FPDS product line is well suited to address market demand driven by certain regulatory mandates, new technologies, and the high cost of maintaining aging and obsolete equipment on aircraft that will be in service for up to fifty years. The shift in the regulatory and technological environment is illustrated by the dramatic increase in the number of Space Based Augmentation System ( SBAS ) or Wide Area Augmentation System ( WAAS ) approach qualified airports, particularly as realized through Localizer Performance with Vertical guidance ( LPV ) navigation procedures. Aircraft equipped with the Company's FMS and FPDS product line (equipped with a SBAS/WAAS/LPV enabled navigator) will be qualified to land at such airports and to comply with upcoming Federal Aviation Administration ( FAA ) mandates for Required Navigation Performance ( RNP ), and Automatic Dependent Surveillance-Broadcast ( ADS-B ) navigation, a fact which IS&S believes will further increase the demand for the Company's products. The Company's FMS/FPDS product line is designed for new production and retrofit applications into general aviation, commercial air transport and military transport aircraft. In addition, the Company offers a state of the art ISU, integrating the full functionality of the primary and navigation displays into a small backup-powered unit. This ISU builds on the Company's legacy air data computer to form a complete next-generation cockpit display and navigation upgrade offering to the commercial and military markets.

More recently, the Company has developed and received certification on its NextGen Flight Deck featuring its ThrustSense® Integrated PT6 Autothrottle ( ThrustSense® Autothrottle ) for retrofit in the Pilatus PC-12. The NextGen Flight Deck features Primary Flight and Multi-Function Displays, ISUs as well as an Integrated FMS and Electronic Flight Bag System. The innovative avionics suite includes dual flight management systems, autothrottles, synthetic vision and enhanced vision. The NextGen enhanced avionics suite is available for integration into other business aircraft with Non-FADEC and FADEC engines.

We believe the ThrustSense® Autothrottle is innovative in that it is the first autothrottle developed for a turbo prop that allows a pilot to automatically control the power setting of the engine. The autothrottle computes and controls appropriate power levels reducing overall pilot workload. The system computes thrust, holds selected speed/torque, and implements appropriate speed and engine limit protection. When engaged by the pilot, the autothrottle system adjusts the throttles automatically to achieve and hold the selected airspeed guarded by a torque/temperature limit mode. The autothrottle system takes full advantage of the integrated cockpit utilizing Weight and Balance information for optimal control settings and enabling safety functions like a Turbulence control mode.



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IS&S sells to both the OEM and the retrofit markets. Customers include various OEMs, commercial air transport carriers and corporate/general aviation companies, DoD and its commercial contractors, aircraft operators, aircraft modification centers, and foreign militaries.

Occasionally, IS&S sells its products directly to DoD; however, the Company sells its products primarily to commercial customers for end use in DoD programs. Sales to defense contractors are generally made on commercial terms, although some of the termination and other provisions of government contracts are applicable to these contracts.

Customers have been and may continue to be affected by the uncertain economic conditions that currently exist both in the United States and abroad. Such conditions may cause customers to curtail or delay their spending on both new and existing aircraft. Factors that can impact general economic conditions and the level of spending by customers include, but are not limited to, general levels of consumer spending, increases in fuel and energy costs, conditions in the real estate and mortgage markets, labor and healthcare costs, access to credit, consumer confidence, and other macroeconomic factors that affect spending behavior. Furthermore, spending by government agencies may be reduced in the future if tax revenues decline, including as a result of recently enacted tax reform legislation in the United States. If customers curtail or delay their spending or are forced to declare bankruptcy or liquidate their operations because of adverse economic conditions, the Company's revenues and results of operations would be affected adversely. However, the Company believes that, in an uncertain economic environment, customers that may have otherwise elected to purchase newly manufactured aircraft may be interested instead in retrofitting existing aircraft as a cost-effective alternative, thereby creating a market opportunity for IS&S.

**Industry**

A wide range of information is critical for proper and safe operation of aircraft. With advances in technology, new types of information to assist pilots are becoming available for display in cockpits, such as satellite-based weather, ground terrain maps, and ADS-B navigation. The Company believes that aircraft cockpits will become more complete information centers, capable of delivering additional information that is either mandated by regulation or demanded by pilots to assist in the safe and efficient operation of aircraft.

The Company classifies flight data into four general types: aircraft heading and altitude information, flight critical aircraft control data, navigation data, and maintenance and aircraft health data. Aircraft heading and altitude information includes; aircraft speed, altitude, and rates of ascent and descent. Flight critical aircraft control information includes; engine data such as fuel and oil quantity, and other engine measurements. Navigation data includes radio position, flight management, GPS, and alternative source information (i.e. information not originating on the aircraft, including weather depiction maps, GPS navigation, and surface terrain maps). Maintenance and aircraft health data includes on-board sensors and programs to measure parameters related to the health of a system on the aircraft. Air data calculations are based primarily on air pressure measurements derived from sensors on the aircraft. Engine data are determined by measuring various indices such as temperature, volume, revolutions per minute (RPM), and pressure within an aircraft's engines and other mechanical equipment. GPS and alternative source information are derived typically from satellites or equipment located on land and transmitted by satellite or radio signals to the aircraft. Maintenance and aircraft health data measure multiple parameters on various products and interface with various components to manage, measure, and report on the health, reliability and usability of a system. This information is displayed in the cockpit for reference, enhanced position awareness, and reduced support logistics on properly equipped aircraft.

Traditionally, flight data and other cockpit information were displayed on a series of separate analog mechanical instruments. In the early 1980s, Cathode Ray Tubes (CRT) and digital displays using Liquid Crystal Displays (LCD) began to replace some individual analog instruments. Presently, the industry offers high resolution color flat panels using Active Matrix Liquid Crystal Displays (AMLCD) to replace traditional analog instruments, CRT or LCD displays. IS&S expects that the ability to display more information in an efficient space and custom platform will become increasingly important if additional information, such as weather depiction maps, traffic information, surface terrain maps, datalink messaging, and surveillance displays, becomes mandated by regulation or demanded by pilots. Accordingly, the Company believes flat panel displays, which can integrate and display a suite of information, will replace individual instruments CRTs and LCDs on legacy aircraft.

In the past, equipment data, such as engine and fuel-related information, were displayed on conventional analog mechanical instruments. Engine and fuel instruments provide information on engine activity, including oil and hydraulic pressures, and temperature. These instruments are clustered throughout an aircraft's cockpit. Engine and fuel instruments tend to be replaced more frequently than other instruments due to obsolescence and normal wear-and-tear. Aircraft operators continue to purchase individual conventional engine and fuel instruments as replacements, because the information that these instruments display is vital for safe and efficient flight. Increasingly, operators are replacing their clusters of analog mechanical instruments with integrated Engine Instrument Display Systems ( EIDS ) or a FPDS packages.

As the skies and airports become more crowded, the aviation industry and its regulators are concentrating on new technologies, procedures, and regulations that allow more aircraft to operate in the skies and on the ground safely, efficiently, and with less impact

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on the environment. These new technologies and procedures, such as traffic avoidance, ground awareness, increased precision of navigation and vertical position, runway incursion prevention, and increased digital communication, will require innovation and intuitive methods to display situational awareness information for the pilots. The Company believes that flat panel displays provide a strong solution to these requirements.

**Strategy**

The Company's objective is to become a leading supplier and integrator of cockpit information, and believes that its industry experience and reputation, technology and products, and business strategy provide the basis to achieve this objective. Key elements of the Company's strategy include:

- *Introduction of Autothrottle to General Aviation Market.* IS&S saw the lack of an available autothrottle system on turboprop aircrafts as an unmet need in the marketplace and over the last two years has invested in the development of a sophisticated turboprop autothrottle. We believe that ThrustSense®, IS&S's new turboprop autothrottle with patented technology, is highly effective, is less complex and less costly than other available products and offers very sophisticated sensing and adds multiple safety features that we believe even exceeds those of much more expensive jet systems. The Company received the first supplemental type certificate ( STC ) ever granted by the Federal Aviation Administration ( FAA ) for a turboprop autothrottle in July 2017. IS&S plans to capitalize on being the first to market and introduce the product to owners and operators of turboprop aircraft.
- *Focusing on retrofits.* Cockpit avionics upgrades for existing aircraft is of great interest in the present environment. The retrofit of an aircraft with the COCKPIT/IP® FPDS, FMS, and ISU system components is cost effective compared to the acquisition of a new aircraft and can provide equivalent functionality to that of new aircraft.
- *Establishing leadership in the flat panel display market.* IS&S expects that many aircraft will be retrofitted with flat panel displays over the next several years. Given the versatility, visual appeal, and lower cost of displaying a series of instruments and other flight relevant information on a single flat panel, the Company believes that flat panel displays will increasingly replace individual analog and digital instruments, LCDs and CRTs. The Company believes that the COCKPIT/IP® has significant benefits over competitive flat panel displays, including lower cost, larger size, reduced weight, enhanced viewing angles, and a broader array of functions. The Company's patented and proprietary Integrity Checking Processor and Zooming features provide increased situational awareness, reliability, performance, and utility to the owner/operator. Accordingly, the Company believes that these advantages will allow IS&S to generate significant revenues from the COCKPIT/IP® product, and to increase market share. In addition, demand for new aircraft, FAA mandates and obsolescence issues on older aircraft will contribute to this growth.
- *Continuing engineering and product development successes.* IS&S develops innovative products by combining its avionics, engineering, and design expertise with commercially available technologies, components, and products from non-aviation applications, including the personal computer and telecommunications industries. The

Company's COCKPIT/IP® system components present examples of its ability to engineer products through the selective application of non-avionic technology. In addition, as permitted by law, IS&S applies for and registers its patents and trademarks for the technology and products it develops in the United States and various countries around the world to protect its intellectual property.

- *Maintaining leadership in air data markets.* The Company believes that it is one of the largest suppliers of air data products to the U.S. retrofit market. The pressures on DoD procurement budget make the retrofit of aging military aircraft with newer, more advanced, and more supportable air data systems more attractive. In addition, higher performance engines in business aircraft are creating a need for more sophisticated air data products which the Company supplies.
- *Increasing sales to DoD, other government agencies, defense contractors, commercial air transport and corporate/general aviation markets.* IS&S has extended its efforts to diversify sales to include all aviation end user markets, especially legacy military programs and commercial air transport aircraft. In the commercial air transport market, the Company has addressed national carriers, regional carriers, and other fleet operators. The Company has targeted the corporate/general aviation market, both for retrofits and original equipment, and has ongoing retrofit programs and two OEM programs with Eclipse Aerospace, Inc. ( Eclipse ) and Pilatus Aircraft Limited ( Pilatus ).
- *Expanding international presence.* IS&S plans to increase its international sales by adding sales and marketing personnel. The Company believes that European and other international aircraft operators and aircraft modification centers will retrofit legacy in-service aircraft with large flat panel displays. IS&S obtained approval from the European Aviation Safety Agency ( EASA ) for installing the FPDS in Europe for the B757/B767 aircraft and expects to obtain EASA approvals for other European aircraft types.

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**Products**

Current lines of products include:

*Flat Panel Display Systems*

Flat panel displays are AMLCD screens that can replicate the display of one or a suite of analog or digital displays on one screen. Flat panel displays can replace existing displays in legacy aircraft. AMLCDs are used also for security monitoring on-board aircraft and as tactical workstations on military aircraft. The flat panel product line offers numerous advantages for presentation of engine performance data. During fiscal years 2018, 2017 and 2016, revenues related to FPDS accounted for 75%, 89% and 95%, respectively, of total sales.

The Company's FPDS can replace conventional analog and digital displays and can display additional information which is not commonly displayed in the cockpit with conventional analog and digital displays. The COCKPIT/IP® is capable of displaying nearly all types of air data, engine and fuel data, altitude, heading and navigational data, maintenance and aircraft health data, and alternative source information. As technology and information delivery systems develop further, additional information will be displayed in the cockpit, such as surface terrain maps and data link messaging. IS&S designed the COCKPIT/IP® to be capable of displaying information from a variety of sources, including its Reduced Vertical Separation Minimum (RVSM) air data system, engine and fuel instrumentation, and third-party data and information products.

From time to time, customers may order one or more FPDSs customized to their particular requirements. Typically, the Company charges for the added development cost. This revenue is reported as EDC on the consolidated statements of operations. Engineering costs incurred in customizing the FPDSs are included in cost of sales.

*Flight Management Systems*

The IS&S NextGen Flight Management System is an easily installed navigation and performance computer that complements the IS&S Flat Panel Display System upgrade for commercial air transport aircraft. The FMS interfaces with the IS&S SBAS GPS Global Positioning System (GPS) to provide a GPS based navigation solution. The GPS receiver is located remotely depending on space availability. To minimize use of cockpit space and ease installation efforts, the FMS is housed in an ARINC 739B compliant Multifunction and Control Display Unit (MCDU).

Each FMS/MCDU has an LCD display, keyboard, mode and function keys, line select keys, annunciator lights, and supports ethernet data loading. The flight crew can manually or datalink waypoint flight plans, routes or user-defined waypoints on the IS&S FMS and modify and update these plans via the FMS/MCDU screen. Once the flight plan data is entered, the MCDU computes the most economical flight profiles and provides steering commands for use by the aircraft control system to fly the airplane along the desired route.

The FMS/MCDU package incorporates a robust navigation database capable of storing today's global database with ample growth for the future. Flight crews can utilize the data in the navigation database to create, edit and modify flight plans for display on the FPDS. The navigation data includes airways, jet routes, Standard Instrument Departure ( SID ), Standard Terminal Arrival Route ( STAR ), and company stored routes.

The FMS/MCDU is ARINC 739B compliant, which provides an interface option for other cockpit equipment such as SATCOM, ACARS, CMU, HUD, and a printer. The interface to the IS&S FPDS is provided via Ethernet. The IS&S EFB is integrated with the FMS/MCDU and FPDS where the control selection of the EFB features and applications are handled via the FMS/MCDU. The display is a five inch LCD with VGA resolution. The touchscreen display uses LED backlighting and is sunlight readable.

#### *Integrated Standby Unit*

The Company's ISU incorporates the measurement and display of attitude, altitude, airspeed, and navigation data into a single standby/backup navigation instrument for military, commercial air transport and corporate/general aviation applications. The ISU has an integral Inertial Measurement Unit that includes accelerometer, gyro, and magnetometer triads. The unit also includes an integral air data measurement module for measurement of static and total pressure for display of altitude, airspeed, and mach number.

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The ISU is a highly reliable and accurate standby navigation system that is based on IS&S's merger of COCKPIT/IP® display technology and RVSM air data products coupled with the latest breakthroughs in MEMS Gyros with exceptional stability. An IS&S proprietary algorithm provides for accurate computation of attitude, heading and air data parameters. The unit includes a triaxial magnetometer that is designed to be tolerant to the local soft iron effects.

The display uses a familiar Primary Flight Display format to reduce pilot workload. Logistics and maintenance savings are realized due to increased reliability and a reduction in LRUs. The unit is equipped with built-in test and display of navigational aid and maintenance data.

*Air Data Systems and Components*

The Company's air data products calculate and display various measures such as aircraft speed, altitude, and vertical rate of change. These air data products utilize advanced sensors to gather air pressure data and customized algorithms to interpret data, thus allowing the system to calculate altitude more accurately. During fiscal 2018, 2017, and 2016, sales of air data systems and components accounted for 25%, 11% and 5%, respectively, of total sales.

IS&S sells individual components and partial and complete air data systems. The components and systems include:

- digital air data computers, which calculate various air data parameters such as altitude, airspeed, vertical speed, angle of attack and other information derived from the measure of air pressure;
- integrated air data computers and display units, which calculate and convey air data information;
- altitude displays, which convey aircraft altitude measurements;
- airspeed displays, which convey various airspeed measurements including vertical airspeed and rates of ascent and descent; and
- altitude alerters which allow pilots to select a desired cruising altitude and which provide warnings to pilots when an unacceptable deviation occurs.

*Engine and Fuel Displays*

IS&S develops, manufactures and markets engine and fuel displays. These solid-state multifunction displays convey information with respect to fuel and oil levels, and engine activity, such as oil and hydraulic pressure and temperature. They include individual and multiple displays installed throughout the cockpit. The displays can be used in conjunction with the Company's engine and fuel data equipment or that of other manufacturers.

Engine and fuel displays are vital to safe flight. In addition, accurate conveyance of engine and fuel information is critical for monitoring engine stress and parts maintenance. Engine and fuel displays tend to be replaced more frequently than other displays, and have been slow to incorporate new technology since their introduction because of their low cost, standard design and universal use.

IS&S believes that its air data engine and fuel displays are extremely reliable, have been designed to be programmable, and are adaptable easily without major modification to most modern aircraft. These products have been installed on B727, B737, C-130H, DC-9, DC-10, P-3, F-16 and A-10 aircraft.

#### *Integrated Global Navigation System*

The Company's Integrated Global Navigation System (IGNS) product is an alternative for adding GPS navigation capability to legacy aircraft through the OEM FMS without the high cost of upgrading the current FMS.

This product includes RNP and RNAV approaches via the certified IS&S Beta 3 GPS and leverages components of the Company's Flat Panel Display System to provide annunciation to the pilot during GPS procedures.

#### *Autothrottle ThrustSense®*

The IS&S Autothrottle (A/T), ThrustSense®, is a full regime A/T, from takeoff to landing phases of flight including go around. ThrustSense® combines full-authority digital engine (FADEC) functionality with low and high speed protection for the Pilatus PC-12's and Beechcraft King Air. IS&S believes ThrustSense® improves safety and performance for Pratt and Whitney PT6-powered single and multi-engine aircraft. In the case of multi-engine aircraft, such as Beechcraft King Air, ThrustSense® provides Vmc



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protection during engine out condition. The system is light weight, installs with minimal downtime and provides the user with high value for performance. IS&S believes ThrustSense® can attain fuel savings of 3% and when flying constant AoA the fuel savings can be 10%.

The IS&S ThrustSense® Autothrottle is designed to ensure stabilized approaches by controlling speeds in the descent. During high pilot workload, the autothrottle is designed to prevent the airplane from getting dangerously slow or fast and protects against overtorque and overtemp enhancing the safety and capability of your aircraft.

Control of the autothrottle is housed in an easy-to-install Flight Instrument Standby that provides standby functionality on a high resolution LCD display. The ThrustSense® Autothrottle is designed to prohibit structural modifications to the existing throttle quadrant. ThrustSense® has MEL Relief and On Condition Maintenance.

IS&S believes ThrustSense® can be adapted to virtually all PT6 powered aircrafts with the IS&S Flight Instrument Standby. The Standby executes software to control the autothrottle actuator. In addition the ISU calculates, processes and displays altitude, attitude, airspeed, slip/skid, and navigation display information, which IS&S believes is presented in a logical and concise single instrument display. It features a high resolution LCD display with full LED backlighting improving reliability and full sunlight readability to the pilot. IS&S believes the graphics are fully anti-aliased with accuracy and detail compared with our competitors.

IS&S believes the autothrottle retrofit and standby are easily installed, and typical installation can take less than a day with minimum modifications to the existing flight deck.

Other potential benefits of the ThrustSense® Autothrottle include:

- safety enhancements and pilot workload reduction;
- potential life-saving enhancements in multi-engine aircraft;
- FADEC-like engine protection;
- does not require replacement of the existing throttle quadrant (major cockpit modification) due to the patented compact and safe actuation mechanism; and
- broader applications for retrofit in FADEC or non-FADEC Turbofan and Turboprop aircraft.

*Utilities Management System*

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IS&S provides the Utilities Management System ( UMS ) for the Pilatus PC-24 which has been certified and delivered. The IS&S UMS integrates utility wide range of aircraft functions, which are commonly supported by multiple individual controllers. The UMS-24 monitors aircraft sensors and control aircraft systems as required to achieve system functionality. This open architecture system allows Pilatus to design and/or refine control and monitoring algorithms, in-house.

IS&S believes there is quite a bit of interest in its UMS from other aircraft manufacturers as well. The UMS is an innovative design that controls 20 plus aircraft systems such as navigation, auto-flight, landing gear, surface positions, fire protection, ice/rain protection, electrical loads, lighting, environmental conditions, cabin pressurization, and oxygen systems based on OEM custom configuration.

The UMS is a Data Concentrator and Processing Unit ( DCPU ) that allows manufacturers to configure and program specific applications on a ARINC 653 operating system and an open architecture platform. The UMS acts as the aircraft central maintenance computer allowing for a maximum of six DCPUs to be included in the communication ring. The system provides a significant power and weight saving over the use of federated boxes and utilizes the latest IS&S technological advancements in avionics circuit design.

### Customers

The Company's customers include the United States government (including DoD, the Department of Interior ( DOI ) and the Department of Homeland Security ( DHS ), American Airlines, Inc. ( AAI ), Boeing, Deutsche Post DHL Group ( DHL ), Eclipse, FedEx Corporation ( FedEx ), Icelandair, L-3 Communications, Lockheed Martin Corporation, Pilatus, Sierra Nevada Corporation ( Sierra Nevada ), and the Department of National Defense (Canada), among others. In fiscal year 2018, the largest customer, Pilatus, accounted for 20% of total revenue. In fiscal year 2017, the three largest customers, Sierra Nevada, Pilatus and DHL accounted for 16%, 12% and 10% of total revenue, respectively. In fiscal year 2016, the three largest customers, Sierra Nevada, Jet2.com and DHL accounted for 13%, 12% and 11% of total revenue, respectively.

### *Retrofit Market*

Historically, a majority of the Company's sales have come from the retrofit market, which IS&S has pursued because of its continued growth in response to the need to support the world's aging fleet of aircraft. The design and airframe structure of many types of older aircraft generally exceeds the technology and technical capabilities of the original cockpit instruments and avionics. The Company has

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developed products that enable owners and operators to upgrade their aircraft by retrofitting them with IS&S products at a competitive cost and with equipment that provides cockpit displays with capabilities and technology equivalent to new aircraft.

IS&S expects its main customers in the retrofit market will continue to be:

- the DoD and defense contractors,
- aircraft operators, and
- aircraft modification centers.

