HESKA CORP
Form 10-K
March 07, 2019

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-K
(Mark One)
x ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2018
OR
o TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from _____ to _____
Commission file number: 0-22427
HESKA CORPORATION
(Exact name of registrant as specified in its charter)

Delaware	77-0192527
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)
3760 Rocky Mountain Avenue Loveland, Colorado	80538
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: (970) 493-7272
Securities registered pursuant to Section 12(b) of the Act:

Public Common Stock, $.01 par value	The Nasdaq Stock Market LLC
(Title of Class)	(Name of Each Exchange on Which Registered)

Securities registered pursuant to Section 12(g) of the Act: None
Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes o No x

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

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 x No o

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 x No o

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) 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. o

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," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer o	Accelerated filer x
Non-accelerated filer o	Smaller Reporting Company ¨
	Emerging Growth Company ¨

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. o

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

The aggregate market value of voting common stock held by non-affiliates of the Registrant was approximately $699,198,491 as of June 30, 2018 based upon the closing price on the Nasdaq Capital Market reported for such date. This calculation does not reflect a determination that certain persons are affiliates of the Registrant for any other purpose.

7,742,105 shares of the Registrant's Public Common Stock, $.01 par value, were outstanding at March 6, 2019.

DOCUMENTS INCORPORATED BY REFERENCE

Items 10, 11, 12, 13 and 14 of Part III incorporate by reference information from the Registrant's definitive proxy statement to be filed with the Securities and Exchange Commission in connection with the solicitation of proxies for the Registrant's 2019 Annual Meeting of Stockholders.

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HESKA, ALLERCEPT, HEMATRUE, SOLO STEP, Element DC, Element HT5, Element POC, Element i, Element COAG and Element DC5x are registered trademarks and SonoSlate is a trademark of Heska Corporation. DRI-CHEM is a registered trademark of FUJIFILM Corporation. TRI-HEART is a registered trademark of Intervet Inc., d/b/a Merck Animal Health, formerly known as Schering-Plough Animal Health Corporation ("Merck Animal Health"), which is a unit of Merck & Co., Inc., in the United States and is a registered trademark of Heska Corporation in other countries. This annual report on Form 10-K also refers to trademarks and trade names of other organizations.

Statement Regarding Forward Looking Statements

This Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). For this purpose, any statements contained herein that are not statements of current or historical fact may be deemed to be forward-looking statements. Without limiting the foregoing, words such as "anticipates," "expects," "intends," "plans," "believes," "seeks," "estimates," variations of such words and similar expressions are intended to identify such forward-looking statements. These statements are not guarantees of future performance and are subject to certain risks, uncertainties and assumptions that are difficult to predict. Therefore, actual results could differ materially from those expressed or forecasted in any such forward-looking statements as a result of certain factors, including those set forth in "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations," "Business" and elsewhere in this Form 10-K. Readers are cautioned not to place undue reliance on these forward-looking statements.

Although we believe that expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. We expressly disclaim any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements contained herein to reflect the passage of time, any change in our expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based, except as otherwise required by applicable securities laws. These forward-looking statements apply only as of the date of this Form 10-K or for statements incorporated by reference from our 2019 proxy statement on Schedule 14A, as of the date of the Schedule 14A.

PART I

Item 1. Business

Unless we state otherwise or the context otherwise requires, the terms "Heska," "we," "our," "us" and the "Company" refer to Heska Corporation and its consolidated subsidiaries.

Overview

We sell veterinary and animal health diagnostic and specialty products. Our offerings include Point of Care diagnostic laboratory instruments and consumables; digital diagnostic imaging instruments, software and services; vaccines; local and cloud-based data services; allergy testing and immunotherapy; and single-use offerings such as in-clinic diagnostic tests and heartworm preventive products. Our core focus is on supporting veterinarians in the canine and feline healthcare space.

On February 24, 2013, the Company acquired a 54.6% interest in Cuattro Veterinary USA, LLC (the "Acquisition"), which was subsequently renamed Heska Imaging US, LLC ("U.S. Imaging") and marked our entry into the veterinary imaging market in the United States ("U.S."). The remaining minority position (45.4%) in U.S. Imaging was subject to purchase by Heska under performance-based puts and calls following the audit of our financial statements for 2016 and 2017. With the required performance criteria met in fiscal year 2016, we considered notice given on March 3, 2017 that the put option was being exercised and on May 31, 2017, we delivered $13.8 million in cash to obtain the remaining minority position in U.S. Imaging.

On May 31, 2016, the Company closed a transaction (the "Merger") to acquire Cuattro Veterinary, LLC ("Cuattro International"), which was subsequently renamed Heska Imaging International, LLC ("International Imaging") and marked our entry into the international veterinary imaging market. Financial information broken out by geographic region is incorporated by reference to Note 16 to the financial statements included

under Item 8 of this annual report on Form 10-K. As of the closing date of the Merger, the Company's interest in both International Imaging and U.S. Imaging was transferred to the Company's wholly-owned subsidiary, Heska Imaging Global, LLC ("Global Imaging").

On June 1, 2017, the Company consolidated its assets and liabilities in the U.S. Imaging and International Imaging companies into Global Imaging, which was re-named Heska Imaging, LLC ("Heska Imaging").

On June 13, 2017, the Company incorporated Heska Canada Limited in the province of British Columbia, in order to expand our footprint into more of the North American veterinary market.

On July 26, 2018, the Company incorporated Heska Australia Pty Ltd in the state of Victoria, in order to expand our footprint into the Australian veterinary market.

On February 26, 2019, the Company acquired Optomed. Optomed designs, develops, manufactures and distributes veterinary imaging solutions, with a primary focus and expertise in endoscopy technologies. Optomed also has a direct sales presence in France.

We were founded as Paravax, Inc. and incorporated in California in 1988. We changed our name to Heska Corporation in 1995, reincorporated in Delaware and completed our initial public offering in 1997.

Our principal executive offices are located at 3760 Rocky Mountain Avenue, Loveland, Colorado 80538. Our telephone number is (970) 493-7272 and our Internet address is www.heska.com.

Products and Services

Our business is composed of two reportable segments, Core Companion Animal ("CCA") and Other Vaccines and Pharmaceuticals ("OVP"). The CCA segment includes, primarily for canine and feline use, Point of Care laboratory instruments and consumables; digital imaging diagnostic instruments, software and services; local and cloud-based data services; allergy testing and immunotherapy; and single use offerings such as in-clinic diagnostic tests and heartworm preventive products. The CCA segment represents approximately 85% of our revenue. The OVP segment includes private label vaccine and pharmaceutical production, primarily for cattle but also for other species including equine, porcine, avian, feline and canine. OVP products are sold by third parties under third party labels. OVP represents approximately 15% of our revenue.

Core Companion Animal Segment

We presently sell a variety of companion animal health products and services, among the most significant of which are the following:

Point of Care Laboratory and Imaging Diagnostics

We offer a line of veterinary Point of Care (stationary and portable) laboratory diagnostic instruments for testing blood and other biological materials, for use in diagnostic imaging and for other uses, some of which are described below. We also market and sell consumable supplies and services for these instruments. Our line of veterinary instruments includes the following:

Blood Chemistry. Element DC® Veterinary Chemistry Analyzer (the "Element DC") is an easy-to-use, robust system that uses dry slide technology for blood chemistry and electrolyte analysis and has the ability to run 22 tests at a time with a single blood sample. Test slides are available as both pre-packaged panels as well as individual slides. The DRI-CHEM® 7000 Veterinary Chemistry Analyzer (the "DRI-CHEM 7000") is a complementary chemistry offering, co-branded with FUJIFILM Corporation ("FUJIFILM"), with higher

throughput, multiple patient staging and a "STAT" feature which provides emergency sample flexibility in critical cases. The Element DC5x® Veterinary Chemistry Analyzer (the "Element DC5x"), launched during 2018, delivers the highest throughput of the solutions, simultaneously staging five patient samples and was designed to replace the DRI-CHEM 7000. The Element DC, DRI-CHEM 7000 and Element DC5x utilize the same test slides. We are supplied with the Element DC, DRI-CHEM 7000 and Element DC5x, as well as the affiliated test slides and supplies, under a contractual agreement with FUJIFILM.

Hematology. The Element HT5® Hematology Analyzer (the "HT5") is a true 5-part hematology analyzer which measures key parameters such as white blood cell count, red blood cell count, platelet count and hemoglobin levels in animals. The HT5 can generate results in less than a minute with 15 µL of sample. We are supplied with the HT5 and affiliated reagents and supplies under a contractual agreement with Shenzen Mindray Bio-Medical Electronics Co., Ltd. ("Mindray"). The HemaTrue® Veterinary Hematology Analyzer (the "HemaTrue") is an easy-to-use and reliable 3-part hematology blood analyzer that we continue to offer to our customers. We are supplied with the HemaTrue instruments and affiliated reagents and supplies for the HemaTrue under a contractual agreement with Boule Medical AB ("Boule").

Blood Gases and Electrolytes. The Element POC® Blood Gas & Electrolyte Analyzer (the "EPOC") is a handheld, wireless analyzer which delivers rapid blood gas, electrolyte, metabolite and basic blood chemistry testing. The EPOC features test cards with room temperature storage which can offer results with less than 100 µL of sample as well as WiFi and Bluetooth connectivity. The EPOC and affiliated consumables and supplies are supplied to us under a contractual agreement with Siemens Healthcare Diagnostics, Inc., a unit of Siemens Healthineers AG.

Immunodiagnostics. The Element i® Immunodiagnostic Analyzer (the "Element i") utilizes fluorescence immunoassay technology to ensure sensitivity for accurate in-clinic detection of Total T4, TSH, Cortisol and Bile Acids. The Element i is a benchtop technology with a test time of 10 minutes or less per analyte. Along with confidence in results, this measurement principle allows for simplified reagents and testing protocols. Element i units are supplied to us under a contractual agreement with FUJIFILM.

Coagulation. The Element COAG® Veterinary Analyzer (the "Element COAG") is a compact benchtop, cartridge-based system used for coagulation and specialty testing. There are five test cartridges offered: the PT/aPTT Coag Combo, Equine Fibrinogen, Canine Fibrinogen, Canine DEA 1 Blood Typing and Feline A and B Blood Typing. Each of these cartridges perform accurate, automated analysis using less than 100 µL of sample in just minutes. We are supplied with the Element COAG and affiliated cartridges and supplies under a contractual agreement with Zoetis US, LLC, a unit of Zoetis Inc.

IV Pumps. The VET/IV 2.2™ infusion pump is a compact, affordable IV pump that allows veterinarians to easily provide regulated infusion of fluids for their patients.

Digital Radiography. We sell hardware, including digital radiography detectors, acquisition workstation equipment, positioning aides, viewing computers, radiographic generators, anti-scatter grids and other accessories for use in digital radiography imaging diagnostics. With this hardware, we also provide licensed embedded software, support, data hosting, warranty and other services. CloudDR™ solutions combine flat panel digital radiography detectors, acquisition workstations and acquisition software to produce, review, archive and share radiographic image studies, primarily in fixed location companion animal veterinary settings.

We also sell mobile digital radiography products, primarily for equine use, such as the Uno 6™, a full powered, portable digital radiography generator integrated with an embedded touchscreen acquisition and review function, based upon a patented design of Cuattro, LLC ("Cuattro"). In addition to Uno 6™, we sell the Slate HUB™, a mobile digital radiography acquisition console that is capable of operating as a general

full field wireless x-ray imager and as the control and display for DentiSlate™, a large format intraoral dental sensor, and SonoSlate ™, a wireless ultrasound.

Ultrasound Systems. Our ultrasound products, including affiliated probes and peripherals, are provided to us by Esaote USA ("Esaote"). We sell several different ultrasound products with varying features and corresponding price points, all under Esaote's trade names or logos.

Diagnostic Data and Support. Cloudbank™ is an automatic, secure, web-based image storage solution designed to interface with the imaging products we sell. ViewCloud™ is a Picture Archival and Communications System (PACS) for Cloudbank™ for web or local viewing, reporting, planning and email sharing of studies on Internet devices, including personal computers, tablet devices and smartphones. SupportCloud™ is a support package including call center voice and remote diagnostics, recovery and other services, such as the provision of warranty-related loaner units, to support customers. Access and operation between our imaging devices, Cloudbank™ and SupportCloud™ is supported by the acquisition software used in the equipment we sell.

With the acquisition of U.S. Imaging, we entered into supply and license agreements with Cuattro to secure exclusive rights to, among other things, proprietary acquisition software, Cloudbank™, ViewCloud™, research and development and other benefits. Cuattro provided us with much of the hardware, software, data hosting and other services for our digital radiography solutions under these exclusive contractual arrangements. Cuattro is 100% owned by our President and Chief Executive Officer, Kevin S. Wilson, his spouse, Shawna M. Wilson ("Mrs. Wilson") and by trusts for the benefit of their children and family. On December 21, 2018, we closed on the purchase of the acquisition software previously provided by Cuattro in the amount of $8.2 million and terminated the supply and license agreement. Related party and acquisition disclosure incorporated by reference to Note 3 to the financial statements included under Item 8 of this annual report on Form 10-K.

