

IROBOT CORP  
Form 10-K  
February 14, 2019  
Table of Contents

UNITED STATES SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

Form 10-K  
(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934  
For the fiscal year ended December 29, 2018

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

Commission file no. 001-36414

iROBOT CORPORATION

(Exact name of registrant as specified in its charter)

Delaware 77-0259 335  
(State or other jurisdiction of (I.R.S. Employer  
incorporation or organization) Identification No.)

8 Crosby Drive, Bedford, MA 01730  
(Address of principal executive offices) (Zip Code)

(781) 430-3000  
(Registrant’s telephone number, including area code)

SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT:

Common Stock, \$0.01 par value per share The Nasdaq Stock Market LLC

SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT:

None

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

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

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant’s knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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  Accelerated filer

Non-accelerated filer " 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. "

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

The aggregate market value of the Common Stock held by nonaffiliates of the registrant was approximately \$2.0 billion based on the last reported sale of the Common Stock on The Nasdaq Global Select Market on June 29, 2018, the last business day of the registrant's most recently completed second fiscal quarter.

As of January 31, 2019, there were 27,796,614 shares of the registrant's Common Stock outstanding.

#### DOCUMENTS INCORPORATED BY REFERENCE

The registrant intends to file a definitive Proxy Statement pursuant to Regulation 14A within 120 days of the end of the fiscal year ended December 29, 2018. Portions of such Proxy Statement are incorporated by reference into Part III of this Form 10-K.

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Table of Contents

iROBOT CORPORATION  
ANNUAL REPORT ON FORM 10-K  
Year Ended December 29, 2018  
TABLE OF CONTENTS

	Page
Part I	
Item 1. <u>Business</u>	<u>3</u>
Item 1A. <u>Risk Factors</u>	<u>10</u>
Item 1B. <u>Unresolved Staff Comments</u>	<u>20</u>
Item 2. <u>Properties</u>	<u>20</u>
Item 3. <u>Legal Proceedings</u>	<u>20</u>
Item 4. <u>Mine Safety Disclosures</u>	<u>20</u>
Part II	
Item 5. <u>Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities</u>	<u>21</u>
Item 6. <u>Selected Financial Data</u>	<u>22</u>
Item 7. <u>Management’s Discussion and Analysis of Financial Condition and Results of Operations</u>	<u>23</u>
Item 7A. <u>Quantitative and Qualitative Disclosures about Market Risk</u>	<u>34</u>
Item 8. <u>Financial Statements and Supplementary Data</u>	<u>36</u>
Item 9. <u>Changes in and Disagreements with Accountants on Accounting and Financial Disclosure</u>	<u>68</u>
Item 9A. <u>Controls and Procedures</u>	<u>68</u>
Item 9B. <u>Other Information</u>	<u>69</u>
Part III	
Item 10. <u>Directors, Executive Officers and Corporate Governance</u>	<u>69</u>
Item 11. <u>Executive Compensation</u>	<u>69</u>
Item 12. <u>Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters</u>	<u>69</u>
Item 13. <u>Certain Relationships and Related Transactions, and Directors Independence</u>	<u>69</u>
Item 14. <u>Principal Accounting Fees and Services</u>	<u>69</u>
Part IV	
Item 15. <u>Exhibits, Financial Statement Schedules</u>	<u>70</u>
Item 16. <u>Form 10-K Summary</u>	<u>73</u>

Table of Contents

PART I

ITEM 1. BUSINESS

This Annual Report on Form 10-K contains forward-looking statements. All statements other than statements of historical facts contained in this Annual Report on Form 10-K, including statements regarding our future results of operations and financial position, business strategy, plans and objectives of management for future operations, and plans for product development, launches and manufacturing are forward-looking statements. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. We discuss certain of these risks in greater detail in the "Risk Factors" section and elsewhere in this Annual Report on Form 10-K. Also, these forward-looking statements speak only as of the date of this Annual Report on Form 10-K, and we have no plans to update our forward-looking statements to reflect events or circumstances occurring after the date of this Annual Report. We caution readers not to place undue reliance upon any such forward-looking statements.

iRobot and its stylized logo, Roomba, NorthStar, Create, iAdapt, Aware, Home Base, Looj, Braava, Braava jet, AeroForce, Better Together, Mirra, vSLAM and Virtual Wall are trademarks of iRobot Corporation.