*Department of Defense and Defense Contractors.* The Company sells its products directly to the DoD and to domestic and international defense contractors for end use on military aircraft retrofit programs. DoD programs generally take one of two forms: a subcontract with a prime government contractor, such as Boeing, Lockheed Martin, or L-3 Communications, or a direct contract with the appropriate government agency, such as the U.S. Air Force. The government's desire for cost-effective retrofit of its aircraft has led it to purchase commercial off-the-shelf equipment rather than to develop specially designed products, which are usually more costly and take longer to implement. These retrofit contracts tend to be on arms-length commercial terms, although some termination and other provisions of government contracts are typically applicable to these contracts, as described under *Government Regulation* below. Each government agency or general contractor retains the right to terminate a contract at any time at its convenience. Upon such alteration or termination, IS&S is entitled typically to be compensated for already delivered items and reimbursement for allowable costs incurred.

*Aircraft Operators.* The Company sells its products to aircraft operators, including commercial airlines, cargo carriers, and business and general aviation aircraft owners or suppliers, primarily for retrofitting of aircraft owned or operated by these customers. The Company's commercial fleet customers include or have included, among others, AAI, ABX Air, FedEx and Icelandair. IS&S sells these customers a range of products from FPDS to air data systems.

*Aircraft Modification Centers.* Aircraft modification centers, which repair and retrofit private aircraft, represent the primary retrofit market for private and corporate jets. IS&S has established relationships with a number of aircraft modification centers throughout the United States, which act as distribution outlets for the Company's products.

*OEM Market*

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Since 2009, IS&S has been providing, through Eclipse, enhanced capability through retrofits to numerous owners of aircraft produced by Eclipse Aviation Inc., the assets of which were acquired by Eclipse in 2009. On April 15, 2015, Eclipse merged with Kestrel Aircraft to form One Aviation. IS&S is also developing and manufacturing the UMS for Pilatus PC-24 aircraft under a multi-year production contract as described above under -Products-Utility Management System . IS&S also markets its products to other original equipment manufacturers including, among others, Boeing and Lockheed Martin.

### Backlog

\$000 s	September 30			
		2018		2017
Backlog, beginning of period	\$	3,039	\$	4,569
Plus: bookings during period, net		14,410		15,715
Less: sales recognized during period		(13,850)		(17,245)
Backlog, end of period	\$	3,599	\$	3,039

Backlog represents the value of contracts and purchase orders, less the revenue recognized to date on those contracts and purchase orders. The year over year increase of \$0.6 million was the result of booking of \$14.4 million in new business, offset by \$13.9 million in recognized revenue. FPDS backlog as of September 30, 2018 increased \$1.0 million from September 30, 2017, and Air data product backlog as of September 30, 2018 decreased by \$0.4 million from September 30, 2017. The backlog excludes potential future sole-source production orders from products developed under the Company's EDC programs, including the Pilatus PC-24, and the KC-46A, all of which the Company expects to enter into extended production phases. Although the Company believes that the orders included in backlog are firm, most of the backlog involves orders that can be modified or terminated by the customer. As of September 30, 2018, none of the Company's backlog was expected to be filled beyond fiscal 2019.

### Engineering Development

The Company invests a large percentage of its sales on engineering development, both Research & Development ( R&D ) and EDC. At September 30, 2018, approximately 22% of the Company's employees were engineers engaged in various engineering development projects. Total engineering development expense is comprised of both internally funded R&D and product development and design charges related to specific customer contracts. Engineering development expense consists primarily of payroll-related

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expenses of employees engaged in EDC projects, engineering related product materials and equipment, and subcontracting costs. R&D charges incurred for product design, product enhancements, and future product development are expensed as incurred. Product development and design charges related to specific customer contracts are charged to cost of sales-EDC based on the method of contract accounting (either percentage-of-completion or completed contract) applicable to such contracts.

**Sales and Marketing**

IS&S focuses its sales efforts on passenger and cargo carrying aircraft operators, general aviation operators, aircraft modification centers, the DoD, DoD contractors, and OEMs. Periodically, the Company evaluates its sales and marketing efforts with respect to these focus areas and, where appropriate, makes use of third-party sales representatives who receive compensation through commissions based on performance. We currently have eight representatives worldwide that are actively selling IS&S products.

We are continuing to expand our maintenance, repair and overhaul ( MRO ) dealer network to address worldwide markets for Boeing 737, 757 and 767, Pilatus PC-12 s, Beechcraft King Air models and other aircraft types. We have added major MRO s like Lufthansa Technik AG and have established a dealer network for ThrustSense® and we are in the process of exploring adding more MRO dealerships in the United States and internationally.

Our marketing efforts have focused on applicable markets using email campaigns, advertisements, trade shows and direct mailers and social media. Our Autothrottle offering on the Pilatus PC-12 has been favorably featured in multiple articles in major publications over the past two years.

The Company believes its ability to provide prompt and effective repair and upgrade service is critical to its marketing efforts. The Company s customer service program offers a 24-hour customer hotline. The Company services its customers utilizing either field service engineers or its in-house repair and upgrade facility. The Company may lend spare units to customers when it is repairing or overhauling their equipment. IS&S provides customers with a standard two-year warranty on new products. The Company offers customers extended warranties of varying lengths beyond the two years for additional fees.

The majority of the Company s sales, personnel and assets are within the United States. In fiscal year 2018, 2017 and 2016 net sales outside the United States amounted to \$4.7 million, \$2.6 million and \$8.2 million, respectively.

**Government Regulation**

FAA regulations govern the manufacture and installation of the Company s products in aircraft owned and operated in the United States, and the IS&S facility is FAA certified. The most significant product and installation regulations are Technical Standard Orders ( TSOs ) and Supplemental Type Certificate ( STCs ), which establish the minimum operational performance standards. For example, in March 2015 and July 2015, respectively, the FAA issued its TSO authorization and STC for the Company s B757 Integrated Standby Unit to be used on B757 aircraft in the United States, and in December 2014, the FAA issued a TSO and STC to IS&S for a high definition Integrated Flat Panel Display System for use on Pilatus PC-12 type aircraft in the United States.

Generally, sales of IS&S products to European or other non-U.S. owners of aircraft require approval of European Aviation Safety Agency ( EASA ), or other relevant governmental agencies. EASA certification requirements for the manufacture and installation of the Company's products in European owned aircraft mirror FAA regulations, and its process for European certification is similar to that of the FAA. For example, in August 2015, the EASA issued an STC on the Company's B757 Integrated Standby Unit to be used on B757 aircraft in the European Community.

In addition to product related regulations, IS&S is subject to U.S. Government procurement regulations with respect to the sale of the Company's products to government entities or government contractors. The government agency or general contractor retains the right to terminate a contract at any time at its convenience. Upon such alteration or termination, IS&S is generally entitled to an equitable adjustment to the contract price so that the Company receives the purchase price for products or services already delivered and reimbursement for allowable costs incurred and for termination related costs.

### **Manufacturing, Assembly and Materials Acquisition**

The Company's manufacturing activities consist primarily of assembling and testing components and subassemblies, and integrating them into finished systems. Typically, the Company purchases components for products from third-party suppliers, a number of which are sole source, and assembles them in a clean room environment. Many of the components purchased are standard products, although certain parts are made to the Company's specifications. Although there are a limited number of suppliers of particular components, management believes other suppliers could provide similar components on comparable terms.

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When appropriate, IS&S enters into long-term supply agreements and uses its relationships with long-term suppliers to improve product quality and availability, and to reduce delivery times and product costs. In addition, the Company identifies alternative suppliers for important component parts. Generally, the introduction of component parts from new suppliers into existing products requires FAA certification of the entire finished product if the newly sourced component varies significantly from the original drawings and specifications. IS&S has not experienced significant delays in delivery of products caused by the inability to obtain either component parts or FAA approval of products incorporating new component parts.

**Quality Assurance**

Product quality is of vital importance. The Company is ISO 9001 and AS9100D certified. These standards represent an international consensus on effective management practices with the goal of ensuring that a company can deliver its products and related services consistently in a manner that meets or exceeds customer quality requirements. IS&S's certification to these standards allows the Company to represent to customers that it maintains high quality industry standards in the education of its employees, and in the design and manufacture of its products. In addition, the Company's products undergo extensive and documented quality control testing prior to being delivered to customers.

**Competition**

The market for the Company's products is highly competitive. Competitors vary in size and resources, and substantially all of the Company's competitors are much larger than IS&S and have substantially greater resources. With respect to air data systems and related products, the Company's principal competitors include Honeywell International Inc. (Honeywell), Rockwell Collins, Inc., Thales Communications, Inc. (Thales), and Garmin Ltd. (Garmin). With respect to flat panel displays, principal competitors currently include Honeywell, Rockwell Collins, Inc., L-3 Communications, Garmin and GE Aviation Systems (GEAS). However, as the flat panel display industry evolves and the demand for flat panel displays increases, IS&S may face future competition in this area from other suppliers.

The Company believes that the principal competitive factors in its markets are cost, development cycle time, responsiveness to customer preferences, product quality, technology, and reliability. IS&S believes that its significant and long-standing customer relationships reflect the Company's ability to compete favorably with respect to these factors.

**Intellectual Property and Proprietary Rights**

IS&S relies on patents to protect its proprietary technology. As of September 30, 2018, the Company holds 41 U.S. patents and has 3 U.S. patent applications pending relating to its technology. In addition, IS&S holds 85 international patents and has 7 international patent applications pending. Certain of these patents and patent applications cover technology relating to air data measurement systems and others cover technology relating to flat panel display systems and other aspects of the COCKPIT/IP® solution. While IS&S believes these patents have significant value in protecting its technology, it believes that the innovative skill, technical expertise, and know-how of the Company's personnel in applying the technology reflected in its patents would be difficult, costly, and time consuming to reproduce.

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While IS&S is not aware of any pending lawsuits against the Company alleging patent infringement or the violation of other intellectual property rights, it cannot be certain such infringement claims will not be asserted against the Company in the future.

### Employees

As of September 30, 2018, IS&S had 55 employees. The Company's future success depends on its ability to attract, train and retain highly qualified personnel. Competition for such qualified personnel is intense, and the Company may not be able to attract, train, and retain highly qualified personnel in the future. None of the Company's employees are currently represented by a labor union.

The Company reduced its overall headcount in fiscal 2018 compared to fiscal 2017 by approximately 40%. Most of this reduction occurred in the Company's third quarter. The reductions affected most of the departments in the Company with the majority of the reductions coming from the operations department.

### Executive Officers of the Registrant

The following is a list of the Company's executive officers, their ages and their positions in each case.

Name	Age	Position
Geoffrey S. M. Hedrick	76	Chairman of the Board and Chief Executive Officer
Shahram Askarpour	61	President
Relland M. Winand	64	Chief Financial Officer



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*Geoffrey S. M. Hedrick* was the Chief Executive Officer from the time he founded the Company in February 1988 through June 4, 2007, and was reappointed as Chief Executive Officer on September 8, 2008. He has been Chairman of the Board since 1997. Prior to founding IS&S, Mr. Hedrick served as President and Chief Executive Officer of Smiths Industries North American Aerospace Companies. He founded Harowe Systems, Inc. in 1971, which was subsequently acquired by Smiths Industries. Mr. Hedrick has over 40 years of experience in the avionics industry, and he holds a number of patents in the electronics, optoelectric, electromagnetic, aerospace, and contamination control fields.

*Shahram Askarpour* has been President since April 2012. Dr. Askarpour joined the Company as a Director of Engineering in 2003, was promoted to Vice President of Engineering in 2005, and was promoted to President on April 2, 2012. Dr. Askarpour has more than 30 years of aerospace industry experience in managerial and technical positions. Prior to joining IS&S, he was employed by Smiths Aerospace (a division of Smiths Group PLC), Instrumentation Technology and Marconi Avionics. He holds a number of key patents in the aviation field. Dr. Askarpour received his engineering education in the United Kingdom, and received an undergraduate degree in Electrical Engineering from Middlesex University, a post graduate Certificate of Advanced Study in Systems Engineering, and a PhD in Automatic Control from Brunel University. He was awarded the title of Associate Research Fellow for three consecutive years by Brunel University, and has published numerous papers in leading international, peer reviewed journals. In addition, he has completed management courses at Carnegie Mellon University and finance courses at the Wharton Business School.

*Relland M. Winand* has been the Company's Chief Financial Officer since December 15, 2014. Mr. Winand has served in a number of executive financial capacities with public companies including Chief Financial Officer of ECC International, Corp, a manufacturer of computer controlled maintenance simulators primarily for the Department of Defense, and Vice President Finance and Administration of Traffic.com, Inc. a leading provider of accurate, real-time traffic information in the United States. Prior to joining Innovative Solutions and Support, Inc., from 2008 to 2013, Mr. Winand was Chief Financial Officer of Orbit/FR, Inc., an international developer and manufacturer of sophisticated microwave test and measurement systems for aerospace/defense, wireless, satellite and automotive industries. From January 2014 until August 2014, Mr. Winand served as a consultant for Solomon Edwards Group LLC. He has over 30 years' experience in financial management and reporting for both public domestic and international manufacturing companies. Mr. Winand received a B.S. in Accounting from Drexel University and an M.B.A. in Finance from Widener University.

**Other**

The SEC maintains a website at <http://www.sec.gov> that contains reports, proxy and information statements, and other information about issuers that file electronically with the SEC.

IS&S also maintains its corporate website at <http://www.innovative-ss.com> and makes available, free of charge, on that website (under the Investor Relations tab) the Company's annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those as reasonably practicable after it electronically files such material with, or furnishes it to, the SEC. The information on the

Company's web site is not incorporated as part of this Annual Report on Form 10-K.

**Item 1A. Risk Factors.**

Each reader should carefully consider the risks, uncertainties and other factors described below, in addition to the other information set forth in this report, because they could materially and adversely affect the Company's business, operating results, financial condition, cash flows, prospects, and the value of an investment in IS&S common stock.

*Risks Related to IS&S Business*

**Growth of the Company's customer base could be limited by delays or difficulties in completing development and introduction of planned products or product enhancements. If IS&S fails to enhance existing products, or to develop and achieve market acceptance for flat panel displays, flight management systems, autothrottle technology and other new products that meet customer requirements, its business, reputation and statements of income may be affected adversely.**

Currently, IS&S spends a large portion of its R&D efforts in developing and marketing the FPDS, FMS, ThrustSense® Autothrottle and complementary products. The Company's ability to grow and diversify its operations through introduction and sale of new products is dependent upon the continued success in product development and engineering activities, its sales and marketing efforts, and regulatory approvals to sell such products. Sales growth will depend in part on market acceptance of and demand for the FPDS, FMS, ThrustSense® Autothrottle and future products. IS&S cannot be certain that it will be able to develop, introduce or market its FPDS, FMS, ThrustSense® Autothrottle or other new products or product enhancements in a timely or cost-effective manner, or that

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any new products will receive market acceptance or necessary regulatory approval. In addition, the Company's business is dependent upon maintaining its reputation and relationships with existing customers. If the Company's performance does not meet its customers' expectations, the Company's reputation and its relationships could be damaged, which may have a material adverse impact on the Company's business and statements of income, including reductions in sales.

In seeking new customers, the Company may have difficulty in displacing the products of incumbent competitors. IS&S cannot be assured that potential customers will accept its products or that existing customers will not abandon them.

**The Company's revenue and operating results may vary significantly from quarter to quarter, which may cause its stock price to decline.**

The Company's revenue and operating results may vary significantly from quarter to quarter because of a number of factors, including:

- demand for products and/or delivery schedule changes by its customers;
- capital expenditure budgets of aircraft owners and operators, and appropriation cycles of the U.S. government;
- changes in the use of the Company's products, including air data systems, flat panel displays, flight management systems and autothrottle technology;
- delays in introducing or obtaining government approval for new products;
- new product introductions by competitors;
- changes in IS&S pricing policies or pricing policies of competitors; and
- costs related to possible acquisition of technologies or businesses.

**The loss of a key customer or a significant deterioration in the financial condition of a key customer could have a material adverse effect on the Company's results of operations.**

The Company's revenue is concentrated with a limited number of customers. During fiscal year 2018 IS&S derived 48% of revenue from the top five customers. IS&S expects a relatively small number of customers to account for a majority of its revenues for the foreseeable future. As a result of the concentrated customer base, a loss of one or more of these customers or a dispute or litigation with one of these key customers could affect adversely its revenue and results of operations. The Company monitors and evaluates the credit status of its customers and attempts to adjust sales terms as appropriate. Despite these efforts, a significant deterioration in the financial condition or bankruptcy filing of a key customer could affect adversely the Company's business, results of operations, and financial condition.

In addition, the Company is subject to credit risk associated with the concentration of accounts receivable from its key customers. If one or more of the Company's top customers were to become bankrupt, insolvent or otherwise were unable to pay for the products and services provided by the Company, then the Company may incur significant write-offs of accounts receivable, incur other impairment charges or result in a significant loss of expected revenues, which may have a material adverse effect on the Company's results of operations.

**Contracts can be terminated by customers at any time and, therefore, may not result in sales.**

The Company's retrofit projects are generally pursuant to either a direct contract with a customer or a subcontract with a general contractor to a customer (including government agencies). Each contract, including contracts with government agencies, includes various terms and conditions that impose certain requirements on IS&S, including the ability of the government agency or general contractor to alter the price, quantity or delivery schedule of the products. Additionally, each government agency or general contractor retains the right to terminate the contract at any time at its convenience. Upon alteration or termination of these contracts, IS&S is entitled typically to an equitable adjustment to the contract price so that it would be compensated for delivered items and allowable costs incurred. Accordingly, because these contracts can be terminated, the Company cannot be assured that its backlog will result in sales.

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**The Company enters into fixed-price contracts or service arrangements to perform specified design and EDC services related to its products that could subject IS&S to losses in the event the Company incurs cost overruns on its projects.**

During fiscal 2018, approximately 3% percent of the Company's total sales were from fixed-price EDC arrangements with customers to perform specified design and EDC services related to its products. These arrangements allow IS&S to benefit by recovering some of its product development costs, but it carries the risk of potential cost overruns. If the Company's initial cost estimates are incorrect, it can incur potentially large one time charges and losses on these contracts. These EDC arrangements can expose the Company to potential losses because the customer may compel IS&S to complete a project or, in the event of a termination for default, pay the incremental cost of its replacement by another provider. Because some of these projects involve new technologies and applications, and can last for more than a year, unforeseen events such as technological difficulties, fluctuations in the price of raw materials, problems with subcontractors, and cost overruns can result in the contractual price becoming less favorable or even unprofitable to IS&S over time. Furthermore, if the Company does not meet project deadlines or if its products do not meet customer specifications, it may need to renegotiate contracts on less favorable terms, be forced to pay penalties or liquidated damages, or suffer losses if the customer exercises its right to terminate. The Company's results of operations are dependent on its ability to maximize earnings from the EDC service arrangements. Lower earnings caused by cost overruns could have a negative impact on the Company's financial condition, operating results, and cash flows.

**Reductions in government expenditures could adversely affect IS&S business.**

Reductions in funding of the DoD and U.S. defense spending could have significant consequences to the Company's business and industry. While the full impact of such reductions is not determinable, the impact of any resulting reductions in defense appropriations, and/or reductions in U.S. defense spending could result in delays in procurement of products and services due to lack of funding, and negatively affect the IS&S's revenues, financial condition and results of operations.

**A portion of IS&S sales come from government contracts, which could be adversely affected by continued high U.S. federal budget deficits.**

A portion of IS&S sales has been, and is expected to continue to be, from defense contractors or government agencies in connection with government aircraft retrofit or original equipment manufacturing contracts. Sales to government contractors and government agencies could decline as a result of DoD spending cuts and general budgetary constraints which may become more severe as the federal budget deficit remains high.

**We self-insure a significant portion of our employee medical insurance program, which may expose us to unpredictable costs and negatively affect our financial performance.**

We self-insure a significant portion of our employee medical insurance program and related benefit claims. The estimated liability for the self-funded portion of our insurance program is determined actuarially, based on claims filed historically, demographic factors and an estimate of claims incurred but not yet reported. We maintain stop loss insurance coverage to limit our exposure for the self-funded portion of our health insurance program both on a per employee and aggregate basis, and liabilities associated with these losses include estimates of both claims filed and losses incurred but not yet reported. Unanticipated changes in any applicable actuarial assumptions or management estimates underlying our recorded liabilities for these losses could result in materially different amounts of expense than expected under these programs, which could have a material adverse effect on our financial condition and results of operations. In addition, the premiums for this coverage could increase in

the future, or we could be forced to raise our self-insured retention amounts. If these expenses increase, or if we experience a claim in excess of our reserve and/or coverage limits, it could also have a material adverse effect on our financial condition and results of operation.

**IS&S depends on key personnel to manage its business effectively, and an inability to retain its key employees could adversely impact the Company's ability to compete.**

The Company's success depends on the efforts, abilities, and expertise of its senior management and other key personnel. There can be no assurance IS&S will be able to retain such employees, and the loss of some could damage its ability to execute its business strategy. The Company intends to continue hiring key management, engineering, and sales and marketing personnel. Competition for skilled personnel is intense, and IS&S may not be able to attract or retain additional qualified personnel.

The Company's future success will depend in part on its ability to implement and improve its operational, administrative and financial systems and controls and to manage, train and expand its employee base. IS&S cannot provide assurance that current and planned personnel levels, systems, procedures, and controls will be adequate to support the current and future customer base. In such a circumstance, the Company may not be able to exploit existing and potential market opportunities. Any delays or difficulties encountered could impair the Company's ability to attract new customers or maintain its relationships with existing customers.

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**IS&S relies on third party suppliers for components of its products, and any interruption in the supply of these components could hinder its ability to deliver products on a timely basis.**

The Company's manufacturing process consists primarily of assembling components purchased from its supply chain. The suppliers may not continue to be available to IS&S. If the Company is unable to maintain relationships with key third party suppliers, the development and distribution of its products could be delayed until equivalent components can be obtained and integrated into the products. In addition, substitution of certain components from other manufacturers may require product redesign, FAA or other approval, which could delay the Company's ability to ship products.