Point of Care Heartworm Diagnostic Tests

Heartworm infections of dogs and cats are caused by the parasite Dirofilaria immitis. This parasitic worm is transmitted in larval form to dogs and cats through the bite of an infected mosquito. Larvae develop into adult worms that live in the pulmonary arteries and heart of the host, where they can cause serious cardiovascular, pulmonary, liver and kidney disease. Our canine and feline heartworm diagnostic tests use monoclonal antibodies or a recombinant heartworm antigen, respectively, to detect heartworm antigens or antibodies circulating in the blood of an infected animal.

We market and sell heartworm diagnostic tests for both canine and feline species. Solo Step® CH for dogs and Solo Step® FH for cats are available in point-of-care, single use formats that can be used by veterinarians on site. We obtain Solo Step® CH and Solo Step® FH from Quidel Corporation ("Quidel").

Heartworm Preventive Products

We have an agreement with Merck Animal Health, a unit of Merck & Co., Inc., granting Merck Animal Health the exclusive distribution and marketing rights for our canine heartworm prevention product, Tri-Heart® Plus Chewable Tablets, ultimately sold to or through veterinarians in the U.S. and Canada. Tri-Heart Plus Chewable Tablets (ivermectin/pyrantel) are indicated for use as a monthly preventive treatment of canine heartworm infection and for treatment and control of ascarid and hookworm infections. We manufacture Tri-Heart Plus Chewable Tablets at our Des Moines, Iowa production facility.

Allergy Products and Services

Allergy is common in companion animals. Clinical symptoms of allergy are variable, but are often manifested as persistent and serious skin disease in dogs and cats. Clinical management of allergic disease is problematic, as there are a large number of allergens that may give rise to these conditions. Although skin testing is often regarded as the most accurate diagnostic procedure, such tests can be painful, subjective and inconvenient. The effectiveness of the immunotherapy that is prescribed to treat symptoms of allergic disease is inherently limited by inaccuracies in the diagnostic process.

We believe that our ALLERCEPT® Definitive Allergen Panels provide the most accurate determination of which we are aware of the specific allergens to which an animal, such as a dog, cat or horse, is reacting. The panels use a highly specific recombinant version of the natural IgE receptor to test the serum of potentially allergic animals for IgE directed against a panel of known allergens. A typical test panel consists primarily of various pollen, grass, mold, insect and mite allergens. The test results serve as the basis for prescription ALLERCEPT® Therapy Shots and ALLERCEPT® Therapy Drops. We operate veterinary laboratories in Loveland, Colorado and Fribourg, Switzerland which both offer blood testing using our ALLERCEPT® Definitive Allergen Panels.

We sell kits to conduct blood testing using our ALLERCEPT® Definitive Allergen Panels to third party veterinary diagnostic laboratories outside of the U.S. We also sell products to screen for the presence of allergen-specific IgE to these customers - we sell kits to conduct preliminary blood testing using products based on our ALLERCEPT® Definitive Allergen Panels. Animals testing positive for allergen-specific IgE using these screening tests are candidates for further evaluation using our ALLERCEPT® Definitive Allergen Panels.

Veterinarians who use our ALLERCEPT® Definitive Allergen Panels often purchase our ALLERCEPT® Therapy Shots or ALLERCEPT® Therapy Drops. These prescription immunotherapy treatment sets are formulated specifically for each allergic animal and contain only the allergens to which the animal has significant levels of IgE antibodies. The prescription formulations are administered in a series of subcutaneous injections (Shots) or by daily sublingual (under the tongue) administration (Drops), with doses increasing over several months, to ameliorate the allergic condition of the animal. Immunotherapy is generally continued for an extended time. We offer canine, feline and equine subcutaneous and sublingual immunotherapy treatment products. We believe our ALLERCEPT® Therapy Drops offer a convenient alternative to subcutaneous injection, thereby increasing the likelihood of pet owner compliance.

Other Vaccines and Pharmaceuticals Segment

We developed a line of bovine vaccines that are licensed by the U.S. Department of Agriculture ("USDA"). Historically, the largest distributor of these vaccines was Agri Laboratories, Ltd. ("AgriLabs"), who sold these vaccines primarily under the Titanium® and MasterGuard® brands. In November 2013, AgriLabs assigned the long-term agreement with us related to these vaccines, and the agreement was assumed by, Eli Lilly and Company ("Eli Lilly") acting through Elanco. In January 2015, we signed a long-term Master Supply Agreement related to these vaccines with Eli Lilly acting through Elanco, thereby terminating the AgriLabs agreement previously assumed by Eli Lilly in November 2013.

We manufacture biological and pharmaceutical products for a number of other animal health companies. We manufacture products for animals other than cattle including horses, pigs, chickens, cats and dogs. Our offerings range from providing complete turnkey services which include research, licensing, production, labeling and packaging of products to providing any one of these services as needed by our customers as well as validation support and distribution services.

Marketing, Sales and Customer Support

We currently market our CCA products in the U.S. to veterinarians through an outside field organization, a telephone sales force and independent third party distributors, as well as through trade shows, print advertising and through other distribution relationships, such as Merck Animal Health in the case of our heartworm preventive. As of December 31, 2018, our customer facing sales, installed base support and utilization organization consisted of 97 individuals in various parts of the U.S.

Veterinarians may obtain our products directly from us or indirectly through others. All of our CCA products ultimately are sold primarily to or through veterinarians. The acceptance of our products by veterinarians is critical to our success.

We have a staff dedicated to customer and product support in our CCA segment including veterinarians, technical support specialists and service technicians. Individuals from our product development group may also be used as a resource in responding to certain product inquiries.

Internationally, we market our CCA products to veterinarians primarily through third party veterinary diagnostic laboratories and independent third party distributors.

All OVP products are marketed and sold by third parties under third party labels.

We grant third parties rights to our intellectual property as well as our products, with our compensation often taking the form of royalties and/or milestone payments.

Manufacturing

The majority of our revenue is from proprietary products manufactured by third parties. Third parties manufacture our veterinary instruments, including affiliated consumables and supplies, as well as other products including key components of our heartworm point-of-care diagnostic tests. We manufacture and supply Quidel with certain critical raw materials and perform the final packaging operations for these products.

Our facility in Des Moines, Iowa is a USDA, Food and Drug Administration ("FDA") and Drug Enforcement Agency ("DEA") licensed biological and pharmaceutical manufacturing facility. This facility currently has the capacity to manufacture more than 50 million doses of vaccine each year. We expect that we will, for the foreseeable future, manufacture most, or all of our pharmaceutical and biological products at this facility, as well as most, or all, of our recombinant proteins and other proprietary reagents for our diagnostic tests. We currently manufacture our canine heartworm prevention product, our allergy treatment products and all our OVP segment products at this facility. The OVP segment's customers purchase products in both finished and bulk format, and we perform all phases of manufacturing, including growth of the active bacterial and viral agents, sterile filling, lyophilization and packaging at this facility. We manufacture our various allergy products at our Des Moines facility, our Loveland facility and our Fribourg facility. We believe the raw materials for most of the products we manufacture are readily available from more than one source.

Product Development

We are committed to providing innovative products to address the health needs of companion animals. We may obtain such products from external sources, external collaboration or internal research and development.

We are committed to identifying external product opportunities and creating business and technical collaborations that lead to high value veterinary products. We believe that our active participation in scientific

networks and our reputation for investing in research enhances our ability to acquire external product opportunities. We have collaborated, and intend to continue to do so, with a number of companies and universities. Examples of such collaborations include:

- Quidel for the development of SOLO STEP CH Cassettes and SOLO STEP FH Cassettes;

- Mindray for the development of veterinary applications for the HT5 Veterinary Hematology Analyzer and associated reagents; and

- FUJIFILM for the development of veterinary applications for the Element DC and Element DC5x Veterinary Chemistry Analyzers and associated slides and supplies.

Internal research and development is managed on a case-by-case basis. We employ individuals with expertise in various applicable areas and will form multidisciplinary product-associated teams as appropriate.

Intellectual Property

We believe that patents, trademarks, copyrights and other proprietary rights represent opportunities to grow our business and maintain or enhance our competitive position. We also rely upon trade secrets, know-how, continuing technological innovations and licensing opportunities to develop and maintain our competitive position. The proprietary technologies of our OVP segment are primarily protected through trade secret protection of, for example, our manufacturing processes in this area.

We actively seek patent protection both in the U.S. and abroad. Our issued patent portfolios primarily relate to heartworm control, flea control, allergy, infectious disease vaccines, diagnostic and detection tests, immunomodulators, instrumentation, nutrition, pain control and vaccine delivery technologies. As of December 31, 2018, we owned, co-owned or had rights to 44 issued U.S. patents expiring at various dates from January 2019 to June 2025 and had no pending U.S. patent applications. Our corresponding foreign patent portfolio as of December 31, 2018 included 62 issued patents in various foreign countries expiring at various dates from January 2019 to August 2024 and had no pending applications.

We also have obtained exclusive and non-exclusive licenses for numerous other patents held by academic institutions and for profit companies.

Seasonality

We do not experience meaningful seasonality.

Government Regulation

Although the majority of our revenue is from the sale of unregulated items, many of our products or products that we may develop are, or may be, subject to extensive regulation by governmental authorities in the U.S., including the USDA and the FDA and by similar agencies in other countries. These regulations govern, among other things, the development, testing, manufacturing, labeling, storage, pre-market approval, advertising, promotion, sale and distribution of our products. Satisfaction of these requirements can take several years to achieve and the time needed to satisfy them may vary substantially, based on the type, complexity and novelty of the product. Any product that we develop must receive all relevant regulatory approval or clearances, if required, before it may be marketed in a particular country. The following summarizes the major U.S. government agencies that regulate animal health products:

USDA. Vaccines and certain single use, point-of-care diagnostics are considered veterinary biologics and are therefore regulated by the Center for Veterinary Biologics, or CVB, of the USDA. In contrast to vaccines, single use, point-of-care diagnostics can typically be licensed by the USDA in about two years, at considerably less cost. However, vaccines or diagnostics that use innovative materials, such as those resulting from recombinant DNA technology, usually require additional time to license. The USDA licensing process involves the submission of several data packages. These packages include information on how the product will be manufactured, information on the efficacy and safety of the product in laboratory and target animal studies and information on performance of the product in field conditions.

- FDA. Pharmaceutical products, which typically include synthetic compounds, are approved and monitored by the Center for Veterinary Medicine of the FDA. Under the Federal Food, Drug and Cosmetic Act, the same statutory standard for FDA approval applies to both human and animal drugs: demonstrated safety, efficacy and compliance with FDA manufacturing standards. However, unlike human drugs, neither preclinical studies nor a sequential phase system of studies are required. Rather, for animal drugs, studies for safety and efficacy may be conducted immediately in the species for which the drug is intended. Thus, there is no required phased evaluation of drug performance, and the Center for Veterinary Medicine will review data at appropriate times in the drug development process. The time and cost for developing companion animal drugs may be significantly less than for drugs for livestock animals, which generally have enhanced standards designed to ensure safety in the food chain.

- EPA. Products that are applied topically to animals or to premises to control external parasites are regulated by the Environmental Protection Agency, or EPA.

After we have received regulatory licensing or approval for our products, numerous regulatory requirements typically apply. Among the conditions for certain regulatory approvals is the requirement that our manufacturing facilities or those of our third party manufacturers conform to current Good Manufacturing Practices or other manufacturing regulations, which include requirements relating to quality control and quality assurance as well as maintenance of records and documentation. The USDA, FDA and foreign regulatory authorities strictly enforce manufacturing regulatory requirements through periodic inspections and/or reports.

A number of our animal health products are not regulated. For example, certain products such as our ALLERCEPT panels are not regulated by either the USDA or FDA. Similarly, none of our veterinary instruments requires regulatory approval to be marketed and sold in the U.S.

We have pursued CE Marking for imaging equipment and regulatory approval outside the U.S. based on market demographics of foreign countries. For marketing outside the U.S., we are subject to foreign regulatory requirements governing regulatory licensing and approval for many of our products. Licensing and approval by comparable regulatory authorities of foreign countries must be obtained before we can market products in those countries. Product licensing approval processes and requirements vary from country to country and the time required for such approvals may differ substantially from that required in the U.S. We cannot be certain that approval of any of our products in one country will result in approvals in any other country.