Overview

iRobot Corporation ("iRobot" or the "Company" or "we") is a leading global consumer robot company that designs and builds robots that empower people to do more both inside and outside of the home. The Company's consumer robots help people find smarter ways to clean and accomplish more in their daily lives. iRobot's portfolio of solutions features proprietary technologies for the connected home and advanced concepts in cleaning, mapping and navigation, human-robot interaction, and physical solutions. Leveraging this portfolio, iRobot's engineers are building an ecosystem of robots to empower the smart home. For more than 25 years, we have been a pioneer in the robotics and consumer products industries.

Since our founding in 1990, we have developed expertise in the disciplines necessary to design and build durable, high-performance and cost-effective robots through the close integration of software, electronics and hardware. Our core technologies serve as reusable building blocks that we adapt and expand to develop next-generation and new products, reducing the time, cost and risk associated with product development. Our significant expertise in consumer needs, robot design, engineering and smart home technologies and trends positions us to capitalize on the growth we expect in the market for robot-based consumer products.

Over the past seventeen years, we have sold more than 25 million consumer robots worldwide. During 2016, we took several steps to become more focused on our well-established consumer robot business in order to capitalize on the substantial opportunities available to us within consumer markets. 2016 was a pivotal year for iRobot as we exited our non-consumer businesses to focus solely on products for the home. In the second quarter of 2016, we completed the sale of our defense and security business and exited the remote presence business. These actions were taken to solidify our position as the leader in diversified consumer robots and to focus on key technologies, with an emphasis on software, that allow our robots to more effectively understand the homes in which they operate.

During 2017, we expanded our global operations with the acquisition of two of our major distributors in Japan and Europe. On April 3, 2017, we closed the acquisition of the iRobot-related distribution business of Sales On Demand Corporation ("SODC") based in Tokyo, Japan for approximately \$16.6 million in cash. On October 2, 2017, we closed the acquisition of our largest European distributor, Robopolis SAS ("Robopolis"), a French company, for a final purchase price, following adjustments for working capital pursuant to the agreement with Robopolis, of \$169.4 million in cash, net of acquired cash of \$38.0 million. This provided us more direct control of 75% of our global revenue through a direct presence in countries including Austria, Belgium, France, Germany, Japan, the Netherlands, Portugal and Spain.

In 2018, iRobot sold more than \$1 billion in consumer robots. The Company capitalized on incremental investments in research and development made and introduced new products in 2018. In the third quarter of 2018, iRobot introduced the Roomba i7 and i7+ in the U.S., robot vacuums that remember a home's floor plan and clean specific

rooms by name. Ushering in a new era of consumer robots, the Roomba i7+ allows customers to clean specific rooms in the home. Using Imprint™ Smart Mapping, the Roomba i7+ learns the home's floor plan, giving customers total control to choose which rooms to clean and when. When the Roomba i7+ robot vacuum is finished cleaning, it empties its own dust bin into the Clean Base™, which holds 30 bins of dirt, allowing customers to forget about vacuuming for weeks at a time.

The Roomba i7 and i7+ further extend our product ecosystem, bringing a new level of intelligence and automation to robotic vacuum cleaners with the ability to learn, map and adapt to a home's floor plan. In the third quarter of 2018, we also introduced the Roomba e5 in the U.S., a highly-featured product at a more accessible price, to our lineup. In the fourth quarter of 2018, we also introduced the Roomba e5 in markets outside of the U.S. in advance of the holiday season.

## Table of Contents

Our total revenue for 2018 was \$1,092.6 million, which represents a 23.6% increase from 2017 revenue of \$883.9 million. Domestic revenue grew \$108.4 million, primarily as a result of strong sales of the Roomba 900 and 600 series robots, as well as the significant investments in advertising media and national promotions. International revenue grew by \$100.2 million in 2018 with increases in most markets.

Our financial performance in 2019 will be driven by our continued focus as a leading global consumer robots company. Our strategy is to maintain Roomba's leadership in the robotic vacuum cleaner segment while positioning the Company as a strategic player in the emerging smart home. We expect growth to be driven by:

- deeper household penetration of Roomba globally;
- broader roll out of the Roomba i7 and i7+ which were launched in the U.S. in 2018;
- continued investment in innovation to extend our technology and product leadership;
- further adoption of Braava products through targeted marketing programs; and
- introduction of additional new products mid-year in 2019.