**If the Company fails to maintain an effective system of internal control over financial reporting, it may not be able to accurately report its financial condition, results of operations or cash flows, which may adversely affect investor confidence in the Company and, as a result, the value of the Company's common stock.**

The Sarbanes-Oxley Act of 2002, as amended (the Sarbanes-Oxley Act) requires, among other things, that the Company maintain effective internal controls for financial reporting and disclosure controls and procedures. Under Section 404 of the Sarbanes-Oxley Act, the Company is required to furnish a report by management on, among other things, the effectiveness of the Company's internal control over financial reporting. This assessment must include disclosure of any material weaknesses identified by management in the Company's internal control over financial reporting. A material weakness is a control deficiency, or combination of control deficiencies, in internal control over financial reporting that results in more than a reasonable possibility that a material misstatement of annual or interim financial statements will not be prevented or detected on a timely basis. Section 404 of the Sarbanes-Oxley Act also generally requires an attestation from the Company's independent registered public accounting firm on the effectiveness of the Company's internal control over financial reporting.

The Company's compliance with Section 404 requires that it compile the system and process documentation necessary to perform an appropriate evaluation. During the evaluation and testing process, if the Company identifies one or more material weaknesses in its internal control over financial reporting, it will be unable to assert that its internal control over financial reporting is effective. The Company cannot assure you that there will not be material weaknesses or significant deficiencies in its internal control over financial reporting in the future. Any failure to maintain internal control over financial reporting could severely inhibit the Company's ability to accurately report its financial condition, results of operations or cash flows. If the Company is unable to conclude that its internal control over financial reporting is effective, or if its independent registered public accounting firm determines the Company has a material weakness or significant deficiency in its internal control over financial reporting once that firm begins its reviews, the Company could lose investor confidence in the accuracy and completeness of its financial reports, the market price of its common stock could decline, and it could be subject to sanctions or investigations by NASDAQ, the Securities and Exchange Commission or other regulatory authorities. Failure to remedy any material weakness in the Company's internal control over financial reporting, or to implement or maintain other effective control systems required of public companies, could also restrict the Company's future access to the capital markets.

**We currently operate without a substantial backlog.**

During periods of economic uncertainty, the rate of customer orders can quickly decrease, and a substantial backlog may help promote greater efficiency in production, facilitate business planning and improve revenue visibility. As of September 30, 2018, none of the Company's backlog was expected to be filled beyond fiscal 2019, which is below the Company's historical expectations. As a result, future revenue will be dependent on orders booked and shipped in that quarter, and may not be predictable with any degree of certainty. Furthermore, certain contracts may represent a significant portion of our revenue and profits for a quarter such that the loss or deferral of even one such contract could adversely affect our revenue and profitability.

**Litigation with customers, employees and others could harm our reputation and impact operating results.**

In the ordinary course of business, we may be involved in lawsuits and regulatory actions with customers, employees and others. Additionally, we may be subject to employment-related claims alleging discrimination, harassment, wrongful termination and wage issues, including those relating to overtime compensation. We are susceptible to claims filed by customers alleging responsibility for breaches of contract or from product defects, and we are also subject to lawsuits filed by patent holders alleging patent infringement. These types of claims, as well as other types of lawsuits to which we are subject from time to time, can distract management's attention from core business operations and impact operating results, particularly if a lawsuit results in an unfavorable outcome, or could harm the Company's reputation with customers, employees, investors and others.



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**The Company's competition includes other manufacturers of air data systems and flight information displays against whom it may not be able to compete successfully.**

The markets for the Company's products are intensely competitive and subject to rapid technological change. Competitors include Honeywell, Rockwell Collins, Inc., Thales, Garmin, GEAS, and L-3 Communications. All these competitors have substantially greater financial, technical, and human resources than does IS&S. In addition, these competitors have much greater experience in and resources for marketing their products. As a result, these competitors may be able to respond more quickly to new or emerging technologies and customer preferences, or to devote greater resources to development, promotion and sale of their products than IS&S can. The Company's competitors may have greater name recognition and more extensive customer bases. Such competition could result in price reductions, fewer customer orders, reduced gross margins, and loss of market share.

**The Company has limited experience in marketing and distributing its products internationally.**

IS&S plans to derive increasing revenues from sales outside the United States, particularly in Europe and Asia. Risks inherent in doing business internationally include:

- differing regulatory requirements;
- legal uncertainty regarding liability and the enforceability of agreements;
- tariffs, trade and investment barriers, and other regulatory barriers;
- political and economic instability, including changes in government budgets;
- changes in diplomatic and trade relationships;
- failure by our employees or agents to comply with U.S. laws affecting the activities of U.S. companies abroad, including the Foreign Corrupt Practices Act of 1977;
- difficulty with staffing and managing widespread operations;

- the impact of recessions in economies outside the United States; and
- variances and unexpected changes in local laws and regulations.

Currently, all of the Company's international sales are denominated in U.S. dollars. An increase in the dollar's value compared to other currencies could render its products less competitive in the international markets. In the future, IS&S may be required to conduct sales in the foreign country's local currency, thus exposing the Company to fluctuations and volatility in exchange rates that could adversely affect its operating results. Further, as we pursue customers in Asia and other less developed markets throughout the world, our potential inability to ensure the creditworthiness of counterparties could impose additional risks and effect our overall profitability. Emerging market operations in particular can present many risks, including cultural differences (such as employment and business practices), volatility in gross domestic product, economic and government instability, and the imposition of exchange controls and capital controls.

While these factors and their impact are difficult to predict, any one or more of them could have a material adverse effect on our competitive position, results of operations, cash flows or financial condition

**If IS&S is unable to respond to rapid technological change, its products could become obsolete and its reputation could suffer.**

Future generations of flat panel displays, air data systems, engine and fuel displays, flight management systems and autothrottle technology which embody new technologies or new industry standards could render the Company's products obsolete. The market for aviation products is subject to rapid technological change, new product introductions, changes in customer preferences, and evolving industry standards and government regulations. The Company's future success will depend on its ability to:

- embrace rapidly changing technologies;
- adapt the Company's products to evolving industry standards and government regulations; and
- develop and introduce timely, high quality, cost effective new products, and product enhancements to address the increasingly sophisticated needs of its customers.

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If IS&S fails to modify or improve its products in response to evolving industry standards and government regulations, its products could rapidly become obsolete.

The Company's products are currently subject to direct regulation by the FAA and other equivalent organizations. The Company's products, as they relate to aircraft applications, must be approved by the FAA, EASA, or other equivalent organizations before they can be installed in an aircraft. To be certified, IS&S must demonstrate that its products are accurate and able to maintain certain levels of repeatability over time. Although certification requirements of the FAA and EASA are substantially similar, no formal reciprocity exists between the two regulators. Accordingly, even though the Company's products are FAA approved, it may need to obtain approval from EASA or other appropriate organizations to have them certified for installation outside the United States.

Significant delay in receiving certification for newly developed products or enhancements to the Company's products, or the loss of certification for its existing products, could result in lost sales or delays in sales. Furthermore, new regulations or product standards, and changes to existing product standards could require IS&S to change its products and underlying technology. IS&S cannot ensure that it will receive regulatory approval on a timely basis or at all.

**Inasmuch as the Company's products utilize sophisticated technology and are deployed in complex aircraft cockpit environments, problems with these products may arise that could harm the Company's reputation for quality assurance and, consequently, its business prospects.**

The Company's products use complex system designs and components that may contain errors, omissions, or defects, particularly when the Company incorporates new technologies into its products or when it releases new versions or enhancements of its existing products. Despite the Company's quality assurance process, errors, omissions or defects could occur in its current products, in new products, or in new versions or enhancements of existing products. IS&S may be required to redesign or recall those products or pay damages. Such an event could result in the following:

- delay or loss of revenues;
- cancellation of customer contracts;
- diversion of development resources;
- damage to the Company's reputation;
- increased service and warranty costs; or

- litigation costs.

Although IS&S carries product liability insurance, this insurance may not be adequate to cover its losses in the event of a large product liability claim. In addition, IS&S may not be able to maintain such insurance in the future.

**The Company's success depends on its ability to protect its proprietary rights against potential risk of infringement. If IS&S is unable to protect and enforce its intellectual property rights, it may be unable to compete effectively.**

The Company's success and ability to compete will depend in part on its ability to obtain and maintain patent or other protection for its technology and products, both in the United States and internationally. In addition, IS&S must operate without infringing the proprietary rights of others.

As of September 30, 2018, IS&S held 41 U.S. patents and has 3 U.S. patent applications pending. In addition, the Company holds 85 international patents and has 7 international patent applications pending. IS&S cannot be certain that patents will be issued on any of its present or future applications. In addition, existing patents or future patents may not adequately protect the Company's technology if they are not broad enough and are successfully challenged, or if other entities are able to develop competing methods without violating its patents. If IS&S is not successful in protecting its intellectual property, competitors could begin to offer products that incorporate the Company's technology. Patent protection involves complex legal and factual questions, and, therefore, is highly uncertain. Litigation relating to intellectual property is often very time consuming and expensive. If a successful claim of patent infringement were made against IS&S, and if the Company were unable to develop non-infringing technology, or to license the infringed or similar technology on a timely and cost-effective basis, the Company might not be able to produce and sell some of its products. Further, IS&S has incurred, and may continue to incur, significant legal and other costs in defense of its intellectual property.

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**A cyber security incident or other technology disruption could have a negative impact on our business.**

We face certain security threats and technology disruptions, including threats to our information technology ( IT ) infrastructure, attempts to gain access to our or our customers' proprietary or classified information, threats of terrorism events, and failures of our technology tools and systems. Our IT networks and related systems are critical to the operation of our business and essential to our ability to successfully perform day-to-day operations. We are also involved with information technology systems for certain customers and other third parties, for which we face similar security threats as for our own, in particular the DoD. In particular, cybersecurity threats-which include, but are not limited to, computer viruses, spyware and malware, attempts to access information, denial of service attacks and other electronic security breaches-are persistent and evolve quickly. In general, such threats have increased in frequency, scope and potential impact in recent years. Further, a variety of technological tools and systems, including both company-owned IT and technological services provided by outside parties, support our critical functions. These technologies, as well as our products, are subject to failure and the user's inability to have such technologies properly supported, updated, expanded or integrated into other technologies and, in certain cases, may contain open source and third party software which may unbeknownst to us contain defects or viruses that pose unintended risks. These risks, if not effectively mitigated or controlled, could materially harm our business or reputation. While we believe that we have implemented appropriate measures and controls, there can be no assurance that such actions will be sufficient to prevent disruptions to critical systems, unauthorized release of confidential information or corruption of data.

The security measures we have implemented are subject to third-party security breaches, employee error, malfeasance, faulty password management or other irregularities. For example, third parties may attempt to fraudulently induce employees or customers into disclosing user names, passwords or other sensitive information, which may in turn be used to access our IT systems. These security systems cannot provide absolute security. To the extent we were to experience a breach of our systems and were unable to protect sensitive data, such a breach could materially damage business partner and customer relationships, and curtail or otherwise impact the use of our information technology systems. Moreover, if a security breach of our information technology system affects our computer systems or results in the release of personally identifiable or other sensitive information of customers, business partners, employees and other third parties, our reputation and brand could be materially damaged, use of our products and services could decrease, and we could be exposed to a risk of loss, litigation and potential liability.

Such an event could require significant management attention and resources, negatively impact our reputation among our customers and the public and challenge our eligibility for future work on sensitive or classified systems, which could have a material adverse effect on our business, financial condition and results of operations.

**Tax changes, including potential tax reform in the United States, could affect the Company's effective tax rate and future profitability.**

The Company's future results could be affected negatively by changes in the effective tax rate as a result of changes in the overall profitability and changes to statutory tax rates in the United States, changes in tax legislation, and the results of audits and examinations of previously filed tax returns.

For example, the Tax Cuts and Jobs Act of 2017 (the Tax Act ), signed into law on December 22, 2017, resulted in significant changes to the U.S. Internal Revenue Code. Such changes include a reduction in the corporate tax rate (from 35% to 21%) and limitations on certain corporate deductions and credits, among other changes. Certain of these changes could potentially impact the measurement of our tax balances as well as have a future negative impact on our business, as could any uncertainty in terms of the implementation and interpretation of the new changes. In addition, adverse changes in the underlying profitability and financial outlook of our operations or future changes in tax law could lead to changes in the value of tax assets or liabilities that we currently or in the future may hold, which could materially affect our results of operations. Further, the nature and impact of any future changes to tax law, and the resulting impact on our business, financial condition and results of operations, are uncertain.

**The economic effects of Brexit may affect relationships with existing and future customers and could have an adverse impact on our business and operating results.**

In June 2016, the United Kingdom (the U.K. ) held a referendum in which voters approved an exit from the European Union ( E.U. ), commonly referred to as Brexit, and negotiations remain ongoing to determine the future terms of the U.K. s relationship with the E.U. The impact on the Company s business as a result of Brexit will depend, in part, on the outcome of tariff, trade, regulatory and other negotiations.

As a result of the referendum, the global markets and currencies have been adversely impacted, including a sharp decline in the value of the British pound as compared to the U.S. dollar. A potential devaluation of the local currencies of our international customers relative to the U.S. dollar may impair the purchasing power of our international customers and could cause international customers to decrease their volume of orders or cancel orders completely.

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Volatility in exchange rates resulting from Brexit is expected to continue in the short term as the U.K. negotiates its exit from the E.U. We translate sales and other results denominated in foreign currency into U.S. dollars for our financial statements. During periods of a strengthening dollar, our reported international sales and earnings could be reduced because foreign currencies may translate into fewer U.S. dollars.

In addition, Brexit could lead to legal uncertainty and potentially divergent national laws and regulations as the U.K. determines which E.U. laws to replace or replicate, and those laws and regulations may be cumbersome, difficult or costly in terms of compliance. Any of these effects of Brexit, among others, could adversely affect our business, financial condition, operating results and cash flows.

**Volatility and weakness in capital markets may adversely affect credit availability and related financing costs, which could adversely affect IS&S.**

Bank and capital markets can experience periods of volatility and disruption. During these periods of volatility and disruption, risks to IS&S include:

- declines in revenues and profitability from reduced orders, payment delays or other factors caused by the economic
- problems of customers;
- reprioritization of government spending away from defense programs in which IS&S participates;
- reduced access to credit sources; and
- disruptions in supplies associated with any financial constraints faced by vendors.

**Item 1B. Unresolved Staff Comments.**

None

**Item 2. Properties.**

In fiscal 2001, IS&S purchased 7.5 acres of land in the Eagleview Corporate Park in Exton, Pennsylvania. Shortly thereafter, the Company constructed a 45,000 square foot design, manufacturing and office facility on this site. Land development approval allows for expansion of up to 20,400 square feet. Such expansion would provide for a 65,400 square foot facility which the Company believes is adequate to meet the needs of the Company for the foreseeable future.

The Company also occupies approximately 8,358 square feet of office and warehouse space in Exton, Pennsylvania under a lease expiring March, 2019. The Company's current annual lease expense for this property is approximately \$69,000.

The Company leases 2 separate hangars to house the Company's airplanes in New Castle County, Delaware under month to month leases. The annual lease expense for both hangars is approximately \$51,000.

**Item 3. Legal Proceedings.**

In the ordinary course of business, IS&S is at times subject to various legal proceedings and claims. The Company does not believe any such matters that are currently pending will, individually or in the aggregate, have a material effect on the results of operations or financial position.

**Item 4. Mine Safety Disclosures.**

Not applicable.



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**Part II**

**Item 5. Market for the Registrant's Common Equity, Related Stockholder Matters, and Issuer Repurchases of Equity Securities.**

The Company's common stock has been traded on the NASDAQ Global Market tier of the NASDAQ Stock Market, LLC under the symbol ISSC since its initial public offering on August 4, 2000.

On November 15, 2018, there were 10 holders of record of the shares of outstanding common stock. This total does not reflect beneficial shareholders who hold their stock in nominee or street name through brokerage firms.

The Company did not pay dividends in fiscal 2018 or fiscal 2017. The declaration and payment of any dividend in the future will be at the discretion of the Company's Board of Directors.

The graph below shows the cumulative shareholder return on \$100 invested at the market close on September 30, 2013 through and including September 28, 2018, the last trading day before the end of the Company's most recently completed fiscal year, with the cumulative total return over the same time period of the same amount invested in the NASDAQ Composite Index, the Russell 2000 Index, and the Dow Jones US Aerospace & Defense Index.

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	9/13	9/14	9/15	9/16	9/17	9/18
<b>Innovative Solutions and Support, Inc.</b>	<b>100.00</b>	<b>65.52</b>	<b>34.05</b>	<b>40.08</b>	<b>45.73</b>	<b>31.91</b>
<b>NASDAQ Composite</b>	<b>100.00</b>	<b>121.64</b>	<b>127.37</b>	<b>148.79</b>	<b>183.54</b>	<b>230.21</b>
<b>Russell 2000</b>	<b>100.00</b>	<b>103.93</b>	<b>105.23</b>	<b>121.50</b>	<b>146.70</b>	<b>169.06</b>
<b>Dow Jones US Aerospace &amp; Defense</b>	<b>100.00</b>	<b>119.02</b>	<b>122.76</b>	<b>143.36</b>	<b>206.44</b>	<b>255.41</b>

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The following tables present portions of the Company's consolidated financial statements. The following selected consolidated financial data set forth below should be read together with Management's Discussion and Analysis of Financial Condition and Results of Operations and the consolidated financial statements and related notes to the consolidated financial statements appearing elsewhere herein. The selected statements of operations data for the fiscal years ended September 30, 2018, 2017 and 2016 and the balance sheet data as at September 30, 2018 and 2017 are derived from the Company's audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K. The selected statements of operations data for the fiscal years ended September 30, 2015 and 2014 and the balance sheet data as at September 30, 2016, 2015 and 2014 are extracted from the Company's audited consolidated financial statements that are not included in this Annual Report on Form 10-K.

	Fiscal year ended September 30,					
	2018	2017	2016	2015	2014	
<b>Statements of Operations Data:</b>						
Net sales	\$ 13,850,372	\$ 16,786,674	\$ 27,969,703	\$ 20,067,084	\$ 44,095,023	
Cost of sales	7,311,923	8,668,348	11,482,323	13,135,349	30,508,823	
Gross profit	6,538,449	8,118,326	16,487,380	6,931,735	13,586,200	
Research and development	3,575,801	4,456,657	4,873,328	2,705,208	2,618,054	
Selling, general and administrative	6,674,187	3,739,234	9,170,865	7,847,270	11,111,014	
Total operating expenses	10,249,988	8,195,891	14,044,193	10,552,478	13,729,068	
Operating (loss) income	(3,711,539)	(77,565)	2,443,187	(3,620,743)	(142,868)	
Interest income	53,561	35,888	33,504	24,804	21,756	
Other income	67,724	4,858,224	78,440	33,283	37,758	
(Loss) income before income taxes	(3,590,254)	4,816,547	2,555,131	(3,562,656)	(83,354)	
Income tax expense (benefit)	63,651	247,920	568,330	2,303,478	(283,622)	
Net (loss) income	\$ (3,653,905)	\$ 4,568,627	\$ 1,986,801	\$ (5,866,134)	\$ 200,268	
Net (loss) income per common share:						
Basic	\$ (0.22)	\$ 0.27	\$ 0.12	\$ (0.35)	\$ 0.01	
Diluted	\$ (0.22)	\$ 0.27	\$ 0.12	\$ (0.35)	\$ 0.01	
Cash dividends declared per common share						
	\$	\$	\$	\$	\$	
Weighted average shares outstanding:						
Basic	16,805,991	16,742,461	16,927,055	16,924,189	16,927,879	
Diluted	16,805,991	16,855,644	17,039,296	16,924,189	17,149,106	

Amounts may not add due to rounding.

	As of September 30,					
	2018	2017	2016	2015	2014	
<b>Balance Sheet Data:</b>						
Cash and cash equivalents	\$ 20,390,713	\$ 24,680,301	\$ 18,767,661	\$ 16,282,039	\$ 15,214,584	
Working capital	25,315,334	30,819,796	25,796,195	23,654,719	26,274,806	

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Total assets	37,633,678	41,037,764	36,488,969	36,106,569	44,029,511
Total shareholders equity	34,154,470	37,608,380	32,848,004	31,342,486	37,011,524

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**Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.**

The following discussion and analysis should be read in conjunction with Selected Consolidated Financial Data and the consolidated financial statements and related notes included in this report.

**Overview**

Innovative Solutions and Support, Inc. (the Company, IS&S, we or us) was incorporated in Pennsylvania on February 12, 1988. The Company operates in one business segment as a systems integrator that designs, develops, manufactures, sells, and services, air data equipment, engine display systems, standby equipment, primary flight guidance, autothrottles and cockpit display systems for retrofit applications and original equipment manufacturers (OEMs). The Company supplies integrated Flight Management Systems (FMS), Flat Panel Display Systems (FPDS), FPDS with Autothrottle, air data equipment, Integrated Standby Units (ISU), ISUs with Autothrottle and advanced Global Positioning System (GPS) receivers that enable reduced carbon footprint navigation.

The Company has continued to position itself as a system integrator, which capability provides the Company with the potential to generate more substantive orders over a broader product base. The strategy, as both a manufacturer and integrator, is designed to leverage the latest technologies developed for the computer and telecommunications industries into advanced and cost-effective solutions for the general aviation, commercial air transport, United States Department of Defense (DoD)/governmental, and foreign military markets. This approach, combined with the Company's industry experience, is designed to enable IS&S to develop high quality products and systems, to reduce product time to market and to achieve cost advantages over products offered by its competitors.

The Company sells to both the OEM and the retrofit markets. Customers include various OEMs, commercial air transport carriers and corporate/general aviation companies, DoD and its commercial contractors, aircraft operators, aircraft modification centers and foreign militaries. Occasionally, IS&S sells its products directly to DoD; however, the Company sells its products primarily to commercial customers for end use in DoD programs. Sales to defense contractors are generally made on commercial terms, although some of the termination and other provisions of government contracts are applicable to these contracts.