To date, we or our distributors have sought regulatory approval for certain of our products from the Canadian Center for Veterinary Biologics, or CCVB (Canada); the Japanese Ministry of Agriculture, Forestry and Fisheries, or MAFF (Japan); the Australian Department of Agriculture, Fisheries and Forestry, or ADAFF (Australia); the Republic of South Africa Department of Agriculture, or RSADA (South Africa); the

Agriculture, Fisheries and Conservation Department, or ADCD (Hong Kong); the Macau Animal Health Division of Animal Control and Inspection, or IACM (Macau); and from the relevant regulatory authorities in certain other countries requiring such approval.

CCA products previously discussed which have received regulatory approval in the U.S. and/or elsewhere are summarized below:

Products	Country	Regulated	Agency	Status
ALLERCEPT Allergy Treatment Sets	U.S.	Yes	USDA	Licensed
	Canada	Yes	CCVB	Licensed
	U.S.	Yes	USDA	Licensed
	EU	No-in most countries		
SOLO STEP CH	Canada	Yes	CCVB	Licensed
	Japan	Yes	MAFF	Licensed
	Australia	Yes	ADAFF	Licensed
SOLO STEP CH Batch Test Strips	U.S.	Yes	USDA	Licensed
	Canada	Yes	CCVB	Licensed
	U.S.	Yes	USDA	Licensed
SOLO STEP FH	Canada	Yes	CCVB	Licensed
	Australia	Yes	ADAFF	Licensed
	U.S.	Yes	FDA	Licensed
	Japan	Yes	MAFF	Licensed
TRI-HEART Plus Heartworm Preventive	South Korea	Yes	NVRQS	Licensed
	Hong Kong	Yes	AFCD	Licensed
	Macau	Yes	IACM	Licensed

Customer Concentration

The information concerning our significant customers included in our Risk Factors section of this annual report under the caption “The loss of significant customers who, for example, are historically large purchasers or who are considered leaders in their field could damage our business and financial results” is incorporated herein by reference thereto.

Competition

Our market is intensely competitive. Our competitors include independent animal health companies and major pharmaceutical companies that have animal health divisions. We also compete with independent, third party distributors, including distributors who sell products under their own private labels. In the Point of Care diagnostic testing market, our major competitors include IDEXX Laboratories, Inc. ("IDEXX") and Zoetis Inc. ("Zoetis"). The products manufactured by our OVP segment for sale by third parties compete with similar products offered by a number of other companies, some of which have substantially greater financial, technical, research and other resources than us and may have more established marketing, sales, distribution and service organizations than our OVP segment's customers. Companies with a significant presence in the animal health market such as Bayer AG, CEVA Santé Animale, Eli Lilly, Merck, Sanofi, Vétoquinol S.A., Virbac S.A. and Zoetis may be marketing or developing products that compete with our products or would compete with them if successfully developed. These and other competitors and potential competitors may have substantially greater financial, technical, research and other resources and larger, more established marketing, sales, distribution and service organizations than we do. Our competitors may offer broader product lines and have greater name recognition than we do.

Environmental Regulation

In connection with our product development activities and manufacturing of our biological, pharmaceutical, diagnostic and detection products, we are subject to federal, state and local laws, rules, regulations and policies governing the use, generation, manufacture, storage, handling and disposal of certain materials, biological specimens and wastes. Although we believe that we have complied with these laws, regulations and policies in all material respects and have not been required to take any significant action to correct any noncompliance, we may be required to incur significant costs to comply with environmental and health and safety regulations in the future. Although we believe that our safety procedures for handling and disposing of such materials comply with the standards prescribed by state and federal regulations, the risk of accidental contamination or injury from these materials cannot be eliminated. In the event of such an accident, we could be held liable for any damages that result and any such liability could exceed our resources.

Employees

As of December 31, 2018 we and our subsidiaries employed 347 people.

Where You Can Find Additional Information

Our principal executive offices are located at 3760 Rocky Mountain Avenue, Loveland, Colorado 80538. Our telephone number is 970-493-7272 and our Internet address is www.heska.com. References to our website in this Annual Report on Form 10-K are inactive textual references only and the content of our website should not be deemed incorporated by reference for any purpose.

Because we believe it provides useful information in a cost-effective manner to interested investors, we make available free of charge, via a link on our website, our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practical after we electronically file such material with, or furnish it to, the Securities and Exchange Commission (the "SEC").

In addition, you may also review and download a copy of this annual report on Form 10-K, including any exhibits and any schedules filed therewith, and our other periodic and current reports, proxy and information statements, and other information that we file with the SEC, without charge, by visiting the SEC's website (http://www.sec.gov).

Executive Officers of the Registrant
Our executive officers and their ages as of March 7, 2019 are as follows:

Name	Age	Position
Kevin S. Wilson	46	Chief Executive Officer and President
Catherine Grassman	43	Vice President, Chief Accounting Officer and Controller
Jason A. Napolitano	50	Chief Operating Officer and Chief Strategist
Nancy Wisnewski, Ph.D.	56	Executive Vice President, Diagnostic Operations and Product Development
Steven M. Eyl	53	Executive Vice President, Global Sales and Marketing
Steven M. Asakowicz	53	Executive Vice President, Companion Animal Health Sales
Rodney A. Lippincott	45	Executive Vice President, Companion Animal Health Sales
Jason D. Aroesty	44	Executive Vice President, International Diagnostics

Kevin S. Wilson was appointed President and Chief Executive Officer effective March 31, 2014. He previously served as our President and Chief Operating Officer from February 2013. Mr. Wilson became a member of our Board of Directors in May 2014. Mr. Wilson is a founder, member and officer of Cuattro, LLC. Since 2008, he has been involved in developing technologies for radiographic imaging with Cuattro, LLC and as a founder of Cuattro Software, LLC, Cuattro Medical, LLC and Cuattro Veterinary, LLC. Mr. Wilson served on the board of various private, non-profit and educational organizations from 2005 to 2011. He was a founder of Sound Technologies, Inc., a diagnostic imaging company, in 1996. After Sound Technologies, Inc. was sold to VCA Antech, Inc. in 2004, Mr. Wilson served as Chief Strategy Officer for VCA Antech, Inc. until 2006. Mr. Wilson attended Saddleback College.

Catherine Grassman, CPA, was appointed Vice President and Chief Accounting Officer on December 1, 2017. Previously serving as Heska’s Corporate Controller, Ms. Grassman has been a central figure in the Company’s accounting and finance leadership since January 2017. Prior to joining Heska, Ms. Grassman was Corporate Controller of a mid-sized private-equity backed company. She also spent more than 15 years with PricewaterhouseCoopers, LLP as a senior manager in the audit practice. She is licensed in Colorado as a Certified Public Accountant and possesses a Masters of Accountancy and a Bachelors of Business Administration from Stetson University.

Jason A. Napolitano was appointed Chief Strategist in September 2016 and Chief Operating Officer in October 2015. He previously served as Executive Vice President and Chief Financial Officer from May 2002 to September 2016 and Secretary from February 2009 to March 2019 and from May 2002 to December 2006. Prior to joining us formally, he was a financial consultant. From 1990 to 2001, Mr. Napolitano held various positions at Credit Suisse First Boston, an investment bank, including Vice President in health care investment banking and Director in mergers and acquisitions. He holds a BS degree from Yale University.

Nancy Wisnewski, Ph.D. was appointed Executive Vice President, Diagnostic Operations and Product Development in September 2016. She previously served as Executive Vice President, Product Development and Customer Service from April 2011 to September 2016 and as Vice President, Product Development and Technical Customer Service from December 2006 to April 2011. From January 2006 to November 2006, Dr. Wisnewski was Vice President, Research and Development. Dr. Wisnewski held various positions in Heska's Research and Development organization between 1993 and 2005. She holds a Ph.D. in Parasitology/Biochemistry from the University of Notre Dame and a BS in Biology from Lafayette College.

Steven M. Eyl was appointed Executive Vice President, Global Sales and Marketing in September 2016. He previously served as our Executive Vice President, Commercial Operations from May 2013 to September 2016. Mr. Eyl was a principal of Eyl Business Services, a consulting firm, from January 2012 to May 2013. He was President of Sound Technologies, Inc. ("Sound") from 2000 to 2011, including after Sound's acquisition by VCA Antech, Inc. in 2004. Mr. Eyl has an extensive background in medical technology sales. He is a graduate of Indiana University.
Steven M. Asakowicz was appointed Executive Vice President, Companion Animal Health Sales in February 2013. From July 2011 to February 2013, he was employed by Cuattro, LLC as Vice President, Sales – U.S. Veterinary and sold exclusively on behalf of Cuattro Veterinary USA, LLC. Mr. Asakowicz previously worked as Sales Director for Sound Technologies, Inc. ("Sound") from November 2002 to June 2011, including after Sound was acquired by VCA Antech, Inc. in 2004. Prior to entering the animal health market, Mr. Asakowicz spent 3.5 years employed by Smith Micro Software, Inc. as a Sales Manager and spent 7.5 years employed by AirTouch Cellular and PacTel Cellular (currently Verizon Wireless) as a Corporate Account Executive. Mr. Asakowicz holds a BA degree from San Diego State University.
Rodney A. Lippincott was appointed Executive Vice President, Companion Animal Health Sales in February 2013. From July 2011 to February 2013, he was employed by Cuattro, LLC as Vice President, Sales – U.S. Veterinary and sold exclusively on behalf of Cuattro Veterinary USA, LLC. Mr. Lippincott held various positions including Sales Director for Sound Technologies, Inc., a unit of VCA Antech, Inc., from September 2007 to June 2011. Prior to entering the animal health market, Mr. Lippincott spent 13.5 years employed by Smith Micro Software, Inc. and held positions including U.S. and International Sales Manager and Director of Marketing. Mr. Lippincott attended Saddleback College and completed the Executive Education Marketing Management Program at Stanford University, Graduate School of Business.
Jason D. Aroesty was appointed Executive Vice President, International Diagnostics in April 2018. Mr. Aroesty worked more than 15 years in the In-Vitro Diagnostics industry, where he played key commercial leadership roles in the healthcare division at Siemens. Mr. Aroesty was based in Europe for more than 10 years, where he led multiple country organizations, eventually assuming regional responsibilities. Prior to joining Heska, he was responsible for Global Sales, Marketing and Communications for the Point of Care business. Mr. Aroesty graduated with a BS degree from Syracuse University and an MBA degree from the University of Rochester's Simon School.

Item 1A. Risk Factors

Our future operating results may vary substantially from period to period due to a number of factors, many of which are beyond our control. The following discussion highlights some of these factors and the possible impact of these factors on future results of operations. The risks and uncertainties described below are not the only ones we face. Additional risks or uncertainties not presently known to us or that we deem to be currently immaterial also may impair our business operations. If any of the following factors actually occur, our business, financial condition or results of operations could be harmed. In that case, the price of our Public Common Stock could decline and investors in our Public Common Stock could experience losses on their investment.

If the third parties who have substantial marketing rights for certain of our historical products, existing products or future products under development are not successful in marketing those products, then our sales and financial position may suffer.

We are party to an agreement with Merck Animal Health, which grants Merck Animal Health exclusive distribution and marketing rights for our canine heartworm preventive product, TRI-HEART Plus Chewable Tablets, ultimately sold to or through veterinarians in the U.S. and Canada. Historically, a significant portion

of our OVP segment's revenue has been generated from the sale of certain bovine vaccines, which have been sold primarily under the Titanium® and MasterGuard® brands. We have a supply agreement with Eli Lilly and its affiliates operating through Elanco for the production of these vaccines. Either of these marketing partners may not devote sufficient resources to marketing our products and our sales and financial position could suffer significantly as a result. Revenue from Merck & Co., Inc. ("Merck") entities, including Merck Animal Health, represented 12% of our 2018 revenue. Revenue from Eli Lilly entities, including Elanco, represented 9% of our 2018 revenue. If Merck Animal Health personnel fail to market, sell and support our heartworm preventive sufficiently or if Elanco personnel fail to market, sell and support the bovine vaccines we produce and sell to Elanco sufficiently, our sales could decline significantly. Furthermore, there may be nothing to prevent these partners from pursuing alternative technologies, products or supply arrangements, including as part of mergers, acquisitions or divestitures. For example, we believe a unit of Merck has obtained FDA approval for a canine heartworm preventive product with additional claims compared with our TRI-HEART Plus Chewable Tablets, but which we believe is not currently being marketed actively. Should Merck decide to emphasize sales and marketing efforts of this product rather than our TRI-HEART Plus Chewable Tablets or cancel our agreement regarding canine heartworm preventive distribution and marketing, our sales could decline significantly. In another example, if Elanco were to emphasize sales and marketing efforts for bovine vaccines other than those we produce or cancel our supply agreement and produce the vaccines we supply to it by itself, our sales could decline significantly. Third party marketing assistance may not be available in the future on reasonable terms, if at all. If the third parties with marketing rights for our products were to merge or go out of business, the sale and promotion of our products could be diminished.