### Strategy

In 2002, iRobot created the home robot cleaning category with the introduction of its Roomba vacuuming robot. Today, we are a global enterprise that has sold more than 25 million consumer robots worldwide. iRobot's success in driving adoption of connected Roomba robots has created a unique opportunity to extend consumer value in the home and expand our business. Our long-term strategy is to increase the penetration of our products in existing markets, expand current products into new markets, and develop and launch new products into current and new markets. We estimate household penetration of iRobot products to be 11% in the U.S. and in the single digits globally. We believe that the current trend towards smart home and product integration provides us with a significant opportunity for product revenue growth. As our customer base grows, iRobot plans to create an ecosystem of connected robots designed to integrate with other devices. This ecosystem will create greater possibilities for new features and capacities and empower the smart home.

Global expansion is a key component of our strategy. Our relentless pursuit of product leadership, through targeted investment in key technologies and capabilities, coupled with our investments in furthering our global brand and targeted marketing initiatives, allows us to continue to maintain our leadership position in the robotic vacuum cleaner segment despite increasing competition. Our acquisitions of distributors in Japan and Europe furthered this strategic objective.

To successfully execute our 2019 plan and drive revenue diversification and significant revenue growth beyond 2019, we plan to continue to make investments in our business during the year. These investments are expected to help iRobot achieve the following goals:

- Continue to strengthen our marketing capabilities globally and accelerate worldwide consumer adoption of Roomba to maintain our market-leading position in robotic vacuum cleaners;
- Continue to develop our wet floor care business to generate a material, secondary revenue stream;
- Launch iRobot Terra, an autonomous robotic lawn mower that will re-invent the robotic lawnmower category with state-of-the-art mapping and navigation technology. In 2019, iRobot plans to make Terra available for purchase in limited quantities in Germany and for beta testing in the U.S.;
- Scale our infrastructure to support global operations and connected products;
- Explore, develop and grow adjacent non-floor care consumer robot products that can generate meaningful diversified revenue streams; and
- Make continued operational improvements that can reduce product and operating costs.

Key pillars of our strategy include:

**Technology:** As a leading global consumer robotics company, iRobot must develop and maintain best-in-class technology in the areas of cleaning, mapping and navigation. In 2019, iRobot plans to take steps towards expanding its product lines with new products that will deliver innovative solutions to improve cleaning performance, efficiency and ease-of-use. Mapping and navigation continues to be the core focus for iRobot. Consumer robots that can map and are spatially aware create a unique and differentiating opportunity to grow consumer value.

**Brand:** iRobot enjoys consistently high brand awareness and high purchase intent in major markets around the world. Along with high awareness, consumers consider the iRobot brand and our products to be premium, innovative and of

high quality. These favorable impressions come as a result of the millions of consumers around the world who own iRobot products and an even greater number who are aware of the brand through advertising and the positive word-of-mouth from existing owners.

## Table of Contents

**Portfolio:** Our strategy includes building a portfolio of investments, including physical platforms, digital and data capabilities, to diversify across domestic and foreign markets and delivering a steady progression of innovation and growth over time. To achieve this, we plan to focus on developing digital, data and physical products that continue to leverage connectivity and spatial intelligence to deliver meaningful benefits to users. In 2018, we launched Roomba i7 and i7+, introducing Imprint™ Smart Mapping, a smart mapping technology that allows users to control which rooms are cleaned and when. This new intelligence platform enables rapid-paced innovation to continuously deliver new intelligence-based features sets to iRobot consumers. The initial set of features enables the connected robots to communicate with consumers to help optimize their personal cleaning experience. The intelligence platform is focused on personalization, learning and prediction. Customers can now be informed when specific maintenance is needed, make suggestions on personalized cleaning schedules and optimize charging.

**Talent:** Our employees are the most important driver of who we are. Our success, diversity and reputation as developers of great talent make us an attractive employer to the top talent all over the world. Talent recruitment and retention continues to be at the core of what we accomplish as we map out our culture and work towards achieving our vision. We are also growing our company to meet organization needs by strategically investing in our employees around the globe.