Cost of sales related to product sales is comprised of material, components and third party avionics purchased from suppliers, direct labor, and overhead costs. Many of the components are standard, although certain parts are manufactured to meet IS&S specifications. The overhead portion of cost of sales is comprised primarily of salaries and benefits, building occupancy costs, supplies, and outside service costs related to production, purchasing, material control, and quality control. Cost of sales includes warranty costs.

Cost of sales related to Engineering Development Contracts (EDC) sales is comprised of engineering labor, consulting services, and other costs associated with specific design and development projects. These costs are incurred pursuant to contractual arrangements and are accounted for typically as contract costs within cost of sales with the reimbursement accounted for as a sale in accordance with the percentage-of-completion method of accounting. Company funded research and development (R&D) expenditures relate to internally-funded efforts towards the development of new products and the improvement of existing products. These costs are expensed as incurred and reported as R&D expenses. The Company intends to continue investing in the development of new products that complement current product offerings and to expense associated R&D costs as they are incurred.

Selling, general and administrative expenses consist of sales, marketing, business development, professional services, salaries and benefits for executive and administrative personnel, facility costs, recruiting, legal, accounting, bad debt expense and other general corporate expenses.

IS&S sells its products to agencies of the United States and foreign governments, aircraft operators, aircraft modification centers, and original equipment manufacturers. The Company's customers have been and may continue to be affected by the uncertain economic conditions that currently exist both in the United States and abroad. Such conditions may cause customers to curtail or delay their spending on both new and existing aircraft. Factors that can impact general economic conditions and the level of spending by customers include, but are not limited to, general levels of consumer spending, increases in fuel and energy costs, conditions in the real estate and mortgage markets, labor and healthcare costs, access to credit, consumer confidence, and other macroeconomic factors that affect spending behavior. Furthermore, spending by government agencies may be reduced in the future if tax revenues decline, including as a result of currently proposed tax reform legislation in the United States. If customers curtail or delay their spending or are forced to declare bankruptcy or liquidate their operations because of adverse economic conditions, the Company's revenues and results of operations would be affected adversely. However, the Company believes that, in an uncertain economic environment, customers that may have otherwise elected to purchase newly manufactured aircraft may be interested instead in retrofitting existing aircraft as a cost-effective alternative, thereby creating a market opportunity for IS&S.

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The following table sets forth statements of operations data expressed as a percentage of total net sales for the fiscal years indicated:

	Twelve Months Ending September 30,		
	2018	2017	2016
Net sales:			
Product	97.1%	96.1%	96.5%
Engineering development contracts	2.9%	3.9%	3.5%
Total net sales	100.0%	100.0%	100.0%
Cost of sales:			
Product	51.4%	49.4%	39.8%
Engineering development contracts	1.4%	2.2%	1.3%
Total cost of sales	52.8%	51.6%	41.1%
Gross profit	47.2%	48.4%	58.9%
Operating expenses:			
Research and development	25.8%	26.5%	17.4%
Selling, general and administrative	48.2%	22.3%	32.8%
Total operating expenses	74.0%	48.8%	50.2%
Operating (loss) income	(26.8)%	(0.4)%	8.7%
Interest income	0.4%	0.2%	0.1%
Other income	0.5%	28.9%	0.3%
(Loss) income before income taxes	(25.9)%	28.7%	9.1%
Income tax expense	0.5%	1.5%	2.0%
Net (loss) income	(26.4)%	27.2%	7.1%

Amounts may not add due to rounding.

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**Fiscal Year Ended September 30, 2018 Compared to Fiscal Year Ended September 30, 2017**

*Net sales.* Net sales for fiscal 2018 decreased \$2.9 million, or 17.5%, to \$13.9 million from \$16.8 million for fiscal 2017. For fiscal 2018, product sales decreased \$2.7 million and EDC sales decreased \$0.3 million, in each case, compared to fiscal 2017. This decrease primarily reflects decreased shipments of displays for retrofit programs to military transport customers reflecting reduced demand compared to fiscal 2017. The decrease in EDC sales was primarily the result of less revenue being recognized from EDC projects awarded in prior years as they have been completed and they have not been replaced by new EDC programs.

*Cost of sales.* Cost of sales was \$7.3 million or 52.8% of net sales, for fiscal 2018 compared to \$8.7 million, or 51.6% of net sales, in fiscal 2017. The decrease in cost of sales was primarily the result of decreased product sales volume. The Company's overall gross margin in fiscal 2018 was 47.2% compared to 48.4% in fiscal 2017. The fiscal 2018 gross margin decrease reflects lower product gross margin primarily the result of reduced coverage of fixed costs due to reduced product sales volume. The overall gross margin decrease was also impacted by an increase in gross margin on EDC programs, from 43% in fiscal 2017 to 52% in fiscal 2018.

*Research and development ( R&D ).* R&D expense was \$3.6 million for fiscal 2018 and \$4.5 million for fiscal 2017. R&D expense decreased to 25.8% of net sales in fiscal 2018 compared to 26.5% of net sales in fiscal 2017. R&D expense in fiscal 2018 was \$0.9 million less than fiscal 2017. The decrease in R&D expense resulted primarily from reduced personnel and consultant costs in fiscal 2018.

*Selling, general, and administrative ( SG&A ).* SG&A expense increased \$2.9 million or 78.5% to \$6.7 million or 48.2% of net sales, for fiscal 2018 from \$3.7 million, or 22.3%, for fiscal 2017. The increase in SG&A expenses in fiscal 2018 was primarily the result of the February 23, 2017 settlement with Delta, which lowered SG&A expenses in fiscal 2017 due to the reversal of the \$3.6 million reserve of the Delta unbilled receivable. The fiscal 2018 increase in SG&A expenses was partially offset by lower legal fees compared to fiscal 2017.

*Interest income, net.* Net interest income increased by \$18,000 to \$54,000 for fiscal 2018 from \$36,000 for fiscal 2017. The increase in interest was mainly a result of higher interest rates in fiscal 2018 as compared to fiscal 2017.

*Other income.* Other income was \$0.1 million in fiscal 2018 and \$4.9 million in fiscal 2017, a decrease of \$4.8 million. The Delta settlement payment to the Company of \$7.75 million was partially reflected in the fiscal 2017 financial statements as payment of the \$3.6 million unbilled receivable previously reserved in SG&A expenses and the remainder of the settlement payment, approximately \$4.1 million was reflected in other income. In addition, in fiscal 2017 the Company sold its outstanding Pennsylvania R&D tax credits and realized a gain on the sale of \$0.7 million which was also reflected in other income. Royalties earned in fiscal 2018 was approximately \$68,000 as compared to



\$57,000 in fiscal 2017.

*Income taxes.* Income tax expense for the fiscal 2018 was \$64,000 as compared to income tax expense of \$248,000 for fiscal 2017. The effective tax rate for fiscal 2018 was (1.8%) and differs from the statutory rate mostly due to an increase in the valuation allowance of approximately \$0.7 million. The majority of this change in valuation allowance was a result of the tax benefit related to pre-tax losses not being currently realizable in future periods. The Tax Act permits an indefinite carryforward period for NOLs.

*Net (loss) income.* As a result of the factors described above, the Company's net loss for fiscal 2018 was \$3.7 million compared to net income of \$4.6 million for fiscal 2017. On a fully diluted basis, net loss per share was \$0.22 for fiscal 2018, compared to a net income of \$0.27 per share for fiscal 2017.

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**Fiscal Year Ended September 30, 2017 Compared to Fiscal Year Ended September 30, 2016**

*Net sales.* Net sales for fiscal 2017 decreased \$11.2 million, or 40%, to \$16.8 million from \$28.0 million for fiscal 2016. For fiscal 2017, product sales decreased \$10.9 million and EDC sales decreased \$0.3 million, in each case, compared to fiscal 2016. This decrease primarily reflects decreased shipments of displays for retrofit programs to commercial transport customers and general aviation customers reflecting reduced demand compared to fiscal 2016. The decrease in EDC sales was primarily the result of less revenue being recognized from EDC projects awarded in prior years as they have been completed and they have not been replaced by new EDC programs.

*Cost of sales.* Cost of sales was \$8.7 million or 51.6% of net sales, for fiscal 2017 compared to \$11.5 million, or 41.1% of net sales, in fiscal 2016. The decrease in cost of sales was primarily the result of decreased product sales volume. The Company's overall gross margin in fiscal 2017 was 48.4% compared to 58.9% in fiscal 2016. The fiscal 2017 gross margin decrease reflects lower product gross margin primarily the result of reduced coverage of fixed costs due to reduced product sales volume. The EDC gross margin in fiscal 2016 reflects a reversal of a loss accrual in the amount of \$0.5 million as the Company had negotiated changes in January 2016 to its arrangement with a certain customer whereby the Company's obligation with respect to certain product deliverables were cancelled.

*Research and development ( R&D ).* R&D expense was \$4.5 million for fiscal 2017 and \$4.9 million for fiscal 2016. R&D expense increased to 26.5% of net sales in fiscal 2017 compared to 17.4% of net sales in fiscal 2016. Although R&D expense in fiscal 2017 was \$0.4 million less than fiscal 2016, the R&D expense increase as a percentage of net sales resulted primarily from lower sales volume in fiscal 2017 compared to fiscal 2016. The decrease in R&D expense resulted primarily from reduced personnel and consultant costs in fiscal 2017.

*Selling, general, and administrative.* Selling, general and administrative expense decreased \$5.4 million or 59.2% to \$3.7 million or 22.3% of net sales, for fiscal 2017 from \$9.2 million, or 32.8%, for fiscal 2016. The decrease in selling, general, administrative expenses in fiscal 2017 was primarily due to the reversal of the \$3.6 million reserve of the Delta unbilled receivable and lower legal fees as compared to fiscal 2016, in each case, due to the February 23, 2017 settlement with Delta.

*Interest income, net.* Net interest income increased by \$2,000 to \$36,000 for fiscal 2017 from \$34,000 for fiscal 2016. The increase in interest was primarily the result of higher cash balances throughout the year ended September 30, 2017 as compared to the year ended September 30, 2016.

*Other income.* Other income was \$4.9 million in fiscal 2017 and \$78,000 in fiscal 2016. The Delta settlement payment to the Company of \$7.75 million was partially reflected in the financial statements as payment of the \$3.6 million unbilled receivable previously reserved in selling, general, and administrative expenses and the remainder of the

settlement payment, approximately \$4.1 million was reflected in other income. In addition, the Company sold its outstanding Pennsylvania R&D tax credits in the quarter ended September 30, 2017 and realized a gain on the sale of \$0.7 million which was also reflected in other income. Royalties earned in fiscal 2017 was approximately \$57,000 as compared to \$78,000 in fiscal 2016.

*Income taxes.* Income tax expense for the fiscal 2017 was \$248,000 as compared to income tax expense of \$568,000 for fiscal 2016. The effective tax rate for fiscal 2017 was 5.2%. The effective tax rate differs from the statutory rate primarily due to the reduction of the valuation allowance of \$1.7 million for tax assets whose benefits were realized in fiscal 2017 that were fully reserved in fiscal 2016. The tax assets realized were primarily from the reversal of the \$3.6 million reserve of the Delta unbilled receivable, the sale of the Company's Pennsylvania R&D tax credits and the utilization of some of the Federal Research and Development Tax Credits to reduce income taxes.

*Net income.* As a result of the factors described above, the Company's net income for fiscal 2017 was \$4.6 million compared to net income of \$2.0 million for fiscal 2016. On a fully diluted basis, net income per share was \$0.27 for fiscal 2017, compared to a net income of \$0.12 per share for fiscal 2016. The increases in net income and net income per share were a result of the proceeds of the Delta settlement.

Table of Contents**Liquidity and Capital Resources**

The following table highlights key financial measurements of the Company:

	September 30, 2018	September 30, 2017
Cash and cash equivalents	\$ 20,390,713	\$ 24,680,301
Accounts receivable	\$ 3,449,893	\$ 2,748,597
Current assets	\$ 28,664,948	\$ 34,181,438
Current liabilities	\$ 3,349,614	\$ 3,361,642
Deferred revenue	\$ 356,801	\$ 280,354
Other non-current liabilities (1)	\$ 129,594	\$ 67,742
Quick ratio (2)	7.12	8.16
Current ratio (3)	8.56	10.17

	Twelve Months Ended September 30,		
	2018	2017	2016
<b>Cash flow activities:</b>			
Net cash (used in) provided by operating activities	\$ (1,740,976)	\$ 6,065,678	\$ 3,562,053
Net cash used in investing activities	(2,548,612)	(153,038)	(351,654)
Net cash (used in) provided by financing activities			(724,777)

- 
- (1) Excludes deferred revenue
- (2) Calculated as: the sum of cash and cash equivalents plus accounts receivable, net, divided by current liabilities
- (3) Calculated as: current assets divided by current liabilities

The Company's principal source of liquidity has been cash flows from current year operations and cash accumulated from prior years' operations. Cash is used principally to finance inventory, accounts receivable, unbilled receivables, and payroll.

***Operating Activities***

The Company used \$1.7 million of cash in operating activities during fiscal 2018 as compared to cash generated of \$6.1 million during fiscal 2017. The cash used in operating activities for the year ended September 30, 2018 was primarily comprised of net loss of \$3.7 million, partially offset by depreciation of \$0.4 million, and the decrease of unbilled receivables of \$1.5 million, which principally represent sales previously recorded under the percentage-of-completion method of accounting that have been billed to customers in accordance with applicable EDC terms.

The Company generated \$6.1 million of cash from operations during fiscal 2017 as compared to \$3.6 million during fiscal 2016. The cash provided by operating activities for the year ended September 30, 2017 was primarily comprised of net income of \$4.6 million, the decrease in receivables of \$1.8 million, and depreciation of \$0.5 million, partially offset by the increase of inventory of \$0.6 million and the decrease in accounts payable of \$0.2 million and accrued expenses of \$0.1 million. The increase in net income during fiscal 2017 was a result of the proceeds of the Delta settlement.

*Investing Activities*

Cash used in investing activities was \$2.5 million for fiscal 2018 and consisted primarily of the purchase of our Hawker Beechcraft B200GT aircraft for \$2.4 million. This aircraft will serve as a test bed for the Company's new products and also as a sales/marketing tool for demonstrating its products to its aviation customers.

Cash used in investing activities was \$0.2 million for fiscal 2017, and consisted of spending for production equipment and laboratory test equipment. The Company plans to continue investing in capital equipment to support engineering development efforts and operations.

Table of Contents**Financing Activities**

Cash used by financing activities was none for fiscal years 2018 and 2017.

**Summary**

Future capital requirements depend upon numerous factors, including market acceptance of the Company's products, the timing and rate of expansion of business, acquisitions, joint ventures, and other factors. IS&S has experienced increases in expenditures since its inception and anticipates that expenditures, excluding the purchase of the Hawker Beechcraft B200GT, will remain relatively constant with the levels experienced in fiscal 2018 and fiscal 2017. The Company believes that its cash and cash equivalents will provide sufficient capital to fund operations for at least the next twelve months. Further, IS&S may need to develop and introduce new or enhanced products, to respond to competitive pressures, to invest in or acquire businesses or technologies, or to respond to unanticipated requirements or developments. If insufficient funds are available, the Company may not be able to introduce new products or to compete effectively.

**Contractual Obligations**

The Company's contractual obligations as of September 30, 2018 mature as follows:

Contractual Obligations	Total	Payments Due by Period			After 5 Years
		Less than 1 Year	1-3 Years	3-5 Years	
Operating leases	\$ 91,790	\$ 61,973	\$ 29,817	\$	\$
Purchase obligations (1)	730,275	730,276			
	\$ 822,065	\$ 792,249	\$ 29,817	\$	\$

(1) A purchase obligation is defined as an agreement to purchase goods or services that is enforceable and legally binding on the Company and that specifies all significant terms, including fixed or minimum quantities to be purchased; fixed, minimum or variable price provisions; and the approximate timing of the transaction. These amounts are primarily comprised of open purchase order commitments entered in the ordinary course of business with vendors and subcontractors pertaining to fulfillment of the Company's current order backlog.

**Off-Balance Sheet Arrangements**

The Company has no off-balance sheet arrangements.

**Inflation**

IS&S does not believe inflation had a material effect on its financial position or results of operations during the past three years; however, it cannot predict future effects of inflation.

**Critical Accounting Policies**

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America ( GAAP ) requires management to make estimates and assumptions that affect reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements and the reported amount of revenues and expenses during the reporting period. The Company s most critical accounting policies are revenue recognition, income taxes, inventory valuation, share based compensation and warranty reserves.

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*Revenue recognition*

The Company enters into sales arrangements with customers that, in general, provide for the Company to design, develop, manufacture and deliver large flat-panel display systems, flight information computers and advanced monitoring systems that measure and display critical flight information, including data relative to aircraft separation, airspeed, altitude, and engine and fuel data measurements. The Company's sales arrangements may include multiple deliverables as defined in FASB ASC Topic 605-25 *Multiple-Element Arrangements* (ASC Topic 605-25), which typically include design and engineering services and the production and delivery of the flat panel display and related components. The Company includes any design and engineering development services elements in EDC sales and any functional upgrade and product elements in product sales on the accompanying consolidated statements of operations.

To the extent that an arrangement contains software elements that are essential to the functionality of tangible products sold in the arrangement, the Company recognizes revenue for the deliverables in accordance with the guidance included in FASB Accounting Standards Update 2009-14, *Revenue Arrangements That Include Software Elements* (ASU 2009-14); and FASB Accounting Standards Update 2009-13, *Multiple-Deliverable Revenue Arrangements-a consensus of the FASB Emerging Issues Task Force* (ASU 2009-13); and FASB ASC Topic 605, *Revenue Recognition* (ASC Topic 605).

To the extent that an arrangement contains software components, which include functional upgrades that the Company sells on a standalone basis and which the Company has deemed outside the scope of the exception defined by ASU 2009-14, the Company recognizes software revenue in accordance with ASC Topic 985, *Software* (ASC Topic 985).

Multiple Element Arrangements

The Company identifies all goods and/or services that are to be delivered separately under a sales arrangement and allocates sales to each deliverable (if more than one) based on that deliverable's fair value. The Company then considers the appropriate recognition method for each deliverable. The Company's multiple element arrangements can include defined design and development activities, and/or functional upgrades, and product sales. The Company had no multiple element arrangements for all periods presented.

The Company utilizes the selling price hierarchy that has been established by ASU 2009-13, which requires that the selling price for each deliverable be based on vendor-specific objective evidence if available, third-party evidence if vendor-specific objective evidence is not available, or estimated selling price if neither vendor-specific objective evidence nor third-party evidence is available. To the extent that an arrangement includes a deliverable for which estimated selling price is used, the Company determines the best estimate of selling price by applying the same pricing policies and methodologies that it would use to determine the price to sell the deliverable on a standalone basis.

To the extent that an arrangement contains defined design and EDC activities as identified deliverables in addition to products (resulting in a multiple element arrangement), the Company recognizes as EDC sales amounts earned during the design and development phase of the contract following the guidance included in FASB ASC Topic 605-35, *Construction-Type and Production-Type Contracts* (ASC Topic 605-35) under the percentage-of-completion method. To the extent that multiple element arrangements include product sales, sales are generally recognized once revenue recognition criteria for the product deliverables have been met based on the provisions of ASC Topic 605.



Single Element Arrangements

*Products*

To the extent that a single element arrangement provides for product sales and repairs, the Company recognizes sales when revenue recognition criteria for the product deliverable have been met based on the provisions of ASC Topic 605. In addition, the Company also receives orders for equipment and parts, and in general, recognizes revenue upon shipment to customers.

The Company may offer its customers extended warranties for additional fees, which it records as deferred revenue and recognizes as sales on a straight-line basis over the warranty periods.

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*Engineering development contract services*

The Company may enter into contracts to perform specified design and EDC services related to its products. The Company recognizes revenue from these arrangements as EDC sales, following the guidance included in ASC Topic 605-35, and considers the nature of these contracts (including term, size of contract, and level of effort) when determining the appropriate accounting treatment for a particular contract. Certain of these contracts are accounted for under the percentage-of-completion method of accounting when the Company determines that progress toward completion is reasonably estimable, and the contract is long-term in nature. The Company uses the completed contract method for all other contracts. Sales and profit margins under the percentage-of-completion method are recorded based on the ratio of actual costs incurred to total estimated costs expected to be incurred related to the contract under the cost-to-cost method.

The percentage-of-completion method of accounting requires the Company to estimate the profit margin for each individual contract or contract segment, and to apply that profit margin on a uniform basis as sales are recorded under the contract. The estimation of profit margin requires the Company to make projections of the total sales to be generated and the total costs that will be incurred under a contract. These projections require the Company to make numerous assumptions and estimates relating to items such as the complexity of design and related development costs, performance of subcontractors, availability and cost of materials, engineering productivity, prototype costs, overhead costs, and capital costs. These contracts sometimes include purchase options for additional quantities and for customer change orders for additional or revised product functionality. Revenues and costs related to profitable purchase options are included in the Company's estimates only when the options are exercised, while revenues and costs related to unprofitable purchase options are included in the Company's estimates when exercise is determined to be probable. Revenues related to change orders are included in profit estimates only if they can be estimated reliably and collectability is reasonably assured. Purchase options and change orders are accounted for either as an integral part of the original contract or separately, depending upon the nature and value of the item, in the period in which any change order or purchase option becomes effective. Anticipated losses on contracts are recognized in full in the period in which losses become probable and estimable.

The Company reviews estimates of profit margins for contracts on a quarterly basis. Assuming the initial estimates of revenue and costs under a contract are accurate, the percentage-of-completion method results in the profit margin being recorded evenly as revenue is recognized under the contracts. Changes in these underlying estimates due to revisions in revenues and cost estimates or the exercise of contract options may result in profit margins being recognized unevenly over a contract as such changes are accounted for on a cumulative basis in the period in which the estimates are revised. Significant changes in estimates related to accounting for long-term contracts may have a material effect on the Company's results of operations in the period in which the revised estimates are made. Cumulative catch-up adjustments (loss contracts), if any, resulting from changes in estimates are included in results of operations and disclosed in the notes to the consolidated financial statements of the Company.