Our Chief Executive Officer has acknowledged outside business interests which may occupy a portion of his time.

On November 26, 2018, Heska Imaging, LLC, entered into a Purchase Agreement for Certain Assets with Cuattro, LLC, pursuant to which Heska Imaging, LLC purchased certain software and related assets and terminated its existing Amended and Restated Master License Agreement and Supply Agreement with Cuattro, LLC. Heska Imaging, LLC is required to make a good faith effort to transition to a new cloud provider in a timely way however Cuattro, LLC is required to provide services until that transition happens. As discussed below, Mr. Wilson has an interest in these agreements and any time and resources devoted to monitoring and overseeing this relationship may prevent us from deploying such time and resources on more productive matters.

Mr. Wilson's employment agreements with us acknowledges that Mr. Wilson has business interests in Cuattro, LLC, Cuattro Software, LLC and Cuattro Medical, LLC which may require a portion of his time, resources and attention in his working hours. If Mr. Wilson is distracted by these or other business interests, he may not contribute as much as he otherwise would have to enhancing our business, to the detriment of our shareholder value. Mr. Wilson is the spouse of Shawna M. Wilson ("Mrs. Wilson"). Mr. Wilson, Mrs. Wilson and trusts for their children and family own a majority interest in Cuattro Medical, LLC. In addition, including equity held by Mrs. Wilson and by trusts for the benefit of Mr. and Mrs. Wilson's children and family, Mr. Wilson also owns a 100% interest in Cuattro, LLC. Cuattro, LLC owns a 100% interest in Cuattro Software, LLC.

Cuattro, LLC charged Heska Imaging $4.6 million, $17.7 million, and $14.5 million during 2018, 2017, and 2016, respectively, primarily related to digital imaging products, for which there was an underlying supply contract with minimum purchase obligations, software and services as well as other operating expenses. Heska Corporation charged Cuattro, LLC $3 thousand, $0.1 million, and $0.2 million in the years ended December 31, 2018, 2017, and 2016, respectively, primarily related to facility usage and other services.

We rely substantially on third party suppliers. The loss of products or delays in product availability from one or more third party suppliers could substantially harm our business.

To be successful, we must contract for the supply of, or manufacture ourselves, current and future products of appropriate quantity, quality and cost. Such products must be available on a timely basis and be in compliance with any regulatory requirements. Similarly, we must provide ourselves, or contract for the supply of, certain services. Such services must be provided in a timely and appropriate manner. Failure to do any of the above could substantially harm our business.

We rely on third party suppliers to manufacture those products we do not manufacture ourselves and to provide services we do not provide ourselves. Proprietary products provided by these suppliers represent a majority of our revenue. We currently rely on these suppliers for our Point of Care laboratory instruments and consumable supplies for these instruments, for our imaging products and related software and services, for key components of our point-of-care diagnostic tests as well as for the manufacture of other products.

The loss of access to products from one or more suppliers could have a significant, negative impact on our business. Major suppliers who sell us proprietary products are FUJIFILM and Shenzen Mindray Bio-Medical Electronics Co., Ltd. We often purchase products from our suppliers under agreements that are of limited duration or potentially can be terminated on an annual basis. In the case of our Point of Care laboratory instruments and our digital radiography solutions, post-termination, we are typically entitled to non-exclusive access to consumable supplies, or ongoing non-exclusive access to products and services to meet the needs of an existing customer base, respectively, for a defined period upon expiration of exclusive rights, which could subject us to competitive pressures in the period of non-exclusive access. Although we believe we will be able to maintain a supply of our major product and service offerings in the near future, there can be no assurance that our suppliers will meet their obligations under any agreements we may have in place with them or that we will be able to compel them to do so. Risks of relying on suppliers include:

- Inability to meet minimum obligations. Current agreements, or agreements we may negotiate in the future, may commit us to certain minimum purchase or other spending obligations. It is possible we will not be able to create the market demand to meet such obligations, which could create a drain on our financial resources and liquidity. Some such agreements may require minimum purchases and/or sales to maintain product rights and we may be significantly harmed if we are unable to meet such requirements and lose product rights.
- Loss of exclusivity. In the case of our Point of Care laboratory instruments, if we are entitled to non-exclusive access to consumable supplies for a defined period upon expiration of exclusive rights, we may face increased competition from a third party with similar non-exclusive access or our former supplier, which could cause us to lose customers and/or significantly decrease our margins and could significantly affect our financial results. In addition, current agreements, or agreements we may negotiate in the future, with suppliers may require us to meet minimum annual sales levels to maintain our position as the exclusive distributor of these products. We may not meet these minimum sales levels and maintain exclusivity over the distribution and sale of these products. If we are not the exclusive distributor of these products, competition may increase significantly, reducing our revenues and/or decreasing our margins.
- Changes in economics. An underlying change in the economics with a supplier, such as a large price increase or new requirement of large minimum purchase amounts, could have a significant, adverse effect on our business, particularly if we are unable to identify and implement an alternative source of supply in a timely manner.

- The loss of product rights upon expiration or termination of an existing agreement. Unless we are able to find an alternate supply of a similar product, we would not be able to continue to offer our customers the same breadth of products and our sales and operating results would likely suffer. In the case of an instrument supplier, we could also potentially suffer the loss of sales of consumable supplies, which would be significant in cases where we have built a significant installed base, further harming our sales prospects and opportunities. Even if we were able to find an alternate supply for a product to which we lost rights, we would likely face increased competition from the product whose rights we lost being marketed by a third party or the former supplier and it may take us additional time and expense to gain the necessary approvals and launch an alternative product.
- High switching costs. In our Point of Care laboratory instrument products, we could face significant competition and lose all or some of the consumable revenues from the installed base of those instruments if we were to switch to a competitive instrument. If we need to change to other commercial manufacturing contractors for certain of our regulated products, additional regulatory licenses or approvals generally must be obtained for these contractors prior to our use. This would require new testing and compliance inspections prior to sale, thus resulting in potential delays. Any new manufacturer would have to be educated in, or develop, substantially equivalent processes necessary for the production of our products. We likely would have to train our sales force, distribution network employees and customer support organization on the new product and spend significant funds marketing the new product to our customer base.
- The involuntary or voluntary discontinuation of a product line. Unless we are able to find an alternate supply of a similar product in this or similar circumstances with any product, we would not be able to continue to offer our customers the same breadth of products and our sales would likely suffer. Even if we are able to identify an alternate supply, it may take us additional time and expense to gain the necessary approvals and launch an alternative product, especially if the product is discontinued unexpectedly.
- Inconsistent or inadequate quality control. We may not be able to control or adequately monitor the quality of products we receive from our suppliers. Poor quality items could damage our reputation with our customers.
- Limited capacity or ability to scale capacity. If market demand for our products increases suddenly, our current suppliers might not be able to fulfill our commercial needs, which would require us to seek new manufacturing arrangements and may result in substantial delays in meeting market demand. If we consistently generate more demand for a product than a given supplier is capable of handling, it could lead to large backorders and potentially lost sales to competitive products that are readily available. This could require us to seek or fund new sources of supply, which may be difficult to find or may require terms that are less advantageous if available at all.
- Regulatory risk. Our manufacturing facility and those of some of our third party suppliers are subject to ongoing periodic unannounced inspection by regulatory authorities, including the FDA, USDA and other federal, state and foreign agencies for compliance with strictly enforced Good Manufacturing Practices, regulations and similar foreign standards. We do not have control over our suppliers' compliance with these regulations and standards. Regulatory violations could potentially lead to interruptions in supply that could cause us to lose sales to readily available competitive products. If one of our suppliers is unable to provide a raw material or finished product due to regulatory issues, it could have a material adverse financial impact on our business and could expose us to legal action if we are unable to perform on contracts to our customers involving related products.

- Developmental delays. We may experience delays in the scale-up quantities needed for product development that could delay regulatory submissions and commercialization of our products in development, causing us to miss key opportunities.
- Limited geographic rights. We typically do not have global geographic rights to products supplied by third parties. If we were to determine a market opportunity in a geography where we did not have distribution rights and were unable to obtain such rights from the supplier, it might hamper our ability to succeed in such geography and our sales and profits would be lower than they otherwise would have been.
- Limited intellectual property rights. We typically do not have intellectual property rights, or may have to share intellectual property rights, to the products supplied by third parties and any improvements to the manufacturing processes or new manufacturing processes for these products.
- Changes to U.S. tariff and import/export regulations. Changes to U.S. trade policies, treaties and tariffs could have a material adverse effect on global trade. These changes could result in increased costs of goods imported into the U.S. for the Company and our third party suppliers. Our third party suppliers may limit their trade with companies in the U.S., including us.

Potential problems with suppliers such as those discussed above could substantially decrease sales, lead to higher costs and/or damage our reputation with our customers due to factors such as poor quality goods or delays in order fulfillment, resulting in our being unable to sell our products effectively and substantially harming our business.

We depend on key personnel for our future success. If we lose our key personnel or are unable to attract and retain additional personnel, we may be unable to achieve our goals.

Our future success is substantially dependent on the efforts of our senior management and other key personnel, including our Chief Executive Officer and President, Kevin Wilson. The loss of the services of members of our senior management or other key personnel may significantly delay or prevent the achievement of our business objectives. Although we have employment agreements with many of these individuals, all are at-will employees, which means that either the employee or Heska may terminate employment at any time without prior notice. If we lose the services of, or fail to recruit, key personnel, the growth of our business could be substantially impaired. We do not maintain key person life insurance for any of our senior management or key personnel.

The loss of significant customers who, for example, are historically large purchasers or who are considered leaders in their field could damage our business and financial results.

In our CCA Segment, revenue from Butler Animal Health Supply, LLC d/b/a Henry Schein Animal Health ("Henry Schein") represented approximately 15%, 13% and 13% of our consolidated revenue for the years ended December 31, 2018, 2017 and 2016, respectively. Revenue from Merck entities, including Merck Animal Health, represented approximately 12%, 12% and 11% of our consolidated revenue for the years ended December 31, 2018, 2017 and 2016, respectively. Revenue from De Lage Landen Financial Services, Inc. ("DLL"), represented approximately 6%, 7% and 11% of our consolidated revenue for the years ended December 31, 2018, 2017 and 2016, respectively. DLL is a third party financing company that provides financing and leasing for, primarily, our imaging product customers. In our OVP segment, revenue from Eli Lilly entities, including Elanco, represented approximately 9%, 11% and 12% of our consolidated revenue for the years ended December 31, 2018, 2017 and 2016, respectively. No other customer accounted for more than 10% of our consolidated revenue for the years ended December 31, 2018, 2017 or 2016.

Henry Schein represented 12% and 17% of our consolidated accounts receivable at December 31, 2018 and 2017, respectively. Merck entities represented approximately 10% and 15% of our consolidated accounts receivable at December 31, 2018 and 2017, respectively. DLL represented 8% and 11% of our consolidated accounts receivable at December 31, 2018 and 2017, respectively. Eli Lilly entities, including Elanco, represented approximately 32% and 4% of our consolidated accounts receivable at December 31, 2018 and 2017, respectively. No other customer accounted for more than 10% of our consolidated accounts receivable at December 31, 2018 or 2017.

We operate in a highly competitive industry, which could render our products obsolete or substantially limit the volume of products that we sell. This would limit our ability to compete and maintain sustained profitability.

The market in which we compete is intensely competitive. Our competitors include independent animal health companies and major pharmaceutical companies that have animal health divisions. We also compete with independent, third party distributors, including distributors who sell products under their own private labels. In the point-of-care diagnostic testing market, our major competitors include IDEXX and Zoetis. The products manufactured by our OVP segment for sale by third parties compete with similar products offered by a number of other companies, some of which have substantially greater financial, technical, research and other resources than us and may have more established marketing, sales, distribution and service organizations than those of our OVP segment customers. Competitors may have facilities with similar capabilities to our OVP segment, which they may operate and sell at a lower unit price to customers than our OVP segment does, which could cause us to lose customers. Companies with a significant presence in the companion animal health market, such as Bayer AG, CEVA Santé Animale, Eli Lilly, Merck, Sanofi, Vétoquinol S.A. and Virbac S.A. may be marketing or developing products that compete with our products or would compete with them if developed. These and other competitors and potential competitors may have substantially greater financial, technical, research and other resources and larger, more established marketing, sales and service organizations than we do. For example, if Zoetis devotes its significant commercial and financial resources to growing its market share in the veterinary allergy market, our allergy-related sales could suffer significantly. Our competitors may offer broader product lines and have greater name recognition than we do. Our competitors may also develop or market technologies or products that are more effective or commercially attractive than our current or future products or that would render our technologies and products obsolete. Further, additional competition could come from new entrants to the animal health care market. Moreover, we may not have the financial resources, technical expertise, marketing, sales or support capabilities to compete successfully. Zoetis has recently launched allergy products which may diminish the competitiveness and sales prospects for our own allergy immunotherapy products. IDEXX has recently launched an SDMA test in its Point of Care laboratory chemistry line, which may cause veterinary customers to prefer IDEXX products to ours.

If we fail to compete successfully, our ability to achieve sustained profitability will be limited and sustained profitability, or profitability at all, may not be possible.

We benefit from relationships or collaboration with third parties, including but not limited to, companies, buying groups, veterinary hospital groups and reference laboratory entities that operate in our markets. Beneficial third party, semi-competitive, directly competitive and cooperative relationships that affect how we go to market, develop products, generate leads and other commercial efforts of Heska may be negatively affected as a result of consolidation, acquisition, merger, exclusive arrangement, or other agreements or activities between and amongst those third parties and others.

We often depend on third parties for products we intend to introduce in the future. If our current relationships and collaborations are not successful, we may not be able to introduce the products we intend to introduce in the future.

We are often dependent on third parties and collaborative partners to successfully and timely perform research and development activities to successfully develop new products. We routinely discuss Heska marketing in the veterinary market instruments being developed by third parties for use in the human health care market. In the future, one or more of these third parties or collaborative partners may not complete research and development activities in a timely fashion, or at all. Even if these third parties are successful in their research and development activities, we may not be able to come to an economic agreement with them. If these third parties or collaborative partners fail to complete research and development activities or fail to complete them in a timely fashion, or if we are unable to negotiate economic agreements with such third parties or collaborative partners, our ability to introduce new products will be impacted negatively and our revenues may decline.

We may be unable to market and sell our products successfully.

We may not develop and maintain marketing and/or sales capabilities successfully, and we may not be able to make arrangements with third parties to perform these activities on satisfactory terms. If our marketing and sales strategy is unsuccessful, our ability to sell our products will be negatively impacted and our revenues will decrease. This could result in the loss of distribution rights for products or failure to gain access to new products and could cause damage to our reputation and adversely affect our business and future prospects.

The market for companion animal healthcare products is highly fragmented. Because our CCA proprietary products are generally available only to veterinarians or by prescription and our medical instruments require technical training to operate, we ultimately sell all our CCA products primarily to or through veterinarians. The acceptance of our products by veterinarians is critical to our success. Changes in our ability to obtain or maintain such acceptance or changes in veterinary medical practice could significantly decrease our anticipated sales. As the vast majority of cash flow to veterinarians ultimately is funded by pet owners without private insurance or government support, our business may be more susceptible to severe economic downturns than other health care businesses which rely less on individual consumers.

For our Point of Care laboratory blood diagnostics products, we primarily rely on contracts with our veterinary customers for their use of our owned equipment and our consumable supplies over a multiple year period. If veterinarians under these contracts experience a significant downturn in their business, they may not fulfill their use and financial obligations under these contracts. If veterinarians breach our contracts, and we are unable to collect on default payment provisions or otherwise enforce the terms of our contracts, our business will be adversely affected. If we have to litigate against customer(s) to enforce our contracts, our expenses may increase, our sales may decrease to those customers, and our reputation may suffer. If significant numbers of our customers under contracts for use of our equipment and consumable supplies do not renew their contracts, our business will be adversely affected.

We have entered into agreements with independent third party distributors, including Henry Schein, which we anticipated to market and sell our products to a greater degree than in the recent past. Independent third party distributors may be effective in increasing sales of our products to veterinarians, although we would expect a corresponding lower gross margin as such distributors typically buy products from us at a discount to end user prices. It is possible new or existing independent third party distributors could cannibalize our direct sales efforts and lower our total gross margin. For us to be effective when working with an independent third party distributor, the distributor must agree to market and/or sell our products and we must provide proper economic incentives to the distributor as well as contend effectively for the time, energy and focus of the employees of such distributor given other products the distributor may be carrying, potentially including those of our competitors. If we fail to be effective with new or existing independent third party distributors, our financial performance may suffer.

A core component of our future growth strategy is international expansion. As we continue to expand our international footprint, we will be increasingly susceptible to the risks associated with international operations including, but not limited to, the following:

- Uncertain political and economic climates, fluctuations in exchange rates that may increase the volatility of foreign-based revenue and expenses.
- Burdens of complying with and unexpected changes in foreign laws, accounting and legal standards, regulatory requirements, taxes, tariffs and other barriers or trade restrictions.
- Lack of experience in connection with the customs, cultures, languages and sales cycle.
- Reduced or altered protection for intellectual property rights in foreign countries.
- Data privacy laws which require that data storage and processing be subject to laws different than the U.S.

As a result of these and other factors, international expansion may be more difficult and not generate the results we anticipate, which could negatively impact our business.

Our stock price has historically experienced high volatility, and could do so in the future, including experiencing a material price decline resulting from a large sale in a short period of time.
Should a relatively large shareholder decide to sell a large number of shares in a short period of time, it could lead to an excess supply of our shares available for sale and correspondingly result in a significant decline in our stock price.

The securities markets have experienced significant price and volume fluctuations and the market prices of securities of many small cap companies have in the past been, and can in the future be expected to be, especially volatile. During the twelve months ended December 31, 2018, the closing stock price of our Public Common Stock has ranged from a low of $58.36 to a high of $113.31. Fluctuations in the trading price or liquidity of our Public Common Stock may adversely affect our ability to raise capital through future equity financings. Factors that may have a significant impact on the market price and marketability of our Public Common Stock include:

- stock sales by large stockholders or by insiders;
- changes in the outlook for our business;
- our quarterly operating results, including as compared to expected revenue or earnings and in comparison to historical results;
- termination, cancellation or expiration of our third party supplier relationships;
- announcements of technological innovations or new products by our competitors or by us;
- litigation;

- regulatory developments, including delays in product introductions;
- developments or disputes concerning patents or proprietary rights;
- availability of our revolving line of credit and compliance with debt covenants;
- releases of reports by securities analysts;
- economic and other external factors; and
- general market conditions.

In the past, following periods of volatility in the market price of a company's securities, securities class action litigation has often been instituted. If a securities class action suit is filed against us, it is likely we would incur substantial legal fees and our management's attention and resources would be diverted from operating our business in order to respond to the litigation.

On May 4, 2010, our shareholders approved an amendment (the "Amendment") to our Restated Certificate of Incorporation. The Amendment places restrictions on the transfer of our stock that could adversely affect our ability to use our domestic Federal Net Operating Loss carryforward ("NOL"). In particular, the Amendment prevents the transfer of shares without the approval of our Board of Directors if, as a consequence, an individual, entity or groups of individuals or entities would become a 5-percent holder under Section 382 of the Internal Revenue Code of 1986, as amended, and the related Treasury regulations, and also prevents any existing 5-percent holder from increasing his or her ownership position in the Company without the approval of our Board of Directors. Any transfer of shares in violation of the Amendment (a "Transfer Violation") shall be void ab initio under our Restated Certificate of Incorporation, as amended (our "Certificate of Incorporation") and our Board of Directors has procedures under our Certificate of Incorporation to remedy a Transfer Violation including requiring the shares causing such Transfer Violation to be sold and any profit resulting from such sale to be transferred to a charitable entity chosen by the Company's Board of Directors in specified circumstances. The Amendment could have an adverse impact on the value and trading liquidity of our stock if certain buyers who would otherwise have bid on or purchased our stock, including buyers who may not be comfortable owning stock with transfer restrictions, do not bid on or purchase our stock as a result of the Amendment. In addition, because some corporate takeovers occur through the acquirer's purchase, in the public market or otherwise, of sufficient shares to give it control of a company, any provision that restricts the transfer of shares can have the effect of preventing a takeover. The Amendment could discourage or otherwise prevent accumulations of substantial blocks of shares in which our stockholders might receive a substantial premium above market value and might tend to insulate management and the Board of Directors against the possibility of removal to a greater degree than had the Amendment not passed.

In February 2018, our Board of Directors granted a waiver to a non-affiliated stockholder to allow the purchase, subject to certain limitations, of up to 730,000 shares of our common stock without causing a Transfer Violation. This waiver can be withdrawn by our Board of Directors at any time, in which case the non-affiliated stockholder is to only sell our stock until the non-affiliated stockholder ceases to be a Five Percent Shareholder (as defined in our Certificate of Incorporation). This waiver, and any similar waivers that our Board of Directors may grant in the future, may make it more likely that we have a "change of ownership" as defined under the provisions of Section 382 of the Internal Revenue Code of 1986, as amended, which could place a significant restriction on our ability to utilize our domestic Federal NOL in the future and materially adversely affect our results of operations.

Our Credit Facility contains restrictions that may limit our flexibility in operating our business.

Our Credit Agreement (the "Credit Agreement") with JPMorgan Chase Bank, N.A. ("Chase") provides for a revolving credit facility of up to $30.0 million (the "Credit Facility"). The Credit Facility contains various financial and non-financial operating covenants that limit our ability to engage in specified types of transactions. The financial covenants require that we maintain a minimum fixed charge coverage ratio and a maximum leverage ratio. The operating covenants limit our ability to, among other things:

- sell, transfer, lease or dispose of our assets;
- create, incur or assume additional indebtedness;
- encumber or permit lines on certain of our assets;
- make restricted payments, including paying dividends on, repurchasing or making distributions with respect to our common stock;
- make specified investments (including loans and advances);
- consolidate, merge, sell or otherwise dispose of substantially all of our assets; and
- enter into certain transactions.

A breach of any of these covenants or a material adverse change to our business could result in a default under the Credit Agreement. Upon the occurrence of an event of default under our Credit Agreement, our lenders could elect to declare all amounts outstanding to be immediately due and payable and terminate all commitments to extend further credit. If we were unable to repay those amounts, the lenders could proceed against the collateral granted to them to secure such indebtedness.

We may face costly legal disputes, including disputes related to our intellectual property or technology or that of our suppliers or collaborators.

We may face disputes related to our business. Even if meritless, these disputes may require significant expenditures on our part and could entail a significant distraction to members of our management team or other key employees. For example, it took us until October 10, 2018, to reach an agreement in principle to settle the complaint that was filed against the Company by Shaun Fauley on March 12, 2015 in the U.S. District Court Northern District of Illinois alleging our transmittal of unauthorized faxes in violation of the federal Telephone Consumer Protection Act of 1991, as amended by the Junk Fax Prevention Act of 2005, as a class action and the settlement, which was approved by the court on February 28, 2019, will require us, among other things, to make available a total of $6.75 million to pay class members, as well as to pay attorneys' fees and expenses to legal counsel to the class. Insurance coverage may not cover any costs required to litigate a legal dispute or an unfavorable ruling or settlement. For example, we do not have insurance coverage for the settlement arrangement regarding the Fauley class action. A legal dispute leading to an unfavorable ruling or settlement, whether or not insurance coverage may be available for any portion thereof, could have material adverse consequences on our business. On the other hand, we may have to use legal means and incur affiliated costs to secure the benefits to which we are entitled under third party agreements, such as to collect payment for amounts due from third parties, which would reduce our income as compared to what it otherwise would have been.

We may become subject to patent infringement claims and litigation in the U.S. or other countries or interference proceedings conducted in the U.S. Patent and Trademark Office, or USPTO, to determine the priority of inventions. The defense and prosecution of intellectual property suits, USPTO interference proceedings and related legal and administrative proceedings are likely to be costly, time-consuming and distracting. As is typical in our industry, from time to time we and our collaborators and suppliers have received, and may in the future receive, notices from third parties claiming infringement and invitations to take licenses under third-party patents. Any legal action against us or

our collaborators or suppliers may

require us or our collaborators or suppliers to obtain one or more licenses in order to market or manufacture affected products or services. We or our collaborators or suppliers may not, however, be able to obtain licenses for technology patented by others on commercially reasonable terms, or at all, or to develop alternative approaches to access or replace such technology if we or they are unable to obtain such licenses or if current and future licenses prove inadequate, any of which could substantially harm our business.

We may also need to pursue litigation to enforce any patents issued to us or our collaborative partners, to protect trade secrets or know-how owned by us or our collaborative partners, or to determine the enforceability, scope and validity of the proprietary rights of others. Any litigation or interference proceedings will likely result in substantial expense to us and significant diversion of the efforts of our technical and management personnel. Any adverse determination in litigation or interference proceedings could subject us to significant liabilities to third parties. Further, as a result of litigation or other proceedings, we may be required to seek licenses from third parties which may not be available on commercially reasonable terms, or at all.

Interpretation of existing legislation, regulations and rules, including financial accounting standards, or implementation of future legislation, regulations and rules could cause our costs to increase or could harm us in other ways.