*Income taxes*

Income taxes are recorded in accordance with ASC Topic 740, *Income Taxes* (ASC Topic 740), which utilizes a balance sheet approach to provide for income taxes. Under this method, the Company recognizes deferred tax assets and liabilities for temporary differences between the financial reporting basis and the tax basis of the Company's assets, liabilities, and expected benefits of utilizing net operating losses (NOL) and tax credit carry-forwards. The impact on deferred taxes of changes in tax rates and laws, if any, are applied to the years during which temporary differences are expected to be settled, and are reflected in the consolidated financial statements in the period of enactment. At the end of each interim and year-end reporting period, the Company prepares an estimate of the annual effective income tax rate and applies that annual effective income tax rate to ordinary year-to-date pre-tax income for the interim period. Specific tax items discrete to a particular quarter are recorded in income tax expense for that quarter. The estimated annual effective tax rate used in providing for income taxes on a year-to-date basis may change in subsequent periods.

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Deferred tax assets are reduced by a valuation allowance if, based on the consideration of all available evidence, it is more likely than not that some portion of the deferred tax asset will not be realized. Significant weight is given to evidence that can be verified objectively, and significant management judgment is required in determining any valuation allowance recorded against net deferred tax assets. The Company evaluates deferred income taxes on a quarterly basis to determine if a valuation allowance is required by considering available evidence. Deferred tax assets are recognized when expected future taxable income is sufficient to allow the related tax benefits to reduce taxes that would otherwise be payable. The sources of taxable income that may be available to realize the benefit of deferred tax assets are future reversals of existing taxable temporary differences, future taxable income exclusive of reversing temporary differences and credit carryforwards, taxable income in carry-back years, and tax planning strategies which are both prudent and feasible. The Company's current balance of the deferred tax valuation allowance is recorded against all of its federal and state deferred tax assets. The Company will continue to assess all available evidence during future periods to evaluate any changes to the realization of its deferred tax assets. If the Company were to determine that it would be able to realize additional federal or state deferred tax assets in the future, it would make an adjustment to the valuation allowance which would reduce the provision for income taxes.

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The accounting for uncertainty in income taxes requires a more likely than not threshold for financial statement recognition and measurement of tax positions taken or expected to be taken in a tax return. The Company records a liability for the difference between the (i) benefit recognized and measured for financial statement purposes and (ii) the tax position taken or expected to be taken on the Company's tax return. To the extent that the Company's assessment of such tax positions changes, the change in estimate is recorded in the period in which the determination is made. The Company has elected to record any interest or penalties associated with uncertain tax positions as income tax expense.

The Company files a consolidated United States federal income tax return. The Company prepares and files tax returns based on the interpretation of tax laws and regulations, and records estimates based on these judgments and interpretations. In the normal course of business, the tax returns are subject to examination by various taxing authorities. Such examinations may result in future tax and interest assessments by these taxing authorities, and the Company records a liability when it is probable that there will be an assessment. The Company adjusts the estimates periodically as a result of ongoing examinations by and settlements with the various taxing authorities, and changes in tax laws, regulations and precedent. The consolidated tax provision of any given year includes adjustments to prior years' income tax accruals that are considered appropriate, and any related estimated interest. Management believes that it has made adequate accruals for income taxes. Differences between estimated and actual amounts determined upon ultimate resolution, individually or in the aggregate, are not expected to have a material effect on the Company's consolidated financial position, but could possibly be material to its consolidated results of operations or cash flow of any one period.

On December 22, 2017, the U.S. government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (the "Tax Act"). The Tax Act makes broad and complex changes to the U.S. tax code that will affect 2017, including, but not limited to, (1) reducing the U.S. federal corporate tax rate from 34 percent to 21 percent; (2) bonus depreciation that will allow for full expensing of qualified property; (3) elimination of the corporate alternative minimum tax (AMT) and changing how existing AMT credits can be realized; (4) a new limitation on deductible interest expense; (5) the repeal of the domestic production activity deduction; and (6) limitations on net operating losses (NOLs) generated after December 31, 2017, to 80 percent of taxable income.

The Tax Act reduced the corporate tax rate to 21 percent, effective January 1, 2018. Consequently, we have recorded a decrease related to DTAs and DTLs with a corresponding net adjustment to deferred income tax expense of \$321,038 for the year ended December 31, 2017. This expense is offset fully by a change in the valuation allowance. The \$321,038 is a provisional amount. We have completed our accounting for the income tax effects of certain elements of the Tax Act.

*Inventory valuation*

The Company values inventory at the lower of cost (first-in, first-out) or net realizable value. Inventories are written down for estimated obsolescence equal to the difference between inventory cost and estimated net realizable value based on a combination of historical usage and assumptions based on expected usage related to estimated future customer and market demands. The Company's method of valuing inventory contains uncertainties because the calculation requires management to consider inventory aging, to make assumptions regarding expected usage, and to apply judgments on forecasted future demand, market conditions, and technological obsolescence. If actual future demand or market conditions are less favorable than those projected by management, additional inventory write-down may be required.

*Share-based compensation*

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The Company accounts for share-based compensation under FASB ASC Topic 505-50, *Equity-Based Payments to Non-Employees* ( ASC Topic 505-50 ) and ASC Topic 718, *Stock Compensation* ( ASC Topic 718 ), which require the Company to measure the cost of employee or non-employee director services received in exchange for an award of equity instruments based on the grant-date fair value of the award using an option pricing model. The Company recognizes such cost over the period during which an employee or non-employee director is required to provide service in exchange for the award.

Accordingly, adoption of ASC Topic 505-50's and ASC Topic 718's fair value method results in recording compensation costs under the Company's stock based compensation plans. The Company determined the fair value of its stock option awards at the date of grant using the Black-Scholes option pricing model. Option pricing models and generally accepted valuation techniques require management to make assumptions and to apply judgment to determine the fair value of its awards. These assumptions and judgments include estimating future volatility of the Company's stock price, expected dividend yield, future employee turnover rates, and future employee stock option exercise behaviors. Changes in these assumptions can materially affect fair value estimates. The Company does not believe that a reasonable likelihood exists that there will be a material change in future estimates or assumptions used to determine

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share-based compensation expense. However, if actual results are not consistent with the Company's estimates or assumptions, the Company would adjust its estimates. Such adjustments could have a material impact on the Company's financial position.

*Warranty reserves*

The Company offers warranties on some products of various lengths, however the standard warranty is twenty-four months. At the time of shipment, the Company establishes a reserve for estimated costs of warranties based on its best estimate of the amounts necessary to settle future and existing claims using historical data on products sold as of the balance sheet date. The length of the warranty period, the product's failure rates, and the customer's usage affect warranty cost. If actual warranty costs differ from the Company's estimated amounts, future results of operations could be affected adversely. Warranty cost is recorded as cost of sales, and the reserve balance recorded as an accrued expense. While the Company maintains product quality programs and processes, its warranty obligation is affected by product failure rates and the related corrective costs. If actual product failure rates and/or corrective costs differ from the estimates, the Company revises the estimated warranty liability accordingly.

*Self-insurance reserves*

Since January 1, 2014, the Company has self-insured a significant portion of its employee medical insurance. The Company maintains a stop-loss insurance policy that limits its losses both on a per employee basis and an aggregate basis. Liabilities associated with the risks that are retained by the Company are estimated based upon actuarial assumptions such as historical claims experience, demographic factors and other actuarial assumptions. The Company estimated the total medical claims incurred but not reported and the Company believes that it has adequate reserves for these claims at September 30, 2018. However, the actual value of such claims could be significantly affected if future occurrences and claims differ from these assumptions. At September 30, 2018, the estimated liability for medical claims incurred but not reported was approximately \$60,200. The Company has recorded the excess of funded premiums over estimated claims incurred but not reported of approximately \$102,000 as a current asset in the accompanying consolidated balance sheet. During the year ended September 30, 2018, the Company has used the excess of funded premiums to reduce amounts payable for claims incurred.

*Treasury Stock*

We account for treasury stock purchased under the cost method and include treasury stock as a component of stockholder's equity. Treasury stock purchased with intent to retire (whether or not the retirement is actually accomplished) is charged to common stock.

**New Accounting Pronouncements**

In March 2016, the FASB issued ASU 2016-09, Improvements to Employer Share-Based Payment Accounting, which simplifies the tax treatment of stock shortfalls and windfalls. Previous guidance required excess tax benefits (windfalls) to be recorded in equity. Tax deficiencies (shortfalls) were recorded in equity to the extent of previous windfalls then to the income statement. The new guidance simplifies this treatment by having all windfalls and shortfalls recorded through the income statement. This guidance became effective for us beginning on October 1, 2017. Adoption of this standard did not have a material effect upon the consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842). Under this guidance, an entity is required to recognize right-of-use assets and lease liabilities on its balance sheet and disclose key information about leasing arrangements. This guidance offers specific accounting guidance for a lessee, a lessor and sale and leaseback transactions. Lessees and lessors are required to disclose qualitative and quantitative information about leasing arrangements to enable a user of the financial statements to assess the amount, timing and uncertainty of cash flows arising from leases. This guidance is effective for annual reporting periods beginning after December 15, 2018, including interim periods within that reporting period, and requires a modified retrospective adoption. The Company is currently evaluating the impacts of adoption of this guidance.

In November 2015, the FASB issued ASU 2015-17, Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes, which simplifies balance sheet presentation of deferred income taxes. Previous guidance required an entity to separate deferred income tax liabilities and assets into current and noncurrent amounts in a classified statement of financial position; however, the new guidance requires that deferred tax liabilities and assets be classified as noncurrent in a classified statement of financial position. The updated standard is effective for the Company beginning October 1, 2017, with early adoption permitted as of the beginning of any interim or annual reporting period. The Company early adopted this standard retrospectively and reclassified its current deferred tax balances to noncurrent deferred tax for all periods presented. The adoption of this guidance did not have a material impact on the Company's consolidated financial statements.

In July 2015, the FASB issued Accounting Standards Update (ASU) No. 2015-11, Simplifying the Measurement of Inventory. ASU 2015-11 simplifies the subsequent measurement of inventory by requiring inventory to be measured at the lower of cost and net

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realizable value. ASU 2015-11 applies only to inventories for which cost is determined by methods other than last-in first-out and the retail inventory method. ASU 2015-11 is effective for public companies for annual reporting periods beginning after December 15, 2016, and interim periods within those fiscal years. We adopted ASU 2015-11 effective October 1, 2017 and the implementation had no material impact on the consolidated financial statements.

In August 2014, the FASB issued ASU No. 2014-15, Presentation of Financial Statements - Going Concern (Subtopic 205-40) (ASU 2014-15). The objective of ASU 2014-15 is to define management's responsibility to evaluate whether there is substantial doubt about an organization's ability to continue as a going concern and provide related disclosures. Previously, GAAP did not provide guidance to evaluate whether there was substantial doubt regarding an organization's ability to continue as a going concern. This ASU provides guidance to an organization's management, with principles and definitions to reduce diversity in the timing and content of financial statement disclosures commonly provided by organizations. This standard was adopted by the Company at September 30, 2017, and the adoption of this ASU did not have a material impact on the consolidated financial statements.

In May 2014, the FASB issued ASU No. 2014-09, Revenue from Contracts with Customers, which provides a single, comprehensive revenue recognition model for all contracts with customers, and contains principles to determine the measurement of revenue and timing of when it is recognized. The model will supersede most existing revenue recognition guidance, and also requires enhanced revenue-related disclosures. Under the new standard and its related amendments (collectively known as ASC 606), revenue is recognized when a customer obtains control of promised goods or services. The amount of revenue recognized will reflect the consideration that the entity expects to receive in exchange for those goods or services. In addition, the standard requires disclosure of the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers.

The guidance permits two methods of adoption: retrospectively to each prior reporting period presented (full retrospective method), or retrospectively with the cumulative effect of initially applying the guidance recognized at the date of initial application (modified retrospective method). We anticipate using the modified retrospective method of adoption when the Company adopts this standard in fiscal year 2019. While we are still the process of assessing the impact of this standard on the Company's financial statements, we do not currently expect that the adoption of ASC 606 will have a material effect on the Company's consolidated financial statements. The actual impact of ASC 606 is subject to change from these estimates and such change may be significant, pending the completion of the Company's assessment in the first quarter of 2019. In order to complete this assessment, the Company is continuing to update and enhance its internal accounting systems and internal controls over financial reporting.

In August 2018, the FASB issued ASU No. 2018-13, Fair Value Measurement (Topic 820): Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement which modifies the disclosures on fair value measurements by removing the requirement to disclose the amount and reason for transfers between Level 1 and Level 2 of the fair value hierarchy and the policy for timing of such transfers. The ASU expands the disclosure requirements for Level 3 fair value measurements, primarily focused on changes in unrealized gains and losses included in other comprehensive income. For public entities, the standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. Early adoption is permitted for any removed or modified disclosures and adoption of the additional disclosures can be delayed until the effective date. The Company does not currently expect the adoption of ASU 2018-13 to have a material impact on its consolidated financial statements.

As new accounting pronouncements are issued, we will adopt those that are applicable.

### **Business Segments**



The Company operates in one business segment as a systems integrator that designs, develops, manufactures, sells, and services flight guidance and cockpit display systems for OEMs and retrofit applications. Customers include commercial air transport carriers and corporate/general aviation companies, DoD and its commercial contractors, aircraft operators, aircraft modification centers, foreign militaries, and various OEMs. The Company currently derives the majority of its revenues from the sale of this equipment and related EDC services. Most of the Company's sales, operating results and identifiable assets are generated in the United States. In fiscal year 2018, 2017, and 2016 net sales outside the United States amounted to \$4.7 million, \$2.6 million and \$8.2 million, respectively.

**Item 7A. Quantitative and qualitative disclosures about market risk.**

The Company's operations are exposed to market risks primarily as a result of changes in interest rates. The Company does not use derivative financial instruments for speculative or trading purposes. The Company's exposure to market risk for changes in interest rates relates to its cash equivalents. The Company's cash equivalents consist of funds invested in money market funds, which bear interest at a variable rate. The Company does not participate in interest rate hedging. A change in interest rates earned on the Company's cash equivalents would impact interest income and cash flows, but would not impact the fair market value of the underlying instruments. Assuming that the balances during fiscal 2018 were to remain constant and that the Company did not act to

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alter the existing interest rate sensitivity, a hypothetical 1% increase in variable interest rates would have affected interest income by approximately \$0.2 million. This would result in a net impact on cash of approximately \$0.2 million for fiscal 2018.

**Item 8. Financial statements and supplementary data.**

The financial statements of Innovative Solutions and Support, Inc. listed in the index appearing under Item 8 herein are filed as part of this Report.

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**Innovative Solutions and Support, Inc.**

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**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

Board of Directors and Shareholders

Innovative Solutions and Support, Inc.

**Opinion on the financial statements**

We have audited the accompanying consolidated balance sheets of Innovative Solutions and Support, Inc. (a Pennsylvania corporation) and subsidiaries (the Company) as of September 30, 2018 and 2017, and the related consolidated statements of operations, shareholders' equity, and cash flows for each of the three years in the period ended September 30, 2018, and the related notes (collectively referred to as the financial statements). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of September 30, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended September 30, 2018 in conformity with accounting principles generally accepted in the United States of America.

**Basis for opinion**

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ GRANT THORNTON LLP

We have served as the Company's auditor since 2014

Philadelphia, Pennsylvania

December 21, 2018

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## INNOVATIVE SOLUTIONS AND SUPPORT, INC.

## CONSOLIDATED BALANCE SHEETS

	September 30, 2018	September 30, 2017
<i>ASSETS</i>		
Current assets		
Cash and cash equivalents	\$ 20,390,713	\$ 24,680,301
Accounts receivable	3,449,893	2,748,597
Unbilled receivables		1,480,822
Inventories	4,280,108	4,179,654
Prepaid expenses and other current assets	544,234	1,092,064
Total current assets	28,664,948	34,181,438
Property and equipment, net	8,786,737	6,669,011
Other assets	181,993	187,315
Total assets	\$ 37,633,678	\$ 41,037,764
<i>LIABILITIES AND SHAREHOLDERS' EQUITY</i>		
Current liabilities		
Accounts payable	\$ 1,529,792	\$ 1,321,251
Accrued expenses	1,463,021	1,760,037
Deferred revenue	356,801	280,354
Total current liabilities	3,349,614	3,361,642
Non-current deferred income taxes	129,594	67,742
Total liabilities	3,479,208	3,429,384
Commitments and contingencies (See Note 14)		
Shareholders' equity		
Preferred stock, 10,000,000 shares authorized, \$.001 par value, of which 200,000 shares are authorized as Class A Convertible stock. No shares issued and outstanding at September 30, 2018 and 2017		
Common stock, \$.001 par value: 75,000,000 shares authorized, 18,937,050 and 18,879,580 issued at September 30, 2018 and 2017, respectively	18,937	18,880
Additional paid-in capital	51,783,779	51,583,841
Retained earnings	3,720,291	7,374,196
Treasury stock, at cost, 2,096,451 shares at September 30, 2018 and at September 30, 2017	(21,368,537)	(21,368,537)
Total shareholders' equity	34,154,470	37,608,380

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Total liabilities and shareholders equity	\$	37,633,678	\$	41,037,764
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The accompanying notes are an integral part of these statements.

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## INNOVATIVE SOLUTIONS AND SUPPORT, INC.

## CONSOLIDATED STATEMENTS OF OPERATIONS

	For the Fiscal Year Ended September 30,		
	2018	2017	2016
Net sales:			
Product	\$ 13,450,803	\$ 16,133,371	\$ 26,985,899
Engineering development contracts	399,569	653,303	983,804
Total net sales	13,850,372	16,786,674	27,969,703
Cost of sales:			
Product	7,120,731	8,294,228	11,112,339
Engineering development contracts	191,192	374,121	369,984
Total cost of sales	7,311,923	8,668,348	11,482,323
Gross profit	6,538,449	8,118,326	16,487,380
Operating expenses:			
Research and development	3,575,801	4,456,657	4,873,328
Selling, general and administrative	6,674,187	3,739,234	9,170,865
Total operating expenses	10,249,988	8,195,891	14,044,193
Operating (loss) income	(3,711,539)	(77,565)	2,443,187
Interest income	53,561	35,888	33,504
Other income	67,724	4,858,224	78,440
(Loss) income before income taxes	(3,590,254)	4,816,547	2,555,131
Income tax expense	63,651	247,920	568,330
Net (loss) income	\$ (3,653,905)	\$ 4,568,627	\$ 1,986,801
Net (loss) income per common share:			
Basic	\$ (0.22)	\$ 0.27	\$ 0.12
Diluted	\$ (0.22)	\$ 0.27	\$ 0.12
Weighted average shares outstanding:			
Basic	16,805,991	16,742,461	16,927,055
Diluted	16,805,991	16,855,644	17,039,296

The accompanying notes are an integral part of these statements.



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## INNOVATIVE SOLUTIONS AND SUPPORT, INC.

## CONSOLIDATED STATEMENTS OF SHAREHOLDERS EQUITY

	Common Stock	Additional Paid-In Capital	Retained Earnings	Treasury Stock	Total
<b>Balance, September 30, 2015</b>	\$ 18,756	\$ 51,148,722	\$ 818,768	\$ (20,643,760)	\$ 31,342,486
Share-based compensation		60,272			60,272
Issuance of stock to directors	57	183,165			183,222
Purchase of treasury stock				(724,777)	(724,777)
Net income			1,986,801		1,986,801
<b>Balance, September 30, 2016</b>	\$ 18,813	\$ 51,392,159	\$ 2,805,569	\$ (21,368,537)	\$ 32,848,004
Issuance of stock to directors	67	191,682			191,749
Net income			4,568,627		4,568,627
<b>Balance, September 30, 2017</b>	\$ 18,880	\$ 51,583,841	\$ 7,374,196	\$ (21,368,537)	\$ 37,608,380
Issuance of stock to directors	57	199,938			199,995
Net loss			(3,653,905)		(3,653,905)
<b>Balance, September 30, 2018</b>	\$ 18,937	\$ 51,783,779	\$ 3,720,291	\$ (21,368,537)	\$ 34,154,470

The accompanying notes are an integral part of these statements.

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## INNOVATIVE SOLUTIONS AND SUPPORT, INC.

## CONSOLIDATED STATEMENTS OF CASH FLOWS

	For the Fiscal Year Ended September 30,		
	2018	2017	2016
<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>			
Net (loss) income	\$ (3,653,905)	\$ 4,568,627	\$ 1,986,801
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	436,208	449,189	493,361
Share-based compensation expense			
Stock options			68,172
Stock awards	199,995	191,749	183,222
Tax adjustment from share-based compensation			(7,899)
(Gain) loss on disposal of property and equipment			3,605
Excess and obsolete inventory cost		92,829	
Deferred income taxes	61,852	41	494,016
(Increase) decrease in:			
Accounts receivable	225,336	1,762,494	(2,116,941)
Unbilled receivables, net	554,190	116,850	2,322,537
Inventories	(100,454)	(626,655)	951,488
Prepaid expenses and other current assets	288,899	(91,280)	371,684
Other non-current assets		(32,967)	
Increase (decrease) in:			
Accounts payable	208,541	(182,520)	67,790
Accrued expenses	(297,016)	(129,871)	(678,623)
Income taxes	258,931	(153,577)	
Deferred revenue	76,447	100,769	(577,160)
Net cash (used in) provided by operating activities	(1,740,976)	6,065,678	3,562,053
<b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>			
Purchases of property and equipment	(2,548,612)	(153,038)	(352,762)
Proceeds from the sale of property and equipment			1,108
Net cash (used in) investing activities	(2,548,612)	(153,038)	(351,654)
<b>CASH FLOWS FROM FINANCING ACTIVITIES:</b>			
Purchases of treasury stock			(724,777)
Net cash (used in) financing activities			(724,777)
Net increase in cash and cash equivalents	(4,289,588)	5,912,640	2,485,622
Cash and cash equivalents, beginning of year	24,680,301	18,767,661	16,282,039
Cash and cash equivalents, end of year	\$ 20,390,713	\$ 24,680,301	\$ 18,767,661
<b>SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION</b>			
Cash paid for income tax	\$	\$ 400,000	\$ 175,000
Cash received from income tax refund	\$ 265,588	\$	\$ 364,836

**SUPPLEMENTAL DISCLOSURE OF NONCASH INFORMATION**

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Transfer from unbilled to accounts receivable	\$	926,632	\$	\$
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The accompanying notes are an integral part of these statements.

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**INNOVATIVE SOLUTIONS AND SUPPORT, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**1. Background**

Innovative Solutions and Support, Inc. (the Company, IS&S, we or us) was incorporated in Pennsylvania on February 12, 1988. The Company operates in one business segment as a systems integrator that designs, develops, manufactures, sells, and services air data equipment, engine display systems, standby equipment, primary flight guidance and cockpit display systems for retrofit applications and original equipment manufacturers (OEMs). The Company supplies integrated Flight Management Systems (FMS), Flat Panel Display Systems (FPDS), FPDS with Autothrottle, air data equipment, Integrated Standby Units (ISU), ISU with Autothrottle and advanced Global Positioning System (GPS) receivers that enable reduced carbon footprint navigation. The Company has continued to position itself as a system integrator, which capability provides the Company with the potential to generate more substantive orders over a broader product base. The strategy, as both a manufacturer and integrator, is designed to leverage the latest technologies developed for the computer and telecommunications industries into advanced and cost-effective solutions for the general aviation, commercial air transport, United States Department of Defense (DoD)/governmental, and foreign military markets. This approach, combined with the Company's industry experience, is designed to enable IS&S to develop high-quality products and systems, to reduce product time to market, and to achieve cost advantages over products offered by its competitors. Customers include various OEMs, commercial air transport carriers and corporate/general aviation companies, DoD and its commercial contractors, aircraft operators, aircraft modification centers, and foreign militaries.

**2. Concentrations**

*Major Customers and Products*

In fiscal 2018, 2017 and 2016, the Company derived 48%, 54% and 51%, respectively, of total sales from five customers, although not all the same customers in each year. Accounts receivable and unbilled receivables related to those top five customers was \$1.4 million, \$1.3 million and \$1.6 million as of September 30, 2018, 2017 and 2016, respectively.

The Company had one customer that accounted for 27% of the Company's accounts receivable balance as of September 30, 2018. Due to contractual terms with this customer, the amount will not be paid within their normal 45 day payment terms.

In fiscal 2018, the largest customer, Pilatus accounted for 20% of total sales. In fiscal 2017, the three largest customers, Sierra Nevada, Pilatus and DHL accounted for 16%, 12% and 10% of total sales, respectively. In fiscal 2016, the three largest customers, Sierra Nevada, Jet2.com and DHL accounted for 13%, 12% and 11% of total sales, respectively.

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Flat panel sales were 75%, 89% and 95% of total sales in the years ended September 30, 2018, 2017 and 2016, respectively. Sales of air data systems and components were 25%, 11% and 5% of total sales for the years ended September 30, 2018, 2017 and 2016, respectively. Sales to government contractors and agencies accounted for approximately 32%, 53% and 32% of total sales during fiscal years 2018, 2017 and 2016, respectively. The government agency or general contractor typically retains the right to terminate the contract at any time at its convenience. Upon alteration or termination of these contracts, IS&S is typically entitled to an equitable adjustment to the contract price so that it would be compensated for delivered items and allowable costs incurred. Accordingly, because these contracts can be terminated, the Company cannot be assured that its backlog will result in sales.

### *Major Suppliers*

The Company buys several of its components from sole source suppliers. Although there are a limited number of suppliers of particular components, management believes other suppliers could provide similar components on comparable terms.

During fiscal 2018 the Company had one supplier that accounted for 11% of the Company's total inventory related purchases. During fiscal 2017 the Company had three suppliers that accounted for 33% of the Company's total inventory related purchases.

### *Concentration of Credit Risk*

Financial instruments that potentially subject the Company to concentration of credit risk consist principally of cash balances and accounts receivable. The Company invests its excess cash where preservation of principal is the major consideration. Cash balances are maintained with two major banks. Balances on deposit with certain money market accounts and operating accounts may exceed the Federal Deposit Insurance Corporation ( FDIC ) limits. The Company's customer base consists principally of companies within

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the aviation industry. The Company requests advance payments and/or letters of credit from customers that it considers to be credit risks.

The Company recorded a charge for impairment for unbilled receivables in the amount of \$3.7 million related to the Delta contract as of September 30, 2014, (See Note 5. Unbilled Receivable in Notes to Consolidated Financial Statements).

### **3. Summary of Significant Accounting Policies**

#### *Principles of Consolidation*

The consolidated financial statements include the accounts of the Company and its subsidiaries. All inter-company balances and transactions have been eliminated in consolidation.

#### *Use of Estimates*

The financial statements of the Company have been prepared in accordance with accounting principles generally accepted in the United States of America, which require management to make estimates and assumptions that affect the amounts reported in the financial statements. Actual results could differ from those estimates. Estimates are used in accounting for, among other items, long term contracts, allowances for doubtful accounts, inventory obsolescence, product warranty cost liabilities, income taxes, engineering and material costs on EDC programs, percentage of completion on EDC contracts, recoverability of long-lived assets and contingencies. Estimates and assumptions are reviewed periodically and the effects of changes, if any, are reflected in the Consolidated Statements of Operations in the period they are determined.

#### *Cash and Cash Equivalents*

Highly liquid investments purchased with an original maturity of three months or less are classified as cash equivalents. Cash equivalents at September 30, 2018 and 2017 consist of cash on deposit and cash invested in money market funds with financial institutions.

#### *Inventory valuation*

Inventories are stated at the lower of cost (first-in, first-out) or net realizable value and consist of the following:

	September 30, 2018	September 30, 2017
Raw materials	\$ 2,892,366	\$ 2,920,209
Work-in-process	817,051	794,756
Finished goods	570,691	464,689
	\$ 4,280,108	\$ 4,179,654

### *Property and Equipment*

Property and equipment are stated at cost. Depreciation is provided using an accelerated method over the estimated useful lives of the assets (the lesser of three to seven years or over the lease term), except for the manufacturing facility and the corporate airplanes, which are depreciated using the straight-line method over their estimated useful lives of thirty-nine years and ten years, respectively. Major additions and improvements are capitalized, while maintenance and repairs that do not improve or extend the life of assets are charged to expense as incurred. During fiscal 2018, the Company purchased an aircraft for approximately \$2.4 million. This aircraft will serve as a test bed for the Company's new products and also as a sales/marketing tool for demonstrating its products to its aviation customers.

### *Long-Lived Assets*

The Company assesses the impairment of long-lived assets in accordance with Financial Accounting Standards Board ( FASB ) Accounting Standards Codification ( ASC ) Topic 360-10, *Property, Plant and Equipment*. This statement requires that long-lived assets be reviewed for impairment whenever events or changes in circumstances indicate the carrying amount of an asset may not be recoverable. In addition, long-lived assets to be disposed of should be reported at the lower of the carrying amount or fair value less cost to sell. The Company considers historical performance and future estimated results in its evaluation of potential impairment and then compares the carrying amount of the asset to estimated future cash flows expected to result from use of the asset. If the carrying amount of the asset exceeds the estimated expected undiscounted future cash flows, the Company measures the amount of the

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impairment by comparing the carrying amount of the asset to its fair value. The estimation of fair value is generally measured by discounting expected future cash flows. No impairment charges were recorded in fiscal years 2018, 2017 or 2016.

**Revenue Recognition**

The Company enters into sales arrangements with customers that, in general, provide for the Company to design, develop, manufacture and deliver large flat-panel display systems, flight information computers and advanced monitoring systems that measure and display critical flight information, including data relative to aircraft separation, airspeed, altitude, and engine and fuel data measurements. The Company's sales arrangements may include multiple deliverables as defined in FASB ASC Topic 605-25 *Multiple-Element Arrangements* (ASC Topic 605-25), which typically include design and engineering services and the production and delivery of the flat panel display and related components. The Company includes any design and engineering development services elements in EDC sales and any functional upgrade and product elements in product sales on the accompanying consolidated statements of operations.

To the extent that an arrangement contains software elements that are essential to the functionality of tangible products sold in the arrangement, the Company recognizes revenue for the deliverables in accordance with the guidance included in FASB Accounting Standards Update 2009-14, *Revenue Arrangements That Include Software Elements* (ASU 2009-14); and FASB Accounting Standards Update 2009-13, *Multiple-Deliverable Revenue Arrangements-a consensus of the FASB Emerging Issues Task Force* (ASU 2009-13); and FASB ASC Topic 605, *Revenue Recognition* (ASC Topic 605).

To the extent that an arrangement contains software components, which include functional upgrades that the Company sells on a standalone basis and which the Company has deemed outside the scope of the exception defined by ASU 2009-14, the Company recognizes software revenue in accordance with ASC Topic 985, *Software* (ASC Topic 985).

**Multiple Element Arrangements**

The Company identifies all goods and/or services that are to be delivered separately under a sales arrangement and allocates sales to each deliverable (if more than one) based on that deliverable's fair value. The Company then considers the appropriate recognition method for each deliverable. The Company's multiple element arrangements can include defined design and development activities, and/or functional upgrades, and product sales. The Company had no multiple element arrangements for all periods presented.

The Company utilizes the selling price hierarchy that has been established by ASU 2009-13, which requires that the selling price for each deliverable be based on vendor-specific objective evidence if available, third-party evidence if vendor-specific objective evidence is not available, or estimated selling price if neither vendor-specific objective evidence nor third-party evidence is available. To the extent that an arrangement includes a deliverable for which estimated selling price is used, the Company determines the best estimate of selling price by applying the same pricing policies and methodologies that it would use to determine the price to sell the deliverable on a standalone basis.

To the extent that an arrangement contains defined design and EDC activities as identified deliverables in addition to products (resulting in a multiple element arrangement), the Company recognizes as EDC sales amounts earned during the design and development phase of the contract



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following the guidance included in FASB ASC Topic 605-35, *Construction-Type and Production-Type Contracts* ( ASC Topic 605-35 ) under the percentage-of-completion method. To the extent that multiple element arrangements include product sales, sales are generally recognized once revenue recognition criteria for the product deliverables have been met based on the provisions of ASC Topic 605.

### Single Element Arrangements

#### *Products*

To the extent that a single element arrangement provides for product sales and repairs, the Company recognizes sales when revenue recognition criteria for the product deliverable have been met based on the provisions of ASC Topic 605. In addition, the Company also receives orders for equipment and parts, and in general, recognizes revenue upon shipment to customers.

The Company may offer its customers extended warranties for additional fees, which it records as deferred revenue and recognizes as sales on a straight-line basis over the warranty periods.

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*Engineering Development Contracts*

The Company may enter into contracts to perform specified design and EDC services related to its products. The Company recognizes revenue from these arrangements as EDC sales, following the guidance included in ASC Topic 605-35, and considers the nature of these contracts (including term, size of contract, and level of effort) when determining the appropriate accounting treatment for a particular contract. Certain of these contracts are accounted for under the percentage-of-completion method of accounting when the Company determines that progress toward completion is reasonably estimable, and the contract is long-term in nature. The Company uses the completed contract method for all other contracts. Sales and profit margins under the percentage-of-completion method are recorded based on the ratio of actual costs incurred to total estimated costs expected to be incurred related to the contract under the cost-to-cost method.

The percentage-of-completion method of accounting requires the Company to estimate the profit margin for each individual contract or contract segment, and to apply that profit margin on a uniform basis as sales are recorded under the contract. The estimation of profit margin requires the Company to make projections of the total sales to be generated and the total costs that will be incurred under a contract. These projections require the Company to make numerous assumptions and estimates relating to items such as the complexity of design and related development costs, performance of subcontractors, availability and cost of materials, engineering productivity, prototype costs, overhead costs, and capital costs. These contracts sometimes include purchase options for additional quantities and for customer change orders for additional or revised product functionality. Revenues and costs related to profitable purchase options are included in the Company's estimates only when the options are exercised, while revenues and costs related to unprofitable purchase options are included in the Company's estimates when exercise is determined to be probable. Revenues related to change orders are included in profit estimates only if they can be estimated reliably and collectability is reasonably assured. Purchase options and change orders are accounted for either as an integral part of the original contract or separately, depending upon the nature and value of the item, in the period in which any change order or purchase option becomes effective. Anticipated losses on contracts are recognized in full in the period in which losses become probable and estimable.

The Company reviews estimates of profit margins for contracts on a quarterly basis. Assuming the initial estimates of revenue and costs under a contract are accurate, the percentage-of-completion method results in the profit margin being recorded evenly as revenue is recognized under the contracts. Changes in these underlying estimates due to revisions in revenues and cost estimates or the exercise of contract options may result in profit margins being recognized unevenly over a contract as such changes are accounted for on a cumulative basis in the period in which the estimates are revised. Significant changes in estimates related to accounting for long-term contracts may have a material effect on the Company's results of operations in the period in which the revised estimates are made. Cumulative catch-up adjustments (loss contracts), if any, resulting from changes in estimates are included in results of operations and disclosed in the notes to the consolidated financial statements of the Company.

*Customer Service Revenue*

The Company enters into sales arrangement with customers for the repair or upgrade of its various products that are not under warranty. The Company's customer service revenue and cost of sales are included in product sales and product cost of sales, respectively, on the accompanying consolidated statements of operations. The Company's customer service revenue and cost of sales for the fiscal years ended 2018, 2017 and 2016 are as follows:

	<b>For the Fiscal Year Ended September 30,</b>		
	<b>2018</b>	<b>2017</b>	<b>2016</b>
Customer Service Sales	\$ 4,047,265	\$ 3,232,712	\$ 3,597,828

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Customer Service Cost of Sales		1,724,167		1,520,146		1,271,022
Gross Profit	\$	2,323,098	\$	1,712,566	\$	2,326,806

***Income Taxes***

Income taxes are recorded in accordance with ASC Topic 740, *Income Taxes* ( ASC Topic 740 ), which utilizes a balance sheet approach to provide for income taxes. Under this method, the Company recognizes deferred tax assets and liabilities for temporary differences between the financial reporting basis and the tax basis of the Company's assets, liabilities, and expected benefits of utilizing net operating losses ( NOL ) and tax credit carry-forwards. The impact on deferred taxes of changes in tax rates and laws, if any, are applied to the years during which temporary differences are expected to be settled, and are reflected in the consolidated financial statements in the period of enactment. At the end of each interim and year-end reporting period, the Company prepares an estimate of the annual effective income tax rate and applies that annual effective income tax rate to ordinary year-to-date pre-tax income for the interim period. Specific tax items discrete to a particular quarter are recorded in income tax expense for that quarter. The estimated annual effective tax rate used in providing for income taxes on a year-to-date basis may change in subsequent periods.

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Deferred tax assets are reduced by a valuation allowance if, based on the consideration of all available evidence, it is more likely than not that some portion of the deferred tax asset will not be realized. Significant weight is given to evidence that can be verified objectively, and significant management judgment is required in determining any valuation allowance recorded against net deferred tax assets. The Company evaluates deferred income taxes on a quarterly basis to determine if a valuation allowance is required by considering available evidence. Deferred tax assets are recognized when expected future taxable income is sufficient to allow the related tax benefits to reduce taxes that would otherwise be payable. The sources of taxable income that may be available to realize the benefit of deferred tax assets are future reversals of existing taxable temporary differences, future taxable income exclusive of reversing temporary differences and credit carryforwards, taxable income in carry-back years, and tax planning strategies which are both prudent and feasible. The Company's current balance of the deferred tax valuation allowance is recorded against all of its federal and state deferred tax assets. The Company will continue to assess all available evidence during future periods to evaluate any changes to the realization of its deferred tax assets. If the Company were to determine that it would be able to realize additional federal or state deferred tax assets in the future, it would make an adjustment to the valuation allowance which would reduce the provision for income taxes.

The accounting for uncertainty in income taxes requires a more likely than not threshold for financial statement recognition and measurement of tax positions taken or expected to be taken in a tax return. The Company records a liability for the difference between the (i) benefit recognized and measured for financial statement purposes and (ii) the tax position taken or expected to be taken on the Company's tax return. To the extent that the Company's assessment of such tax positions changes, the change in estimate is recorded in the period in which the determination is made. The Company has elected to record any interest or penalties associated with uncertain tax positions as income tax expense.

The Company files a consolidated United States federal income tax return. The Company prepares and files tax returns based on the interpretation of tax laws and regulations, and records estimates based on these judgments and interpretations. In the normal course of business, the tax returns are subject to examination by various taxing authorities. Such examinations may result in future tax and interest assessments by these taxing authorities, and the Company records a liability when it is probable that there will be an assessment. The Company adjusts the estimates periodically as a result of ongoing examinations by and settlements with the various taxing authorities, and changes in tax laws, regulations and precedent. The consolidated tax provision of any given year includes adjustments to prior years' income tax accruals that are considered appropriate, and any related estimated interest. Management believes that it has made adequate accruals for income taxes. Differences between estimated and actual amounts determined upon ultimate resolution, individually or in the aggregate, are not expected to have a material effect on the Company's consolidated financial position, but could possibly be material to its consolidated results of operations or cash flow of any one period.

On December 22, 2017, the U.S. government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (the Tax Act). The Tax Act makes broad and complex changes to the U.S. tax code that will affect 2017, including, but not limited to, (1) reducing the U.S. federal corporate tax rate from 34 percent to 21 percent; (2) bonus depreciation that will allow for full expensing of qualified property; (3) elimination of the corporate alternative minimum tax (AMT) and changing how existing AMT credits can be realized; (4) a new limitation on deductible interest expense; (5) the repeal of the domestic production activity deduction; and (6) limitations on net operating losses (NOLs) generated after December 31, 2017, to 80 percent of taxable income.

The Tax Act reduced the corporate tax rate to 21 percent, effective January 1, 2018. Consequently, we have recorded a decrease related to DTAs and DTLs with a corresponding net adjustment to deferred income tax expense of \$321,038 for the year ended December 31, 2017. This expense is offset fully by a change in the valuation allowance. The \$321,038 is a provisional amount. We have completed our accounting for the income tax effects of certain elements of the Tax Act.

***Engineering Development***

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Total engineering development expense is comprised of both internally funded R&D and product development and design charges related to specific customer contracts. Engineering development expense consists primarily of payroll-related expenses of employees engaged in EDC projects, engineering related product materials and equipment, and subcontracting costs. R&D charges incurred for product design, product enhancements, and future product development are expensed as incurred. Product development and design charges related to specific customer contracts are charged to cost of sales-EDC based on the method of contract accounting (either percentage-of-completion or completed contract) applicable to such contracts.

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***Comprehensive Income***

Pursuant to FASB ASC Topic 220, *Comprehensive Income* ( ASC Topic 220 ), the Company is required to classify items of other comprehensive income by their nature in a financial statement and display the accumulated balance of other comprehensive income separately from retained earnings and additional paid-in capital in the equity section of its condensed consolidated balance sheets. For fiscal 2018, 2017 and 2016 comprehensive income consisted of net income only, and there were no items of other comprehensive income for any of the periods presented.

***Fair Value of Financial Instruments***

The net carrying amounts of cash and cash equivalents, accounts receivable, accounts payable and short-term debt approximate their fair value because of the short-term nature of these instruments. For financial assets and liabilities measured at fair value on a recurring basis, fair value is the price the Company would receive to sell an asset or pay to transfer a liability in an orderly transaction with a market participant at the measurement date. A three-level fair value hierarchy prioritizes the inputs used to measure fair value as follows:

Level 1 Unadjusted quoted prices that are available in active markets for the identical assets or liabilities at the measurement date.

Level 2 Other observable inputs available at the measurement date, other than quoted prices included in Level 1, either directly or indirectly, including:

- Quoted prices for similar assets or liabilities in active markets;
- Quoted prices for identical or similar assets in non-active markets;
- Inputs other than quoted prices that are observable for the asset or liability; and
- Inputs that are derived principally from or corroborated by other observable market data.

Level 3 Unobservable inputs that cannot be corroborated by observable market data and reflect the use of significant management judgment. These values are generally determined using pricing models for which the assumptions utilize management's estimates of market participant assumptions.

The following table sets forth by level within the fair value hierarchy the Company's financial assets and liabilities that were accounted for at fair value on a recurring basis as of September 30, 2018 and 2017, according to the valuation techniques the Company used to determine their fair values.

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	Fair Value Measurement on September 30, 2018		
	Quoted Price in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets			
Cash and cash equivalents:			
Money market funds	\$ 19,725,474	\$	\$

	Fair Value Measurement on September 30, 2017		
	Quoted Price in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets			
Cash and cash equivalents:			
Money market funds	\$ 23,897,092	\$	\$

**Share-Based Compensation**

The Company accounts for share-based compensation under FASB ASC Topic 505-50, *Equity-Based Payments to Non-Employees* ( ASC Topic 505-50 ), and ASC Topic 718, *Stock Compensation* ( ASC Topic 718 ), which require the Company to measure the cost of employee or non-employee director services received in exchange for an award of equity instruments based on the grant-date fair value of the award using an option pricing model. The Company recognizes such cost over the period during which an employee or non-employee director is required to provide service in exchange for the award.

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***Warranty***

The Company offers warranties on some products of various lengths, however the standard warranty is twenty-four months. At the time of shipment, the Company establishes a reserve for estimated costs of warranties based on its best estimate of the amounts necessary to settle future and existing claims using historical data on products sold as of the balance sheet date. The length of the warranty period, the product's failure rates, and the customer's usage affect warranty cost. If actual warranty costs differ from the Company's estimated amounts, future results of operations could be affected adversely. Warranty cost is recorded as cost of sales, and the reserve balance recorded as an accrued expense. While the Company maintains product quality programs and processes, its warranty obligation is affected by product failure rates and the related corrective costs. If actual product failure rates and/or corrective costs differ from the estimates, the Company revises the estimated warranty liability accordingly.