We prepare our financial statements in conformance with U.S. generally accepted accounting principles ("GAAP"). These accounting principles are established by and are subject to interpretation by the SEC, the Financial Accounting Standards Board ("FASB") and others who interpret and create accounting policies. A change in those policies or how those policies are interpreted can have a significant effect on our reported results and may affect our reporting of transactions completed before a change is made effective. Such changes may adversely affect our reported financial results and the way we conduct our business, or have a negative impact on us if we fail to track such changes.

If our regulators and/or auditors adopt or interpret more stringent standards than we anticipate, we could experience unanticipated changes in our reported financial statements, including but not limited to restatements, which could adversely affect our business due to litigation and investor confidence in our financial statements. In addition, changes in the underlying circumstances to which we apply given accounting standards and principles may affect our results of operations and have a negative impact on us. For example, we review goodwill recognized on our Consolidated Balance Sheets at least annually and if we were to conclude there was an impairment of goodwill, we would reduce the corresponding goodwill to its estimated fair value and recognize a corresponding expense in our statement of operations. This impairment and corresponding expense could be as large as the total amount of goodwill recognized on our Consolidated Balance Sheets, which was $26.7 million at December 31, 2018. There can be no assurance that future goodwill impairments will not occur if projected financial results are not met, or otherwise.

The Sarbanes-Oxley Act of 2002 ("Sarbanes-Oxley") has increased our required administrative actions and expenses as a public company since its enactment. The general and administrative costs of complying with Sarbanes-Oxley will depend on how it is interpreted over time. Of particular concern are the level of standards for internal control evaluation and reporting adopted under Section 404 of Sarbanes-Oxley. If our regulators and/or auditors adopt or interpret more stringent standards than we anticipate, we and/or our auditors may be unable to conclude that our internal controls over financial reporting are designed and operating effectively, which could adversely affect investor confidence in our financial statements and cause our stock price to decline. Even if we and our auditors are able to conclude that our internal control over financial reporting is designed and operating effectively in such a circumstance, our general and administrative costs are likely to increase. For example, in both 2018 and 2017, we were required to have our independent registered public accountant conduct an audit of our internal control over financial reporting

because as of June 30 of both years our stock market value was above a certain level prescribed by regulation. This increased our general and administrative costs from what they otherwise would have been.

Similarly, we are required to comply with the SEC's mandate to provide interactive data using the eXtensible Business Reporting Language as an exhibit to certain SEC filings. Compliance with this mandate has required a significant time investment, which has and may in the future preclude some of our employees from spending time on more productive matters. In addition, future legislative, regulatory or rule-making action or more stringent interpretations of existing legislation, regulations and rules may increase our general and administrative costs or have other adverse effects on us.

We intend to pursue acquisitions and other strategic development opportunities, which may not result as desired and could be detrimental to our financial position.

We intend to pursue acquisitions and other strategic development opportunities, including minority investments where strategic. The ultimate business and financial performance of these opportunities may not create, and may end up adversely affecting materially, the value we hope to enhance by pursuing them. Any acquisition may significantly underperform relative to our financial expectations and may serve to diminish rather than enhance shareholder value.

The success of any acquisition will depend on, among other things, our ability to integrate assets and personnel acquired in these transactions and to apply our internal controls process to these acquired businesses. The integration of acquisitions may require significant attention from our management, and the diversion of management's attention and resources could have a material adverse effect on our ability to manage our business. Furthermore, we may not realize the degree or timing of benefits we anticipated when we first entered into the acquisition transaction. If actual integration costs are higher than amounts originally anticipated, if we are unable to integrate the assets and personnel acquired in an acquisition as anticipated, or if we are unable to fully benefit from anticipated synergies, our business, financial condition, results of operations and cash flows could be materially adversely affected. Furthermore, it is possible we will use management time and resources to pursue opportunities we ultimately are unable or decide not to consummate, in which case, we may not be able to utilize such management time and resources on what may have proved to be more productive matters in other areas of our business.

Obtaining and maintaining regulatory approvals in order to market our products may be costly and delay the marketing and sales of our products. Failure to meet all regulatory requirements could cause significant losses from affected inventory and the loss of market share.

Many of the products we develop, market or manufacture may subject us to extensive regulation by one or more of the USDA, the FDA, the EPA and foreign and other regulatory authorities. These regulations govern, among other things, the development, testing, manufacturing, labeling, storage, pre-market approval, advertising, promotion and sale of some of our products. Satisfaction of these requirements can take several years and time needed to satisfy them may vary substantially, based on the type, complexity and novelty of the product. The decision by a regulatory authority to regulate a currently non-regulated product or product area could significantly impact our revenue and have a corresponding adverse impact on our financial performance and position while we attempt to comply with the new regulation, if such compliance is possible at all.

The effect of government regulation may be to delay or to prevent marketing of our products for a considerable period of time and to impose costly procedures upon our activities. We may not be able to estimate the time to obtain required regulatory approvals accurately and such approvals may require significantly more time than we anticipate. We have experienced in the past, and may experience in the future, difficulties that could delay or prevent us from obtaining the regulatory approval or license necessary to

introduce or market our products. Such delays in approval may cause us to forgo a significant portion of a new product's sales in its first year due to seasonality and advanced booking periods associated with certain products. Regulatory approval of our products may also impose limitations on the indicated or intended uses for which our products may be marketed.

Difficulties in making established products to all regulatory specifications may lead to significant losses related to affected inventory as well as market share. Among the conditions for certain regulatory approvals is the requirement that our facilities and/or the facilities of our third party manufacturers conform to current Good Manufacturing Practices and other requirements. If any regulatory authority determines that our manufacturing facilities or those of our third party manufacturers do not conform to appropriate manufacturing requirements, we or the manufacturers of our products may be subject to sanctions, including, but not limited to, warning letters, manufacturing suspensions, product recalls or seizures, injunctions, refusal to permit products to be imported into or exported out of the U.S., refusals of regulatory authorities to grant approval or to allow us to enter into government supply contracts, withdrawals of previously approved marketing applications, civil fines and criminal prosecutions. Furthermore, third parties may perceive procedures required to obtain regulatory approval objectionable and may attempt to disrupt or otherwise damage our business as a result. In addition, certain of our agreements may require us to pay penalties if we are unable to supply products, including for failure to maintain regulatory approvals.

Any of these events, alone or in combination with others, could damage our business.

Our future revenues depend on successful product development, commercialization and/or market acceptance, any of which can be slower than we expect or may not occur.

The product development and regulatory approval process for many of our potential products is extensive and may take substantially longer than we anticipate. Research projects may fail. New products that we may be developing for the veterinary marketplace may not perform consistently within our expectations. Because we have limited resources to devote to product development and commercialization, any delay in the development of one product or reallocation of resources to product development efforts that prove unsuccessful may delay or jeopardize the development of other product candidates. If we fail to successfully develop new products and bring them to market in a timely manner, our ability to generate additional revenue will decrease.

Even if we are successful in the development of a product or obtain rights to a product from a third party supplier, we may experience delays or shortfalls in commercialization and/or market acceptance of the product. For example, veterinarians may be slow to adopt a product, a product may not achieve the anticipated technical performance in field use or there may be delays in producing large volumes of a product. The former is particularly likely where there is no comparable product available or historical precedent for such a product. The ultimate adoption of a new product by veterinarians, the rate of such adoption and the extent veterinarians choose to integrate such a product into their practice are all important factors in the economic success of any new products and are factors that we do not control to a large extent. If our products do not achieve a significant level of market acceptance, demand for our products will not develop as expected and our revenues will be lower than we anticipate.

Many of our expenses are fixed and if factors beyond our control cause our revenue to fluctuate, this fluctuation could cause greater than expected losses, cash flow and liquidity shortfalls.

We believe that our future operating results will fluctuate on a quarterly basis due to a variety of factors which are generally beyond our control, including:

- supply of products, including minimum purchase agreements, from third party suppliers or termination, cancellation or expiration of such relationships;

- competition and pricing pressures from competitive products;
- the introduction of new products or services by our competitors or by us;
- large customers failing to purchase at historical levels;
- fundamental shifts in market demand;
- manufacturing delays;
- shipment problems;
- information technology problems, which may prevent us from conducting our business effectively, or at all, and may also raise our costs;
- regulatory and other delays in product development;
- product recalls or other issues which may raise our costs;
- changes in our reputation and/or market acceptance of our current or new products; and
- changes in the mix of products sold.

We have high operating expenses, including those related to personnel. Many of these expenses are fixed in the short term and may increase over time. If any of the factors listed above cause our revenues to decline, our operating results could be substantially harmed.

Cyberattack related breaches of the Company's information technology systems could have an adverse effect on our business.

Cyberattacks are increasing in their frequency, sophistication and intensity, and have become increasingly difficult to detect and defend against. Cyberattacks, ranging from the use of malware, computer viruses, dedicated denial of services attacks, credential harvesting, social engineering and other means for obtaining unauthorized access to or disrupting our Company's ability to operate normally, could have a disruptive effect on our business. Cyberattacks may cause equipment failures, loss of information, including sensitive personal information of third party vendors, customers or employees, or valuable technical and marketing information, as well as disruptions to our or our vendor or customers' operations. These attacks may be committed by company employees or external actors operating in any geography, including jurisdictions where law enforcement measures to address such attacks are unavailable or ineffective. Cyberattacks may occur alone or in conjunction with physical attacks, especially where disruption of service is an objective of the attacker. While, to date, we have not been subject to cyberattacks which, individually or in the aggregate, have been material to Heska Corporation's operations or financial condition, the preventive actions we take to reduce the risks associated with cyberattacks, including protection of our systems and networks, may be insufficient to repel or mitigate the effects of a major cyberattack in the future.

The Company devotes significant resources to network security, data encryption and other security measures to protect its systems and data, but these security measures cannot provide absolute security. The Company requires user names and passwords to access its information technology systems. The Company also uses encryption and authentication technologies designed to secure the transmission and storage of data and prevent unauthorized access. The Company also conducts periodic internal training and educational communications to raise and maintain employee cybersecurity awareness, and has purchased an insurance policy to offset all or a portion of a covered financial loss that may be associated with an instance of a cybersecurity breach. To the extent the Company was to experience a breach of its systems and was unable to protect sensitive data, such a breach could materially damage business partner and customer relationships, and reduce or otherwise negatively impact access to online services. Moreover, if a computer security breach affects the Company's systems or results in the unauthorized release of Personally Identifiable Information (PII), the Company's reputation and brand could be materially damaged. Use of the Company's products and services could decrease, the Company could suffer from reputational harm impacting sales revenue, and the Company could be faced with unforeseen regulatory investigation, remediation and litigation costs. Our insurance policies may not cover the full extent, or any, of the potential financial harm that could be caused by

a breach of our systems, including in respect of possible damages claims that may be brought against us by our business partners and customers in respect of any such breach.

To date, the Company has not experienced any material impact to the business or operations resulting from information or cybersecurity attacks; however, because of the frequently changing attack techniques, along with the increased volume and sophistication of the attacks, there is the potential for the Company to be adversely impacted. This impact could result in reputational, competitive, operational or other business harm as well as financial costs and regulatory action.

We may not be able to continue to achieve sustained profitability or increase profitability on a quarterly or annual basis.

Prior to 2005, we incurred net losses on an annual basis since our inception in 1988 and, as of December 31, 2018, we had an accumulated deficit of $135.0 million. Relatively small differences in our performance metrics may cause us to generate an operating or net loss in future periods. Our ability to continue to be profitable in future periods will depend, in part, on our ability to increase sales in our CCA segment, including maintaining and growing our installed base of instruments and related consumables, to maintain or increase gross margins and to limit the increase in our operating expenses to a reasonable level as well as avoid or effectively manage any unanticipated issues. We may not be able to generate, sustain or increase profitability on a quarterly or annual basis. If we cannot achieve or sustain profitability for an extended period, we may not be able to fund our expected cash needs, including the repayment of debt as it comes due, or continue our operations.

We have fewer than 300 holders of record, which could allow us to terminate voluntarily the registration of our common stock with the SEC and after which we would no longer be eligible to maintain the listing of our Public Common Stock on the Nasdaq Capital Market. We may also be unable to otherwise maintain our listing on the Nasdaq Capital Market.

We have fewer than 300 holders of record as of our latest information, a fact which could make us eligible to terminate voluntarily the registration of our common stock with the SEC and therefore suspend our reporting obligations with the SEC under the Exchange Act and become a non-reporting company. If we were to cease reporting with the SEC, we would no longer be eligible to maintain the listing of our common stock on the Nasdaq Capital Market, which we would expect to materially adversely affect the liquidity and market price for our common stock. The Nasdaq Capital Market has several additional quantitative and qualitative requirements companies must comply with to maintain this listing. While we believe, we are currently in compliance with all Nasdaq requirements, there can be no assurance we will continue to meet Nasdaq listing requirements, that Nasdaq will interpret these requirements in the same manner we do if we believe we meet the requirements, or that Nasdaq will not change such requirements or add new requirements to include requirements we do not meet in the future.