**Self-Insurance Reserves**

Since January 1, 2014, the Company has self-insured a significant portion of its employee medical insurance. The Company maintains a stop-loss insurance policy that limits its losses both on a per employee basis and an aggregate basis. Liabilities associated with the risks that are retained by the Company are estimated based upon actuarial assumptions such as historical claims experience, demographic factors and other actuarial assumptions. The Company estimated the total medical claims incurred but not reported and the Company believes that it has adequate reserves for these claims at September 30, 2018 and 2017. However, the actual value of such claims could be significantly affected if future occurrences and claims differ from these assumptions. At September 30, 2018 and 2017, the estimated liability for medical claims incurred but not reported was \$60,200 and \$53,200, respectively. The Company has recorded the excess of funded premiums over estimated claims incurred but not reported of \$102,000 as a current asset in the accompanying consolidated balance sheet. During the year ended September 30, 2018, the Company has used the excess of funded premiums to reduce amounts payable for claims incurred.

***Treasury Stock***

We account for treasury stock purchased under the cost method and include treasury stock as a component of stockholder's equity. Treasury stock purchased with intent to retire (whether or not the retirement is actually accomplished) is charged to common stock.

***New Accounting Pronouncements***

In March 2016, the FASB issued ASU 2016-09, Improvements to Employer Share-Based Payment Accounting, which simplifies the tax treatment of stock shortfalls and windfalls. Previous guidance required excess tax benefits (windfalls) to be recorded in equity. Tax deficiencies (shortfalls) were recorded in equity to the extent of previous windfalls then to the income statement. The new guidance simplifies this treatment by having all windfalls and shortfalls recorded through the income statement. This guidance became effective for us beginning on October 1, 2017. Adoption of this standard did not have a material effect upon the consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842). Under this guidance, an entity is required to recognize right-of-use assets and lease liabilities on its balance sheet and disclose key information about leasing arrangements. This guidance offers specific accounting



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guidance for a lessee, a lessor and sale and leaseback transactions. Lessees and lessors are required to disclose qualitative and quantitative information about leasing arrangements to enable a user of the financial statements to assess the amount, timing and uncertainty of cash flows arising from leases. This guidance is effective for annual reporting periods beginning after December 15, 2018, including interim periods within that reporting period, and requires a modified retrospective adoption, with early adoption permitted. The Company is currently evaluating the impacts of adoption of this guidance.

In November 2015, the FASB issued ASU 2015-17, Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes, which simplifies balance sheet presentation of deferred income taxes. Previous guidance required an entity to separate deferred income tax liabilities and assets into current and noncurrent amounts in a classified statement of financial position; however, the new guidance requires that deferred tax liabilities and assets be classified as noncurrent in a classified statement of financial position. The updated standard is effective for the Company beginning October 1, 2017, with early adoption permitted as of the beginning of any interim or annual reporting period. The Company early adopted this standard retrospectively and reclassified its current deferred tax balances to noncurrent deferred tax for all periods presented. The adoption of this guidance did not have a material impact on the Company's consolidated financial statements.

In July 2015, the FASB issued Accounting Standards Update ( ASU ) No. 2015-11, Simplifying the Measurement of Inventory. ASU 2015-11 simplifies the subsequent measurement of inventory by requiring inventory to be measured at the lower of cost and net realizable value. ASU 2015-11 applies only to inventories for which cost is determined by methods other than last-in first-out and the retail inventory method. ASU 2015-11 is effective for public companies for annual reporting periods beginning after December 15,

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2016, and interim periods within those fiscal years. We adopted ASU 2015-11 effective October 1, 2017 and the implementation had no material impact on the consolidated financial statements.

In August 2014, the FASB issued ASU No. 2014-15, Presentation of Financial Statements - Going Concern (Subtopic 205-40) (ASU 2014-15). The objective of ASU 2014-15 is to define management's responsibility to evaluate whether there is substantial doubt about an organization's ability to continue as a going concern and provide related disclosures. Previously, GAAP did not provide guidance to evaluate whether there was substantial doubt regarding an organization's ability to continue as a going concern. This ASU provides guidance to an organization's management, with principles and definitions to reduce diversity in the timing and content of financial statement disclosures commonly provided by organizations. This standard was adopted by the Company at September 30, 2017, and the adoption of this ASU did not have a material impact on the consolidated financial statements.

In May 2014, the FASB issued ASU No. 2014-09, Revenue from Contracts with Customers, which provides a single, comprehensive revenue recognition model for all contracts with customers, and contains principles to determine the measurement of revenue and timing of when it is recognized. The model will supersede most existing revenue recognition guidance, and also requires enhanced revenue-related disclosures. Under the new standard and its related amendments (collectively known as ASC 606), revenue is recognized when a customer obtains control of promised goods or services. The amount of revenue recognized will reflect the consideration that the entity expects to receive in exchange for those goods or services. In addition, the standard requires disclosure of the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers.

The guidance permits two methods of adoption: retrospectively to each prior reporting period presented (full retrospective method), or retrospectively with the cumulative effect of initially applying the guidance recognized at the date of initial application (modified retrospective method). We anticipate using the modified retrospective method of adoption when the Company adopts this standard in fiscal year 2019. While we are still the process of assessing the impact of this standard on the Company's financial statements, we do not currently expect that the adoption of ASC 606 will have a material effect on the Company's consolidated financial statements. The actual impact of ASC 606 is subject to change from these estimates and such change may be significant, pending the completion of the Company's assessment in the first quarter of 2019. In order to complete this assessment, the Company is continuing to update and enhance its internal accounting systems and internal controls over financial reporting.

In August 2018, the FASB issued ASU No. 2018-13, Fair Value Measurement (Topic 820): Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement which modifies the disclosures on fair value measurements by removing the requirement to disclose the amount and reason for transfers between Level 1 and Level 2 of the fair value hierarchy and the policy for timing of such transfers. The ASU expands the disclosure requirements for Level 3 fair value measurements, primarily focused on changes in unrealized gains and losses included in other comprehensive income. For public entities, the standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. Early adoption is permitted for any removed or modified disclosures and adoption of the additional disclosures can be delayed until the effective date. The Company does not currently expect the adoption of ASU 2018-13 to have a material impact on its consolidated financial statements.

As new accounting pronouncements are issued, we will adopt those that are applicable.

#### **4. Net Income Per Share**

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	For the Fiscal Year Ended September 30,		
	2018	2017	2016
<b>Numerator:</b>			
Net income (loss)	\$ (3,653,905)	\$ 4,568,627	\$ 1,986,801
<b>Denominator:</b>			
Basic weighted average shares	16,805,991	16,742,461	16,927,055
Dilutive effect of share-based awards		113,182	112,241
Diluted weighted average shares	16,805,991	16,855,644	17,039,296
<b>Net income (loss) per common share:</b>			
Basic	\$ (0.22)	\$ 0.27	\$ 0.12
Diluted	\$ (0.22)	\$ 0.27	\$ 0.12

Net income per share is calculated pursuant to ASC Topic 260, *Earnings per Share* ( ASC Topic 260 ). Basic earnings per share ( EPS ) excludes potentially dilutive securities and is computed by dividing net income by the weighted average number of common shares outstanding for the period. Diluted EPS is computed assuming the conversion or exercise of all dilutive securities such as employee stock options and restricted stock units ( RSUs ).

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The number of incremental shares from the assumed exercise of stock options and RSUs is calculated by using the treasury stock method. As of September 30, 2018, 2017 and 2016, there were 550,834, 586,834 and 589,168 options to purchase common stock outstanding, respectively, and no shares subject to vesting of restricted stock units outstanding, respectively. The average outstanding diluted shares calculation excludes options with an exercise price that exceeds the average market price of shares during the period. For fiscal year 2018, all options to purchase common stock were excluded from the computation of diluted earnings per share because the effect would be anti-dilutive. For fiscal years 2017 and 2016, 336,961 and 339,581 shares, respectively were excluded from the calculation of earnings per share as their effect would be anti-dilutive.

Net income and EPS in the period ended September 30, 2017 were positively impacted by approximately \$4.1 million of other income related to the Company's settlement agreement with Delta Air Lines, Inc., (See Note 5. Unbilled Receivable in Notes to Consolidated Financial Statements).

### **5. Unbilled Receivables**

Unbilled receivables principally represent sales recorded under the percentage-of-completion method of accounting that have not been billed to customers in accordance with applicable contract terms. Unbilled receivables were \$0 and \$1.5 million at September 30, 2018 and 2017, respectively. On February 23, 2017 the Company entered into a settlement agreement with Delta. Under the terms of the settlement, Delta paid the Company \$7.75 million resulting in the reversal of the \$3.6 million reserve and the collection of the unbilled receivable in the fiscal year ended September 30, 2017. The reversal of the reserve is reflected in the selling, general and administrative expenses in the Consolidated Statements of Operations in the fiscal year ended September 30, 2017. The remainder of the amount paid to the Company, approximately \$4.1 million is reflected in other income in the fiscal year ended September 30, 2017.

The percentage-of-completion method of accounting for EDC revenue, requires estimates of profit margins for contracts be reviewed by the Company on a quarterly basis. If the initial estimates of revenues and costs under a contract are accurate, the percentage-of-completion method results in the profit margin being recorded evenly as revenue is recognized under the contract. Changes in these underlying estimates because of revisions in revenue and cost estimates or the exercise of contract options may result in profit margins being recognized unevenly over a contract because such changes are accounted for on a cumulative basis in the period in which the estimates are revised. Significant changes in estimates related to accounting for long-term contracts may have a material effect on the Company's results of operations in the period in which the revised estimates are made. Net cumulative catch-up adjustments resulting from changes in estimates increased operating income by \$0 and \$61,000 during the fiscal years ended September 30, 2018 and 2017, respectively, and reduced operating income by \$58,000 during the fiscal year ended September 30, 2016.

Table of Contents**6. Prepaid Expenses and Other Current Assets**

Prepaid expenses and other current assets consist of the following:

	September 30, 2018		September 30, 2017
Prepaid insurance	\$ 258,015	\$	402,300
Income tax refund receivable	1,578		260,509
Other	284,641		429,255
	\$ 544,234	\$	1,092,064

**7. Property and Equipment**

Property and equipment, net consists of the following balances:

	September 30, 2018		September 30, 2017
Computer equipment	\$ 2,268,969	\$	2,247,866
Corporate airplanes	5,601,039		3,194,571
Furniture and office equipment	1,033,779		1,051,637
Manufacturing facility	5,733,313		5,733,313
Equipment	5,580,083		5,507,774
Land	1,021,245		1,021,245
	21,238,428		18,756,406
Less accumulated depreciation and amortization	(12,451,691)		(12,087,395)
	\$ 8,786,737	\$	6,669,011

Depreciation related to property and equipment was approximately \$0.4 million, \$0.4 million and \$0.5 million in fiscal years 2018, 2017 and 2016, respectively. The corporate airplanes are utilized primarily in support of product development. The Pilatus PC-12 airplane, one of the Company's two corporate airplanes, has been depreciated to its estimated salvage value.

**8. Other Assets**

Other assets consist of the following:

September 30,	September 30,
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	2018		2017	
Intangible assets, net of accumulated amortization of \$531,637 at September 30, 2018 and September 30, 2017	\$	68,600	\$	68,600
Other non-current assets		113,393		118,715
	\$	181,993	\$	187,315

Intangible assets consist of licensing and certification rights which are amortized over a defined number of units. No impairment charges were recorded in fiscal 2018, 2017 or 2016.

Total intangible amortization expense was approximately \$0, \$2,600 and \$12,000 in fiscal years 2018, 2017 and 2016, respectively. The timing of future amortization expense is not determinable because the intangible assets are being amortized over a defined number of units.

Other non-current assets as of September 30, 2018 and September 30, 2017 include the security deposit for an airplane hangar, and a deposit for medical claims required under the Company's medical plan. In addition, other non-current assets as of September 30, 2018 includes \$38,000 of prepaid software licenses that will be earned upon the shipment of a certain product to a customer.

Table of Contents**9. Accrued Expenses**

Accrued expenses consist of the following:

	September 30, 2018	September 30, 2017
Warranty	\$ 854,952	\$ 1,013,461
Salary, benefits and payroll taxes	143,183	258,688
Professional fees	203,823	219,331
Other	261,063	268,557
	\$ 1,463,021	\$ 1,760,037

**10. Warranty**

The Company provides for the estimated cost of product warranties at the time revenue is recognized. Warranty cost is recorded as cost of sales and the reserve balance is recorded as an accrued expense in the financial statements. While the Company engages in extensive product quality programs and processes, the Company's warranty obligation is affected by product failure rates and by the related material, labor, and delivery costs incurred in correcting a product failure. If actual product failure rates, material, or labor costs differ from the Company's estimates, further revisions to the estimated warranty liability would be recorded.

Warranty cost and accrual information for fiscal years ended September 30, 2018 and 2017:

	2018	2017
Warranty accrual as of October 1,	\$ 1,013,461	\$ 1,009,368
Accrued expense for fiscal year	(5,926)	219,390
Warranty cost incurred for fiscal year	(152,583)	(215,297)
Warranty accrual as of September 30,	\$ 854,952	\$ 1,013,461

**11. Income Taxes**

The components of income taxes are as follows:

	2018	For the Fiscal Year Ended September 30, 2017	2016
Current provision (benefit):			
Federal	\$ (3,440)	\$ 244,794	\$ 77,244

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State	5,239	3,082	(2,930)
Total current provision (benefit)	1,799	247,876	74,314
Deferred provision (benefit):			
Federal	61,799		493,989
State	53	44	27
Total deferred provision (benefit)	61,852	44	494,016
Total current and deferred provision (benefit)	\$ 63,651	\$ 247,920	\$ 568,330

Following is a reconciliation of the statutory federal rate to the Company's effective income tax rate:



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	For the Fiscal Year Ended September 30,		
	2018	2017	2016
U.S. Federal statutory tax rate	24.3%	34.0%	34.0%
Rate change due to tax reform	(9.0)%		
State income taxes, net of federal benefit	1.9%	(0.4)%	0.2%
Permanent items	(0.1)%	0.2%	(0.2)%
Research and development tax credits	1.3%	8.1%	(12.6)%
Valuation allowance	(20.3)%	(35.9)%	(2.9)%
Change in unrecognized tax benefits	0.9%	(0.9)%	(0.1)%
123R cancellations and forfeitures	(0.8)%	0.1%	3.8%
Effective income tax rate	(1.8)%	5.2%	22.3%

The Company's U.S. Federal statutory tax rate was impacted by the Tax Act.

On December 18, 2015, the Protecting Americans from Tax Hikes (PATH) Act was enacted, which retroactively and permanently extended the U.S. R&D Tax Credit. As a result, the Company's effective income tax rate in fiscal year 2016 reflects an R&D Tax Credit for twelve months from the fiscal year ended September 30, 2015.

The deferred tax effect of temporary differences giving rise to the Company's deferred tax assets and liabilities consists of the components below:

	As of September 30,		
	2018 Non Current	2017 Non Current	2016 Non Current
<b>Deferred tax assets:</b>			
Reserves and accruals	\$ 730,015	\$ 1,275,427	\$ 2,539,117
Research and development credit	1,318,977	1,236,365	1,742,627
NOL carryforwards -fed/state	2,982,246	1,208,592	1,206,476
Depreciation	(863,796)	(690,774)	(725,018)
Stock options	345,608	609,016	603,881
	4,513,050	3,638,626	5,367,083
Less: Valuation allowance	(4,296,553)	(3,568,459)	(5,297,757)
Total deferred tax assets	216,497	70,167	69,326
<b>Deferred tax liabilities:</b>			
Depreciation	(346,091)	(137,909)	(137,027)
Total deferred tax liabilities	(346,091)	(137,909)	(137,027)
Net deferred tax asset (liability)	\$ (129,594)	\$ (67,742)	\$ (67,701)

At September 30, 2018 and 2017, the Company had state NOL carryforwards of \$23.8 million and \$21.2 million, respectively, which begin to expire in varying amounts after the fiscal year ending September 30, 2026. The Company has federal R&D Tax Credit carryforwards of approximately \$1,319,000 and \$1,236,000 in fiscal 2018 and 2017, respectively, which begin to expire in varying amounts after fiscal year

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ending September 30, 2033. In fiscal 2017, all state R&D tax credits were sold and the resultant gain of \$669,000 was recognized in other income on the Consolidated Statements of Operations.

Deferred tax assets are reduced by valuation allowances if, based on the consideration of all available evidence, it is more likely than not that some portion of the deferred tax asset will not be realized. Significant weight is given to evidence that can be verified objectively, and significant management judgment is required in determining any valuation allowances recorded against net deferred tax assets. The Company evaluates deferred income taxes on a quarterly basis to determine if valuation allowances are required by considering available evidence, including historical and projected taxable income and tax planning strategies which are both prudent and feasible. ASC Topic 740 requires the consideration of a valuation allowance to reflect the likelihood of realization of deferred tax assets. Significant management judgment is required in determining any valuation allowance recorded against net deferred tax assets. The change in the valuation allowance for the period ended September 30, 2018 and September 30, 2017 was approximately \$0.7 million and \$1.7 million, respectively.

The Company will continue to maintain the balance of the valuation allowance until an appropriate level of profitability is sustained to warrant a conclusion that it is no longer more likely than not that a portion of these net deferred tax assets will not be realized in future periods. There is currently no assurance of such future income before taxes. The Company believes that its estimate of future taxable

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income is inherently uncertain, and if its current or future operations generate losses, further adjustments to the valuation allowance are possible.

Following is a reconciliation of beginning and ending balances of total amounts of gross unrecognized tax benefits:

	For the Fiscal Year Ended September 30,		
	2018	2017	2016
Balance at beginning of year	\$ 570,000	\$ 615,000	\$ 615,000
Unrecognized tax benefits related to prior years	52,000		(2,000)
Unrecognized tax benefits related to current year	11,000	18,000	26,000
Decrease in unrecognized tax benefits due to the lapse of applicable statute of limitations	(93,000)	(63,000)	(24,000)
Balance at end of year	\$ 540,000	\$ 570,000	\$ 615,000

The total liabilities associated with the unrecognized tax benefits that, if recognized, would impact the Company's effective tax rate were \$540,000, \$570,000 and \$615,000 at September 30, 2018, 2017 and 2016, respectively. It is not anticipated that the balance of unrecognized tax benefits at September 30, 2018 will change significantly over the next twelve months. The balance of unrecognized tax benefits as reflected in the table above at September 30, 2018 are recorded on the balance sheet as a reduction to deferred tax assets.

The Company's policy is to recognize interest accrued and, if applicable, penalties related to unrecognized tax benefits in income tax expense for all periods presented. At September 30, 2018, the Company currently has no unrecognized tax benefits against which interest has been accrued, and there is no accrual recorded for penalties.

For the fiscal year ended September 30, 2018, 2017 and 2016, the Company recognized (benefit) expense of \$0, \$0 and \$(3,000), respectively, for interest (net of federal impact) within income tax expense.

The Company is subject to income taxes in the U.S. federal and various state jurisdictions. Tax regulations within each jurisdiction are subject to the interpretation of related tax laws and regulations and require significant judgment to apply. The Company's federal income tax returns for the fiscal years ended September 30, 2015 and thereafter are open years subject to examination by the Internal Revenue Service ( IRS ). The Company files income tax returns in various state jurisdictions, as appropriate, with varying statutes of limitation. During fiscal year 2012, the IRS examined the Company's income tax return for the year ended September 30, 2010, and no adjustments resulted from this examination. There are no state income tax examinations in process at this time.

## 12. Savings Plan

The Company sponsors a voluntary defined contribution savings plan covering all employees. The Company made contributions of \$105,000, \$120,000 and \$127,000 for the fiscal years ended September 30, 2018, 2017 and 2016, respectively.

### 13. Share-Based Compensation

The Company accounts for share-based compensation under the provisions of ASC Topic 505-50 and ASC Topic 718 by using the fair value method for expensing stock options and stock awards.

Total share-based compensation expense was approximately \$200,000, \$203,000 and \$251,000 for the fiscal years ended September 30, 2018, 2017 and 2016, respectively. The income tax impact recognized as a (charge) credit to additional paid in capital in the statement of shareholders equity related to share-based compensation arrangements was \$0, \$0 and (\$8,000) for the fiscal years ended September 30, 2018, 2017 and 2016, respectively. Compensation expense related to share-based awards is recorded as a component of selling, general and administrative expenses.

The Company has three share-based compensation plans, the 1998 Stock Option Plan (the 1998 Plan ), the 2003 Restricted Stock Plan (the Restricted Plan ) and the 2009 Stock-Based Incentive Compensation Plan (the 2009 Plan ), each of which the shareholders approved. The 1998 Plan expired on November 13, 2008. The last awards under the Restricted Plan were made in 2010, and no further shares remain to be awarded under the Restricted Plan.

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**1998 Stock Option Plan**

The 1998 Plan allowed the granting of incentive and nonqualified stock options to employees, officers, directors and independent contractors, and consultants. No stock options were granted to independent contractors or consultants under this plan. Incentive stock options granted under the 1998 Plan have exercise prices that are at least equal to the fair value of the common stock on grant date. Nonqualified stock options granted under the plan have exercise prices that are less than, equal to or greater than the fair value of the common stock on the date of grant. The Company reserved 3,389,000 shares of common stock for awards under the plan. On November 13, 2008, the 1998 Plan expired and no additional shares were granted under the 1998 Plan after that date.