If we are delisted from the Nasdaq Capital Market, our Public Common Stock may be considered a penny stock under the regulations of the SEC and would therefore be subject to rules that impose additional sales practice requirements on broker-dealers who sell our securities. The additional burdens imposed upon broker-dealers may discourage broker-dealers from effecting transactions in our Public Common Stock, which could severely limit market liquidity of the Public Common Stock and any stockholder's ability to sell our securities in the secondary market. This lack of liquidity would also likely make it more difficult for us to raise capital in the future.

We may face product returns and product liability litigation in excess of, or not covered by, our insurance coverage or indemnities and/or warranties from our suppliers. If we become subject to product liability claims resulting from defects in our products, we may fail to achieve market acceptance of our products and our sales could substantially decline.

The testing, manufacturing and marketing of our current products as well as those currently under development entail an inherent risk of product liability claims and associated adverse publicity. Following the introduction of a product, adverse side effects may be discovered. Adverse publicity regarding such effects could affect sales of our other products for an indeterminate time period. To date, we have not experienced any material product liability claims, but any claim arising in the future could substantially harm our business. Potential product liability claims may exceed the amount of our insurance coverage or may be excluded from coverage under the terms of the policy. We may not be able to continue to obtain adequate insurance at a reasonable cost, if at all. In the event that we are held liable for a claim against which we are not indemnified or for damages exceeding the $10 million limit of our insurance coverage or which results in significant adverse publicity against us, we may lose revenue, be required to make substantial payments which could exceed our financial capacity and/or lose or fail to achieve market acceptance.

We may be held liable for the release of hazardous materials, which could result in extensive remediation costs or otherwise harm our business.

Certain of our products and development programs produced at our Des Moines, Iowa facility involve the controlled use of hazardous and biohazardous materials, including chemicals and infectious disease agents. Although we believe that our safety procedures for handling and disposing of such materials comply with the standards prescribed by applicable local, state and federal regulations, we cannot eliminate the risk of accidental contamination or injury from these materials. In the event of such an accident, we could be held liable for any fines, penalties, remediation costs or other damages that result. Our liability for the release of hazardous materials could exceed our resources, which could lead to a shutdown of our operations, significant remediation costs and potential legal liability. In addition, we may incur substantial costs to comply with environmental regulations if we choose to expand our manufacturing capacity.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our principal administrative and research and development activities are located in Loveland, Colorado. We lease approximately 60,000 square feet at a facility in Loveland, Colorado under an agreement which expires in 2023. Our principal production facility located in Des Moines, Iowa, consists of approximately 160,000 square feet of buildings on 34 acres of land, which we own. We also own a 169-acre farm used principally for testing products, located in Carlisle, Iowa. Our European facility in Fribourg, Switzerland has approximately 6,000 square feet leased under an agreement which expires in 2022.

Item 3. Legal Proceedings

From time to time, the Company may be involved in litigation relating to claims arising out of its operations. The Company records accruals for outstanding legal matters when it believes it is probable that a loss will be incurred, and the amount can be reasonably estimated.

As previously disclosed in the Company's Current Report on Form 8-K filed with the SEC on October 16, 2018, on October 10, 2018, we reached an agreement in principle to settle the complaint that was filed against

the Company by Shaun Fauley on March 12, 2015 in the U.S. District Court Northern District of Illinois alleging our transmittal of unauthorized faxes in violation of the federal Telephone Consumer Protection Act of 1991, as amended by the Junk Fax Prevention Act of 2005, as a class action. The settlement, which was approved by the court on February 28, 2019, will require us, among other things, to make available a total of $6.75 million to pay class members, as well as to pay attorneys' fees and expenses to legal counsel to the class. The Company has recorded an estimated loss provision of approximately $7.0 million in connection with the settlement agreement and expenses associated with the matter, which is included in general and administrative expenses in the Consolidated Statements of Income, and included in accrued liabilities on the Consolidated Balance Sheet. The Company does not have insurance coverage for the settlement arrangement regarding the Fauley class action.

As of December 31, 2018, we were not a party to any other legal proceedings that are expected, individually or in the aggregate, to have a material adverse effect on our business, financial condition or operating results.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

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

Our Public common stock is quoted on the Nasdaq Capital Market under the symbol "HSKA".

As of March 7, 2019, there were approximately 250 holders of record of our Public Common Stock, and approximately 3,900 beneficial stockholders. We do not anticipate any dividend payments in the foreseeable future.

Unregistered Sales of Equity Securities and Use of Proceeds

The following table sets forth information about our purchases of our outstanding Public Common Stock during the Fiscal Year Ended December 31, 2018.

Period	Total Number of Shares Purchased (1)	Average Price Paid per Share (1)	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number (or Approximate Dollar Value) of Shares that May Yet Be Purchased Under the Plans or Programs
March 17, 2018	14,334	$78.50	—	—
Total	14,334	$78.50	—	—

(1) Shares of Public Common Stock we purchased between January 1, 2018 and December 31, 2018 were solely for the cancellation of shares of restricted stock to pay withholding taxes.

STOCK PRICE PERFORMANCE GRAPH

The following graph provides a comparison over the five-year period ended December 31, 2018 of the cumulative total shareholder return from a $100 investment in the Company's common stock with the NASDAQ Medical Supplies Index and the NASDAQ Composite Total Return:

	Dec-13	Dec-14	Dec-15	Dec-16	Dec-17	Dec-18
Heska Corporation	$ 100	$ 208	$ 444	$ 821	$ 920	$ 987
NASDAQ Medical Supplies Index	$ 100	$ 120	$ 133	$ 151	$ 199	$ 213
NASDAQ Composite Total Return Index	$ 100	$ 115	$ 123	$ 134	$ 173	$ 168

Item 6. Selected Financial Data

The selected consolidated statements of income and consolidated balance sheets data have been derived from our consolidated financial statements. The information set forth below is not necessarily indicative of the results of future operations and should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the Consolidated Financial Statements and related Notes included as Items 7 and 8, respectively, in this Form 10-K.

	2018	2017	2016	2015	2014
	(In thousands, except per share data)				
Consolidated Statements of Income Data:					
Revenue, net	$127,446	$129,341	$130,083	$104,597	$89,837
Net income attributable to Heska Corporation	$5,850	$9,953	$10,508	$5,239	$2,603
Earnings per share attributable to Heska Corporation:					
Basic earnings per share attributable to Heska Corporation	$0.81	$1.42	$1.55	$0.80	$0.44
Diluted earnings per share attributable to Heska Corporation	$0.74	$1.30	$1.43	$0.74	$0.41
Basic weighted-average common shares outstanding	7,220	7,026	6,783	6,509	5,951
Diluted weighted-average common shares outstanding	7,856	7,642	7,361	7,074	6,409
Consolidated Balance Sheets Data:					
Total assets	$156,452	$135,444	$130,844	$109,719	$96,844
Long-term obligations and redeemable preferred stock	$6,031	$6,000	$—	$—	$—
Cash dividends declared per share:	$—	$—	$—	$—	$—

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with "Selected Financial Data" and the Consolidated Financial Statements and related Notes included in Items 6 and 8, respectively, of this Form 10-K. This discussion contains forward-looking statements that involve risks and uncertainties. Such statements, which include statements concerning future revenue sources and concentration, gross profit margins, selling and marketing expenses, research and development expenses, general and administrative expenses, capital resources, additional financings or borrowings and additional losses, are subject to risks and uncertainties, including, but not limited to, those discussed below and elsewhere in this Form 10-K, particularly in Item 1A "Risk Factors," that could cause actual results to differ materially from those projected. The forward-looking statements set forth in this Form 10-K are as of the close of business on March 6, 2019, and we undertake no duty and do not intend to update this information, except as required by applicable securities laws.

Overview

We sell advanced veterinary diagnostic and specialty products. Our offerings include Point of Care laboratory instruments and consumables; Point of Care digital imaging diagnostic products; vaccines; local and cloud-based data services; allergy testing and immunotherapy; and single-use offerings such as in-clinic diagnostic tests and heartworm preventive products. Our core focus is on supporting veterinarians in the canine and feline healthcare space.

Our business is composed of two reportable segments, CCA and OVP. The CCA segment includes, primarily for canine and feline use, Point of Care laboratory instruments and consumables; digital imaging diagnostic instruments, software and services; local and cloud-based data services; allergy testing and immunotherapy; and single use offerings such as in-clinic diagnostic tests and heartworm preventive products. The OVP segment includes private label vaccine and pharmaceutical production, primarily for cattle but also for other species including equine, porcine, avian, feline and canine. OVP products are sold by third parties under third party labels.

CCA represented approximately 85% of our 2018 revenue. OVP represented approximately 15% of our 2018 revenue.

CCA Segment

Revenue from Point of Care laboratory including instruments, consumables and other revenue such as service represented $57.4 million, $54.9 million and $48.8 million of our 2018, 2017 and 2016 revenue, respectively. Revenue in this area primarily involves placing an instrument under contract in the field and generating future revenue from testing consumables, such as cartridges and reagents, as that instrument is used. Approximately $44.8 million, $39.2 million and $36.3 million of our 2018, 2017 and 2016 revenue, respectively, resulted from the sale of such testing consumables to an installed base of instruments. Approximately $10.8 million, $13.8 million and $10.4 million of our 2018, 2017 and 2016 revenue, respectively, was from instrument sales, including revenue recognized from sales-type lease treatment. Included in instrument sales are sales of infusion pumps, which are sold outright through distribution. Sales of infusion pumps were $2.7 million, $4.0 million, and $3.7 million for 2018, 2017, and 2016, respectively. Approximately $1.8 million, $1.9 million and $2.0 million of our 2018, 2017 and 2016 revenue, respectively, was from other revenue sources, such as charges for repairs. Instruments placed under subscription agreements are considered operating or sales-type (capital) leases, depending on the duration and other factors of the underlying agreement. A loss of, or disruption in, the supply of consumables we are selling to an installed base of instruments could substantially harm our business. All of our Point of Care laboratory and

other non-imaging instruments and consumables are supplied by third parties, who typically own the product rights and supply the product to us under marketing and/or distribution agreements. In many cases, we have collaborated with a third party to adapt a human instrument for veterinary use. Major products in this area include our instruments for chemistry, hematology, blood gas and immunodiagnostic testing and their affiliated operating consumables.

Point of Care digital imaging hardware, software and services represented approximately $22.8 million, $21.9 million and $29.6 million of 2018, 2017 and 2016 revenue, respectively. Digital radiography is the largest product offering in this area, which also includes ultrasound instruments. Digital radiography solutions typically consist of a combination of hardware and software placed with a customer, often combined with an ongoing service and support contract. We sell our imaging solutions both in the U.S. and internationally. Our experience has been that most of the revenue is generated at the time of sale in this area, in contrast to the Point of Care diagnostics laboratory placements discussed above where ongoing consumable revenue is often a larger component of economic value as a given instrument is used.

Other CCA revenue, including single use diagnostic and other tests, pharmaceuticals and biologicals, as well as research and development, licensing and royalty revenue, represented $28.7 million, $28.4 million and $29.0 million of our 2018, 2017 and 2016 revenue, respectively. Since items in this area are often single use by their nature, our typical aim is to build customer satisfaction and loyalty for each product, generate repeat annual sales from existing customers and expand our customer base in the future. Products in this area are both supplied by third parties and provided by us. Major products and services in this area include heartworm diagnostic tests and preventives, and allergy test kits, allergy immunotherapy and testing. Of our annual revenue, heartworm produced primarily for private-label accounted for approximately $16.8 million in both 2018 and 2017, and $16.7 million in 2016.

We consider the CCA segment to be our core business and devote most of our management time and other resources to improving the prospects for this segment. Maintaining a continuing, reliable and economic supply of products we currently obtain from third parties is critical to our success in this area. Virtually all of our sales and marketing expenses occur in the CCA segment. The majority of our research and development spending is dedicated to this segment as well.

All of our CCA products are ultimately sold primarily to or through veterinarians. In many cases, veterinarians will mark up their costs to their customer. The acceptance of our products by veterinarians is critical to our success. CCA products are sold directly to end users by us as well as through distribution relationships, such as the sale of kits to conduct blood testing to third party veterinary diagnostic laboratories and independent third party distributors. Revenue from direct sales and distribution relationships represented approximately 57% and 43%, respectively, of CCA 2018 revenue, 58% and 42%, respectively, of CCA 2017 revenue and 61% and 39%, respectively, of CCA 2016 revenue.

OVP Segment

The OVP segment includes our approximately 160,000 square foot USDA and FDA licensed production facility in Des Moines, Iowa. We view this facility as an asset which could allow us to control our cost of goods on any pharmaceuticals and vaccines that we may commercialize in the future. We have increased integration of this facility with our operations elsewhere. For example, virtually all our U.S. inventory, excluding our imaging products, is now stored at this facility and related fulfillment logistics are managed there. CCA segment products manufactured at this facility are transferred at cost and are not recorded as revenue for our OVP segment. We view OVP reported revenue as revenue primarily to cover the overhead costs of the facility and to generate incremental cash flow to fund our CCA segment.

Historically, a significant portion of our OVP segment's revenue has been generated from the sale of certain bovine vaccines, which have been sold primarily under the Titanium® and MasterGuard® brands. We have an agreement with Eli Lilly and Company and its affiliates operating through Elanco for the production of these vaccines (the "Elanco Agreement"). Our OVP segment also produces vaccines and pharmaceuticals for other third parties.

Critical Accounting Estimates

The discussion and analysis of our financial condition and results of operations is based upon our consolidated financial statements, which have been prepared in accordance with GAAP. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. We evaluate our estimates on an ongoing basis. We base our estimates on historical experience and on various assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates. "Part II, Item 8. Note 1 Summary of Significant Accounting Policies" to the consolidated financial statements included in this Annual Report on Form 10-K describes the significant accounting policies used in preparation of these consolidated financial statements. We believe the following critical accounting estimates and assumptions may have a material impact on reported financial condition and operating performance and involve significant levels of judgment to account for highly uncertain matters or are susceptible to significant change.

Revenue Recognition

Effective January 1, 2018, we adopted FASB Accounting Standards Codification ("ASC") Topic 606, Revenue from Contracts with Customers (the "New Revenue Standard"), using the modified retrospective method for all contracts not completed as of the date of adoption. Under the New Revenue Standard, revenue is recognized when, or as, performance obligations under the terms of a contract are satisfied, which occurs when control of the promised products or services is transferred to a customer. We exclude sales, use, value-added, and other taxes we collect on behalf of third parties from revenue. Revenue is measured as the amount of consideration we expect to receive in exchange for transferring products or services to a customer. To meet the requirements of the New Revenue Standard and accurately present the consideration received in exchange for promised products or services, we applied the prescribed five-step model outlined below:

1. Identification of a contract or agreement with a customer
2. Identification of our performance obligations in the contract or agreement
3. Determination of the transaction price
4. Allocation of the transaction price to the performance obligations
5. Recognition of revenue when, or as, we satisfy a performance obligation

See "Part II. Item 8. Financial Statements and Supplementary Data, Note 2. Revenue Recognition" to the consolidated financial statements for the year ended December 31, 2018, included in this Annual Report on Form 10-K for additional information about our revenue recognition policy and criteria for recognizing revenue.

Application of the various accounting principles in GAAP related to the measurement and recognition of revenue requires us to make judgments and estimates. Specifically, our subscription arrangements related to our Point of Care laboratory products provide our customers the right to use our instruments upon entering into multi-year agreements to purchase a minimum amount of consumables. These types of agreements include an embedded lease, designated as either an operating-type lease ("OTL") or a sales-type lease ("STL"), dependent upon individual contract terms, most often relating to the term of the contract relative to

the life of the underlying instruments being placed under that contract. The determination of the amounts allocated to each component of the contract are based upon fair value. Changes in fair value in any period of the underlying components will impact that amount of revenue recognized.

Allowance for Doubtful Accounts

We maintain an allowance for doubtful accounts receivable based on client-specific allowances, as well as a general allowance. Specific allowances are maintained for clients which are determined to have a high degree of collectability risk based on such factors, among others, as: (i) the aging of the accounts receivable balance; (ii) the client's past payment history; and (iii) a deterioration in the client's financial condition, evidenced by weak financial condition and/or continued poor operating results, reduced credit ratings and/or a bankruptcy filing. In addition to the specific allowance, the Company maintains a general allowance for credit risk in its accounts receivable which is not covered by a specific allowance. The general allowance is established based on such factors, among others, as: (i) the total balance of the outstanding accounts receivable, including considerations of the aging categories of those accounts receivable; (ii) past history of uncollectable accounts receivable write-offs; and (iii) the overall creditworthiness of the client base. A considerable amount of judgment is required in assessing the realizability of accounts receivable. Should any of the factors considered in determining the adequacy of the overall allowance change, an adjustment to the provision for doubtful accounts receivable may be necessary.

Inventory Valuation

We write down the carrying value of inventory for estimated obsolescence by an amount equal to the difference between the cost of inventory and the estimated market value when warranted based on assumptions of future demand, market conditions, remaining shelf life or product functionality. If actual market conditions or results of estimated functionality are less favorable than those we estimated, additional inventory write-downs may be required, which would have a negative effect on results of operations. The inventory allowance was $1.6 million as of December 31, 2018 and 2017.

Deferred Tax Assets – Valuation Allowance

We evaluate our ability to realize the tax benefits associated with a deferred tax asset (“DTA”) by analyzing our forecasted taxable income using both historical and projected future operating results, the reversal of existing temporary differences, taxable income in prior carry back years (if permitted) and the availability of tax planning strategies. A valuation allowance is required to be established unless management determines that it is more likely than not that we will ultimately realize the tax benefit associated with a deferred tax asset. As of December 31, 2018 and 2017, we had valuation allowances of approximately $10.2 million and $14.5 million, respectively. The change in the valuation allowance resulted from the expiration of deferred tax assets which were offset with a valuation allowance at December 31, 2017. See Note 4 - Income Taxes in the accompanying notes to the consolidated financial statements for additional information regarding our income taxes.

Valuation of Goodwill and Intangibles

We assess goodwill for impairment annually, at the reporting unit level, in the fourth quarter and whenever events or circumstances indicate impairment may exist. In evaluating goodwill for impairment, we have the option to first assess the qualitative factors to determine whether it is more-likely-than-not that the estimated fair value of the reporting unit is less than its carrying amount as a basis for determining whether it is necessary to perform the comparison of the estimated fair value of the reporting unit to the carrying value. The more-likely-than-not threshold is defined as having a likelihood of more than 50 percent. If, after assessing the totality of events or circumstances, we determine that is it more-likely-than-not that the

estimated fair value of a reporting is less than its carrying amount, we would then estimate the fair value of the reporting unit and compare it to the carrying value. If the carrying value exceeds the estimated fair value we would recognize an impairment for the difference; otherwise, no further impairment test would be required. In contrast, we can opt to bypass the qualitative assessment for any reporting unit in any period and proceed directly to quantitative analysis. Doing so does not preclude us from performing the qualitative assessment in any subsequent period. We performed qualitative assessments in the fourth quarters of 2018, 2017 and 2016 and determined that no indications of impairment existed.

We assess the realizability of intangible assets other than goodwill whenever events or changes in circumstances indicate that the carrying value may not be recoverable. If an impairment review is triggered, we evaluate the carrying value of intangible assets based on estimated undiscounted future cash flows over the remaining useful life of the primary asset of the asset group and compare that value to the carrying value of the asset group. The cash flows that are used contain our best estimates, using appropriate and customary assumptions and projections at the time. If the net carrying value of an intangible asset exceeds the related estimated undiscounted future cash flows, an impairment to adjust the intangible asset to its fair value would be reported as a non-cash charge to earnings. If necessary, we would calculate the fair value of an intangible asset using the present value of the estimated future cash flows to be generated by the intangible asset, and applying a risk-adjusted discount rate. We had no impairments of our intangible assets during the years ended December 31, 2018, 2017 and 2016.

These valuations require the use of management’s assumptions, which would not reflect unanticipated events and circumstances that may occur.

Share-Based Compensation Expense

We utilize share-based compensation arrangements as part of our long-term incentive plan. Under these incentive arrangements, we currently issue restricted stock awards, both tied to time vesting or performance and time vesting to employees and directors. We also issue stock options awards to employees. All significant inputs into the determination of expense as well as the related expense are discussed further in "Part II. Item 8. Financial Statements and Supplementary Data, Note 11. Capital Stock".

Restricted Stock Awards (Time Vesting)

The fair value of restricted stock awards with only time-based vesting terms used in our expense recognition method is measured based on the number of shares granted and the closing market price of our common stock on the date of grant. Such value is recognized as an expense over the corresponding requisite service period. Forfeitures are accounted for as they occur.

Restricted Stock Awards (Performance Vesting)

We also grant restricted stock awards subject to performance vesting criteria, in addition to service to our executive officers and other key employees. This type of grant consists of the right to receive shares of common stock, subject to achievement of time-based criteria and certain corporate and market performance-related goals over a specified period, as established by the Compensation Committee of our Board of Directors. We recognize any related share-based compensation expense ratably over the service period based on the probability assessment on the outcome of the performance condition related to corporate performance metrics. The fair value used in our expense recognition method is measured based on the number of shares granted and the closing market price of our common stock on the date of grant. The amount of share-based compensation expense recognized in any one period can vary based on the attainment or expected attainment

of the performance goals. If such performance goals are not ultimately met, no compensation expense is recognized and any previously recognized compensation expense is reversed. We recognize any related share-based compensation expense ratably over the service period based on the most probable outcome of the performance condition related to market performance metrics. The fair value used in our expense recognition method is measured based on the number of shares granted, and a Monte Carlo simulation model, which incorporates the probability of the achievement of the market-related performance goals as part of the grant date fair value. If such performance goals are not ultimately met, the expense is not reversed.

As of December 31, 2018, we reviewed each of the underlying corporate performance targets and determined that approximately 167,000 of shares of common stock were related to corporate performance targets in which we did not deem achievement probable. No compensation expense had been recorded at any period prior to December 31, 2018. The unrecognized compensation cost associated with the restricted stock awards not deemed probable, based on grant date fair value, is approximately $13.5 million. Any change in the probability determination could accelerate the recognition of this expense.

Recent Accounting Pronouncements

In addition to the impacts from new accounting pronouncements included above, see "Part II. Item 8. Financial Statements and Supplementary Data, Note 1. Summary of Significant Accounting Policies" to the consolidated financial statements for the year ended December 31, 2018, included in this Annual Report on Form 10-K for a complete discussion of recent accounting pronouncements adopted and not adopted.

Results of Operations

Our analysis presented below is organized to provide the information we believe will facilitate an understanding of our historical performance and relevant trends going forward. This discussion should be read in conjunction with our consolidated financial statements, including the notes thereto, in Item 8 of this annual report on Form 10-K.

The following table sets forth, for the periods indicated, certain data derived from our Consolidated Statements of Income (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Revenue	$127,446	$129,341	$130,083
Gross profit	56,638	58,261	53,892
Operating expenses	52,844	40,042	37,359
Operating income	3,794	18,219	16,533
Interest and other (income) expense, net	(13)	(150)	29
Income before income taxes and equity in losses of unconsolidated affiliates	3,807	18,369	16,504
Income tax (benefit) expense	(2,115)	8,913	4,339
Net income before equity in losses of unconsolidated affiliates	5,922	9,456	12,165
Equity in losses of unconsolidated affiliates	(72)	—	—
Net income, after equity in losses of unconsolidated affiliates	5,850	9,456	12,165
Net (loss) income attributable to non-controlling interest	—	(497)	1,657
Net income attributable to Heska Corporation	$5,850	$9,953	$10,508

The following tables set forth, for the periods indicated, segment data derived from our Consolidated Statements of Income (in thousands):

CCA Segment

	Year Ended December 31,			Change			
	2018	2017	2016	Dollar Change	% Change	Dollar Change	% Change
Point of Care Laboratory:	$57,375	$54,855	$48,817	$2,520	5 %	$6,038	12 %
Consumables	44,771	39,161	36,344	5,610	14 %	2,817	8 %
Instruments	10,810	13,773	10,438	(2,963)	(22)%	3,335	32 %
Other	1,794	1,921	2,035	(127)	(7)%	(114)	(6)%
Point of Care Imaging	22,832	21,907	29,609	925	4 %	(7,702)	(26)%
Other CCA Revenue	28,717	28,429	28,972	288	1 %	(543)	(2)%
Total CCA Revenue	$108,924	$105,191	$107,398	$3,733	4 %	$(2,207)	(2)%
Percent of Total Revenue	85.5 %	81.3 %	82.6 %				
Cost of Revenue	56,326	54,509	59,066	1,817	3 %	(4,557)	(8)%
Gross Profit	52,598	50,682	48,332	1,916	4 %	2,350	5 %
Operating Income	$2,040	$12,656	$13,015	$(10,616)	(84)%	$(359)	(3)%

OVP Segment

	Year Ended December 31,			Change			
	2018	2017	2016	Dollar Change	% Change	Dollar Change	% Change
Revenue	$18,522	$24,150	$22,685	$(5,628)	(23)%	$1,465	6 %
Percent of Total Revenue	14.5 %	18.7 %	17.4 %				
Cost of Revenue	14,482	16,570	17,125	(2,088)	(13)%	(555)	(3)%
Gross Profit	4,040	7,580	5,560	(3,540)	(47)%	2,020	36 %
Operating Income							