Following is a summary of option activity under the 1998 Plan for fiscal years ended September 30, 2018, 2017 and 2016 and changes during the periods then ended:

	Options		Weighted Average Exercise Price		Aggregate Intrinsic Value
Outstanding at September 30, 2015	53,000	\$	8.83	\$	
Granted					
Exercised					
Cancelled	(23,000)		12.17		
Outstanding at September 30, 2016	30,000	\$	6.27		
Granted					
Exercised					
Cancelled					
Outstanding at September 30, 2017	30,000	\$	6.27	\$	
Granted					
Exercised					
Cancelled	(30,000)		6.27		
Outstanding at September 30, 2018		\$		\$	
Vested		\$		\$	
Options exercisable at September 30, 2018		\$		\$	

In fiscal 2018 and 2017 and 2016, no options were granted under the 1998 Plan. Therefore, there is no weighted-average grant date fair value and no intrinsic value attributable to individual options granted. No options were exercised during fiscal years 2018, 2017 and 2016.

The following table summarizes information about stock options under the 1998 Plan at September 30, 2018:

Range of Exercise Prices	Options Outstanding		Weighted- Average Exercise Price	Options Exercisable	
	Outstanding As of September 30, 2018	Weighted- Average Remaining Contractual		As of September 30, 2018	Weighted- Average Exercise Price

Life

\$ 5.01 - \$ 10.00

\$

\$

Fair value of each option grant is estimated on the date of grant using the Black-Scholes option pricing model. Options are exercisable over a maximum term of ten years from date of grant and vest typically over periods of three to five years from the grant date. The expected term of options represents the period of time that options granted are expected to be outstanding and is based on historical experience. Expected volatility is based on historical volatility of the Company's stock price. The risk free interest rate is based on U.S. Treasuries with maturities consistent with the expected life of the options in effect at the time of grant. Compensation expense for employee stock options includes an estimate for forfeitures, and is recognized ratably over the vesting term. Because no options were granted from the 1998 Plan in fiscal 2018, 2017 and 2016, the data for expected dividend, expected volatility, weighted average risk-free interest rate and expected lives is not applicable.

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Total compensation expense associated with stock option awards to employees under the 1998 Plan was \$0 for fiscal years ended September 30, 2018, 2017 and 2016.

At September 30, 2018, there is no unrecognized compensation expense related to non-vested stock options under the 1998 Plan that is expected to be recognized during fiscal 2019.

**2009 Stock-Based Incentive Compensation Plan**

The 2009 Plan authorizes the grant of stock appreciation rights, restricted stock, options, RSUs and other equity-based awards (collectively referred to as Awards ). Options granted under the 2009 Plan may be either incentive stock options as defined in section 422 of the Internal Revenue Code of 1986, as amended (the Code ), or nonqualified stock options, as determined by the Compensation Committee of the Company's Board of Directors (the Compensation Committee ).

Subject to an adjustment necessary upon a stock dividend, recapitalization, forward split or reverse split, reorganization, merger, consolidation, spin-off, combination, repurchase or share exchange, extraordinary or unusual cash distribution, or other similar corporate transaction or event, the maximum number of shares of common stock available for Awards under the 2009 Plan shall be 1,200,000, all of which may be issued pursuant to Awards of incentive stock options. In addition, the Plan provides that no more than 300,000 shares of common stock per year may be awarded to any employee as a performance-based Award under Section 162(m) of the Code. At September 30, 2018 there were 208,128 shares of common stock available for awards under the plan.

If any Award is forfeited, or if any option terminates, expires or lapses without being exercised, the related shares of common stock subject to such Award will again be available for future grant. Any shares tendered by a participant in payment of the exercise price of an option or the tax liability with respect to an Award (including, in any case, shares withheld from any such Award) will not be available for future grant under the 2009 Plan. If there is any change in the Company's corporate capitalization, the Compensation Committee must proportionately and equitably adjust the number and kind of shares of common stock which may be issued in connection with future Awards, the number and type of shares of common stock covered by Awards then outstanding under the 2009 Plan, the number and type of shares of common stock available under the 2009 Plan, the exercise or grant price of any Award, or if deemed appropriate, make provision for a cash payment with respect to any outstanding Award, provided that no adjustment may be made that would adversely affect the status of any Award that is intended to be a performance-based Award under Section 162(m) of the Code, unless otherwise determined by the Compensation Committee. In addition, the Compensation Committee may make adjustments in the terms and conditions of any Awards, including any performance goals, in recognition of unusual or nonrecurring events affecting the Company or any subsidiary, or in response to changes in applicable laws, regulations or accounting principles, provided that no adjustment may be made that would adversely affect the status of any Award that is intended to be a performance-based Award under Section 162(m) of the Code, unless otherwise determined by the Compensation Committee.

Following is a summary of option activity under the 2009 Plan for the fiscal years ended September 30, 2018, 2017 and 2016, and changes during the periods then ended:

Options	Weighted Average Exercise Price	Aggregate Intrinsic Value
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Outstanding at September 30, 2015	592,168	\$	3.35	\$	
Granted					
Exercised	67,115		2.81		25,504
Cancelled	(33,000)		3.78		
Outstanding at September 30, 2016	626,283	\$	3.35	\$	
Granted			2.81		25,504
Exercised	(67,115)				55,705
Cancelled	(2,334)		3.78		
Outstanding at September 30, 2017	556,834	\$	3.32		177,043
Granted					
Exercised					
Cancelled	(6,000)		3.78		
Outstanding at September 30, 2018	550,834	\$	3.32	\$	15,000
Vested and expected to vest	550,834	\$	3.32	\$	15,000
Options exercisable at September 30, 2018	550,834	\$	3.32	\$	15,000



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The following table summarizes information about stock options under the 2009 Plan at September 30, 2018:

Range of Exercise Prices	Options Outstanding Outstanding As of September 30, 2018	Weighted- Average Remaining Contractual Life	Weighted- Average Exercise Price	Options Exercisable As of September 30, 2018	Weighted- Average Exercise Price
\$ 0.00 - \$ 5.00	550,834	3.8	\$ 3.32	550,834	\$ 3.32

Fair value of each option grant is estimated on the date of grant using the Black-Scholes option pricing model. Options are exercisable over a maximum term of ten years from date of grant and vest typically over periods of three to five years from the grant date. The expected term of options represents the period of time that options granted are expected to be outstanding and is based on historical experience and the expected turnover rate of the employees receiving the options. Expected volatility is based on historical volatility of the Company's stock. The risk free interest rate is based on U.S. Treasuries with maturities consistent with the expected life of the options in effect at the time of grant. Compensation expense for employee stock options includes an estimate for forfeitures and is recognized ratably over the vesting term.

The Company did not grant any options in fiscal years 2018, 2017 and 2016, and therefore did not record any compensation expense related to the 2009 Plan during such periods.

Total compensation expense associated with stock option awards to employees under the 2009 Plan was \$0, \$0 and \$68,000 for fiscal years ended September 30, 2018, 2017 and 2016, respectively.

Total share-based compensation expense associated with the annual grant of stock awards to non-employee directors under the 2009 Plan was approximately \$200,000, \$203,000 and \$178,000 for the fiscal years ended September 30, 2018, 2017 and 2016, respectively.

At September 30, 2018, no unrecognized compensation expense, net of forfeitures, related to non-vested stock options under the 2009 Plan, will be recognized.

### *Restricted Stock Units*

During fiscal 2016, the Company's Board of Directors (the Board) approved grants of RSUs to the non-employee directors on the Board as compensation for their services during calendar year 2016. Under the terms of the awards, at the conclusion of the vesting period on January 2, 2017, the grants of RSUs were settled in shares of the Company's common stock at a rate of one share of stock for each unit, provided that if a director resigns from the Board prior to January 1, 2017, such director shall only receive a pro rata portion of such award for time served. As of September 30, 2016, there were 67,115 unvested restricted stock units outstanding under the 2009 Plan, all of which were issued during the fiscal year ended September 30, 2016. There were no such awards outstanding as of September 30, 2018 and 2017, and no such activity under the 2009 Plan during the fiscal year ended September 30, 2018 and 2017.

#### 14. Commitments and Contingencies

##### *Operating Leases*

Rent expense under operating leases totaled approximately \$113,000, \$94,000 and \$83,000 for the years ended September 30, 2018, 2017 and 2016, respectively. Future minimum lease payments under non-cancelable operating leases are \$62,000 for the year ended September 30, 2018.

##### *Purchase Obligations*

A purchase obligation is defined as an agreement to purchase goods or services that is enforceable and legally binding on the Company and that specifies all significant terms, including fixed or minimum quantities to be purchased, fixed, minimum or variable price provisions, and the approximate timing of the transaction. These amounts are comprised primarily of open purchase order commitments entered in the ordinary course of business with vendors and subcontractors pertaining to fulfillment of the Company's current order backlog. The purchase obligations on open purchase orders were \$0.7 million, \$0.9 million and \$0.9 million as of September 30, 2018, 2017 and 2016, respectively.

Table of Contents*Product Liability*

The Company has product liability insurance of \$50,000,000. The Company has not experienced any material product liability claims.

*Legal Proceedings*

In the ordinary course of business, IS&S is at times subject to various legal proceedings and claims. The Company believes it is not reasonably possible that such matters that are currently pending will, individually or in the aggregate, have a material effect on the results of operations or financial position.

**15. Related Party Transactions**

The Company incurred legal fees of \$0 and \$121,000 for the fiscal years ended September 30, 2018 and 2017, respectively with a law firm in which a lawyer of the firm is a shareholder of the Company.

**16. Quarterly Financial Data (unaudited)**

Summarized quarterly results of operations of the Company for the years ended September 30, 2018 and September 30, 2017 are presented below:

	<b>Fiscal Year Ended September 30, 2018</b>			
	<b>First Quarter</b>	<b>Second Quarter</b>	<b>Third Quarter</b>	<b>Fourth Quarter</b>
Net sales	\$ 3,087,984	\$ 3,727,204	\$ 3,389,663	\$ 3,645,521
Cost of sales	1,593,268	2,082,347	1,806,980	1,829,328
Gross profit	1,494,716	1,644,857	1,582,683	1,816,193
Operating (loss) income	(1,051,560)	(1,143,511)	(1,072,228)	(444,240)
Net (loss) income	(881,619)	(1,316,871)	(1,041,037)	(414,378)
Net income (loss) per common share				
Basic	\$ (0.05)	\$ (0.08)	\$ (0.06)	\$ (0.03)
Diluted	\$ (0.05)	\$ (0.08)	\$ (0.06)	\$ (0.03)

	<b>Fiscal Year Ended September 30, 2017</b>			
	<b>First Quarter</b>	<b>Second Quarter</b>	<b>Third Quarter</b>	<b>Fourth Quarter</b>
Net sales	\$ 3,365,866	\$ 4,653,902	\$ 4,541,421	\$ 4,225,484
Cost of sales	1,828,052	2,302,431	2,164,140	2,373,726

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Gross profit	1,537,814	2,351,471	2,377,281	1,851,758
Operating (loss) income	(1,595,295)	2,985,918	(541,189)	(926,999)
Net (loss) income	(1,194,974)	5,930,425	19,220	(186,045)

Net income (loss) per  
common share

Basic	\$	(0.07)	\$	0.35	\$	\$	(0.01)
Diluted	\$	(0.07)	\$	0.35	\$	\$	(0.01)

Quarterly and full fiscal year EPS are calculated independently based on the weighted average number of shares outstanding during each period. As a result, the sum of each quarter's per share amount may not equal the total per share amount for the respective year.

Net income and EPS in the second quarter of fiscal 2017 were positively impacted by approximately \$4.1 million of other income related to the Company's settlement agreement with Delta Air Lines, Inc., (See Note 5. Unbilled Receivable in Notes to Consolidated Financial Statements).

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**17. Business Segments**

The Company operates in one business segment which designs, manufactures and sells flat panel displays, flight information computers, and advanced monitoring systems to the DoD, the Department of Interior ( DOI ), other government agencies, commercial air transport carriers, and corporate/general aviation markets. The Company currently derives virtually all of its revenues from the sale of this equipment and related EDC. Most of the Company's sales, operating results, and identifiable assets are in the United States. During fiscal 2018, 2017 and 2016, IS&S derived 75%, 89% and 95%, respectively, of its total product revenues from the sale of FPDS. During fiscal 2018, 2017 and 2016, the Company derived 25%, 11% and 5%, respectively, of total product revenues from the sale of air data systems related products. During fiscal 2018, 2017 and 2016, the Company derived 3%, 4% and 4%, respectively, of total revenues from the sale of EDC services.

*Geographic Data*

Most of the Company's sales, operating results and identifiable assets are generated in the United States. In fiscal years 2018, 2017 and 2016, net sales outside the United States amounted to \$4.7 million, \$2.6 million and \$8.2 million, respectively.

*Product Data*

The Company's current product line includes FPDS, flight management systems, and air data systems and components. During fiscal 2018, 2017 and 2016, the Company derived 75%, 89% and 95%, respectively, of its revenue from sales of FPDS. The remaining revenue for each of the fiscal years was from sales of air data systems and components.

**Item 9. Changes in and disagreements with accountants on accounting and financial disclosure.**

None.

**Item 9A. Controls and procedures**

(a) We carried out an evaluation under the supervision and with the participation of our management, including our chief executive officer and chief financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures, as such term is defined under Rule 13a-15(e) promulgated under the Securities Exchange Act of 1934, as amended (the Exchange Act ). Based on that evaluation, our chief executive officer and chief financial officer concluded that these controls and procedures were effective as of September 30, 2018 to provide reasonable assurance that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported, within the time periods specified in the rules and forms of the

Securities and Exchange Commission and accumulated and communicated to our management including our chief executive and financial officers, as appropriate, to allow timely decisions regarding required disclosure.

(b) Management's annual report on internal control over financial reporting is set forth below on this Annual Report on Form 10-K.

(c) There were no changes in the Company's internal control over financial reporting identified in connection with the evaluation of such controls that occurred during the Company's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

**Management's report on internal control over financial reporting**

Management of Innovative Solutions & Support, Inc. and its subsidiaries (the "Company") is responsible for establishing and maintaining adequate internal control over financial reporting. The Company's internal control over financial reporting is a process designed under the supervision of the Company's principal executive officer and principal financial officer and intended to provide reasonable assurance regarding the reliability of financial reporting and preparation of the Company's financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America.

The Company's internal control over financial reporting includes policies and procedures that are intended to (1) pertain to maintenance of records that, in reasonable detail, accurately and fairly reflect transactions and dispositions of the assets of the Company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of Company assets that could have a material effect on financial statements.

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Due to its inherent limitations, internal control over financial reporting may not prevent or detect misstatements and, even when determined to be effective, can only provide reasonable, not absolute, assurance with respect to financial statement preparation and presentation. Projections of any evaluation of effectiveness to future periods are subject to risk that controls may become inadequate as a result of changes in conditions or deterioration in the degree of compliance.

Management assessed the effectiveness of the Company's internal control over financial reporting as of September 30, 2018. This assessment was based on criteria for effective internal control over financial reporting described in Internal Control-Integrated Framework (2013), issued by the Committee on Sponsoring Organizations of the Treadway Commission. Based on this assessment, management believes that, as of September 30, 2018, internal control over financial reporting was effective to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with U.S. generally accepted accounting principles.

**Item 9B. Other Information**

None.

**PART III**

**Item 10. Directors, executive officers and corporate governance.**

This information (other than information relating to executive officers included in Part I Item 1.) will be included in the Company's Proxy Statement relating to its Annual Meeting of Shareholders, which will be filed within 120 days after the close of the Company's fiscal year covered by this Annual Report on Form 10-K, and is hereby incorporated by reference to such Proxy Statement. IS&S has adopted a written code of business conduct and ethics, known as the Company's code of conduct, which applies to all of its directors, officers, and employees, including its chief executive officer, its president, and its chief financial officer. The Company's code of conduct is available on its Internet website, [www.innovative-ss.com](http://www.innovative-ss.com). The code of conduct may also be obtained by contacting investor relations at (610) 646-9800. Any amendments to the Company's code of conduct or waivers from provisions of the code for its directors and officers will be disclosed on the Company's Internet website promptly following the date of such amendment or waiver.

**Item 11. Executive compensation.**

This information will be included in the Company's Proxy Statement relating to its Annual Meeting of Shareholders, which will be filed within 120 days after close of the Company's fiscal year covered by this Report, and is hereby incorporated by reference to such Proxy Statement.

**Item 12. Security ownership of certain beneficial owners and management and related stockholder matters.**

This information will be included in the Company's Proxy Statement relating to its Annual Meeting of Shareholders, which will be filed within 120 days after close of the Company's fiscal year covered by this Report, and is hereby incorporated by reference to such Proxy Statement.

**Equity Compensation Plan Information**

The following table gives information about the Company's common stock that may be issued upon the exercise of options and rights under all of its existing equity compensation plans and arrangements as of September 30, 2018.

<b>Plan Category</b>	<b>Number of Securities to be issued upon exercise of outstanding options and rights</b>	<b>Weighted-average exercise price of outstanding options and rights</b>	<b>Number of Securities remaining available for future issuance under equity compensation plans (excluding securities reflected in second column)</b>
Equity compensation plans approved by security holders	550,834	\$ 3.32	208,128
Equity compensation plans not approved by security holders		\$	



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The Company makes an annual grant of restricted stock awards under the 2009 Plan to its non-employee directors. Total share-based compensation expense for non-employee directors was \$200,000, \$203,000 and \$178,000 for the fiscal years ended September 30, 2018, 2017 and 2016, respectively. In the fiscal years ended September 30, 2018, 2017 and 2016, awards to the Company's non-employee directors under the Plan were 57,470, 67,115 and 56,376 shares or, in the case of fiscal 2016, RSUs exercisable for shares, respectively.

**Item 13. Certain relationships and related transactions and director independence.**

**Related Party Transactions**

This information will be included in the Company's Proxy Statement relating to its Annual Meeting of Shareholders, which will be filed within 120 days after close of the Company's fiscal year covered by this Report, and is hereby incorporated by reference to such Proxy Statement.

**Item 14. Principal accounting fees and services**

This information will be included in the Company's Proxy Statement relating to its Annual Meeting of Shareholders, which will be filed within 120 days after close of the Company's fiscal year covered by this Report, and is hereby incorporated by reference to such Proxy Statement.

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**PART IV**

**Item 15. Exhibits, financial statement schedules.**

(a) The following documents are filed as part of this report:

1. *Financial Statements*

See index to Financial Statements at Item 8 on page 34 of this report.

2. *Financial Statement Schedules*

Schedules have been omitted because they are not applicable or are not required or the information required to be set forth therein is included in the financial statements or notes thereto.

3. The following exhibits are filed as part of, or incorporated by reference into this report:

Exhibit Number	Exhibit Title
3.1	<u>Articles of Incorporation of IS&amp;S. (2)</u>
3.2	<u>Amended and Restated Bylaws of IS&amp;S. (7)</u>
10.1	<u>IS&amp;S 1998 Stock Option Plan. (1) (4)</u>
10.2	<u>Amendment No. 1 to the IS&amp;S 1998 Stock Option Plan. (1) (3)</u>
10.3	<u>IS&amp;S 2003 Restricted Stock Plan (1) (6)</u>
10.4	<u>IS&amp;S 2009 Stock-Based Incentive Compensation Plan (5)</u>
10.5	<u>Employment Agreement, dated February 14, 2012, between IS&amp;S and Shahram Askarpour (8)</u>
21	<u>Subsidiaries of IS&amp;S.</u>
23.1	<u>Consent of Grant Thornton LLP</u>
31.1	<u>Certification of Chief Executive Officer pursuant to Rule 13a-14(a)</u>
31.2	<u>Certification of Chief Financial Officer Pursuant to Rule 13a-14(a)</u>
32.1	<u>Certification Pursuant to U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</u>
101	XBRL Instance Document
101.INS	XBRL Taxonomy Extension Scheme Document

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101.SCH	XBRL Taxonomy Extension Calculation Linkbase Document
101.CAL	XBRL Taxonomy Extension Definition Linkbase Document
101.DEF.	XBRL Taxonomy Extension Label Linkbase Document
101.LAB.	XBRL Taxonomy Extension Presentation Linkbase Document
101.PRE.	

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- (1) Constitutes a management contract or compensatory plan or arrangement required to be filed as an exhibit to this form.
- (2) Incorporated by reference from the Registrant's Current Report on Form 8-K filed with the Commission on September 19, 2007.
- (3) Incorporated by reference from the Registrant's Annual Report on Form 10-K filed with the Commission for the fiscal year 2008.
- (4) Incorporated by reference from the Registrant's Proxy Statement filed with the Commission on March 1, 2005.
- (5) Incorporated by reference from the Registrant's Proxy Statement filed with the Commission on January 28, 2009.
- (6) Incorporated by reference from the Registrant's Proxy Statement filed with the Commission on January 26, 2004.
- (7) Incorporated by reference from the Registrant's Current Report on Form 8-K filed with the Commission on May 1, 2018.
- (8) Incorporated by reference from the Registrant's Current Report on Form 8-K filed with the Commission on April 2, 2012.

**Item 16. Form 10-K Summary**

None.

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**SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

INNOVATIVE SOLUTIONS AND SUPPORT, INC.

By: /s/ Geoffrey S. M. Hedrick  
**Geoffrey S. M. Hedrick**  
*Chairman & Chief Executive Officer*

Dated: December 21, 2018

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Geoffrey S. M. Hedrick <b>Geoffrey S. M. Hedrick</b>	Chairman & Chief Executive Officer	December 21, 2018
/s/ Shahram Askarpour <b>Shahram Askarpour</b>	President	December 21, 2018
/s/ Relland Winand <b>Relland Winand</b>	Chief Financial Officer (Principal Accounting Officer)	December 21, 2018
/s/ Glen R. Bressner <b>Glen R. Bressner</b>	Director	December 21, 2018
/s/ Winston J. Churchill <b>Winston J. Churchill</b>	Director	December 21, 2018
/s/ Robert E. Mittelstaedt, Jr. <b>Robert E. Mittelstaedt, Jr.</b>	Director	December 21, 2018
/s/ Robert H. Rau <b>Robert H. Rau</b>	Director	December 21, 2018
/s/ Roger A. Carolin <b>Roger A. Carolin</b>	Director	December 21, 2018