### Technology

In 2016, iRobot narrowed its focus to the consumer market and made increased, but disciplined investments in advancing mapping and navigation, and user interaction including cloud and app development and cleaning efficacy. From the launch of Braava jet, to the introduction of a lower cost Visual Simultaneous Localization and Mapping, or vSLAM, solution in Roomba 960, these strategic investments in technology had an immediate impact on product diversification, performance and market expansion. In 2017, we introduced two new connected products to the product portfolio bringing the advantages of cloud connectivity to more consumers. With the iRobot HOME App, we also delivered our robots' maps directly to our customers through the launch of post-mission cleaning maps. In 2018, we introduced three new connected products including a new intelligence platform with the ability to learn, map and adapt to a home's floor plan, as well as empty its own dust bin into the Clean Base. We believe the improved performance of our connected robots, and the data sourced from our maps, will accelerate new product development and digital partnerships for the smart home.

We plan to continue to leverage opportunities, enabled by our growing connected product portfolio, to invest in developing technologies and interfaces for our products to provide a convenient and personalized user experience. At the foundation of our effort to drive enhanced user experience has been the deployment of our new connectivity and cloud infrastructure through AWS. We made this investment to enable us to scale our connected products globally, with increased access to valuable cloud services and applications to support future product features, and to integrate with other devices in the smart home. iRobot plans to continue to identify additional ways to advance the smart home experience by enabling a broader understanding of the home's space, enabled through Roomba's spatial awareness of the home.

From robotic vacuum cleaning to mopping and lawn care, we are dedicated to developing market-leading solutions that provide compelling value to customers worldwide. From our customers' perspective, the core value of our robots is the ability to efficiently and effectively perform a physical mission - the task for which that robot was initially purchased. In addition, we focus on features that allow the robots to perform longer, without consumer interaction. Our goal is to deliver maximum autonomy and effectiveness of the mission.

### Products

We sell various products that are designed for use in and around the home. Our current consumer products are focused on both indoor and outdoor cleaning applications. We believe our consumer products provide value to our customers by delivering a better way to clean and by freeing people from repetitive home cleaning tasks. To ensure the continued acceptance of our robots, we will continue to invest in technology necessary to further improve their capabilities. The opportunity for robots working together to accomplish multiple tasks with little intervention from the user is expected to be a significant step forward. Consumers can already use third party integration software to operate Roomba. We believe the mapping and spatial awareness capabilities of our consumer robots will play an important role in allowing other smart devices in the home to more seamlessly work together and advance the next-generation



smart home.

We currently offer multiple Roomba floor vacuuming robots at varying price points ranging from approximately \$299 to \$1,099 based upon features and performance characteristics. Roomba's design allows it to clean under toe kicks, beds and other furniture, resulting in cleaner floors since the Roomba can access more of the floor than standard upright vacuum cleaners. In addition, Roomba eliminates the need to manually vacuum for many users - it cleans automatically upon the push of a button or through scheduling.

In 2018, we launched several new robotic vacuum cleaners:

- Roomba i7 brings a new level of intelligence and automation to robotic vacuum cleaners with the ability to learn, map and adapt to a home's floor plan;

5

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## Table of Contents

Roomba i7+ includes all the features of i7 plus the ability for the robot to empty its own bin into the Clean Base with Automatic Dirt Disposal. This brings a level of automation that allows users to forget about vacuuming for weeks at a time; and

Roomba e5 is an affordable, highly-featured product which includes WiFi connectivity, intelligent navigation with Dirt Detect technologies and iRobot's dual multi-surface rubber brushes.

In addition to the newly launched products, we continue to offer an assortment of other robotic vacuum cleaner offerings. Roomba 900 series robots help keep floors cleaner throughout the entire home with intelligent visual navigation and iRobot HOME App control with wireless connectivity. The Roomba 800 series robots offer our AEROForce technology which incorporates brushless, counter-rotating extractors that amplify suction for superior performance over bristle brushes, while requiring less maintenance than previous Roomba models. The Roomba 600 series robots offer a three-stage cleaning system which thoroughly vacuums every section of the floor multiple times, as well as an improved brush design enabling the robot to better handle fibers like hair, pet fur, lint and carpet fuzz. We currently offer the Braava family of automatic floor mopping robots designed exclusively for hard-surface floors. These robots provide a different cleaning approach than our Roomba products. The Braava robots, priced at \$199 and \$299, automatically dust and damp mop hard-surface floors using popular cleaning cloths or our specially designed reusable microfiber cloths, and include a special reservoir that dispenses liquid throughout the cleaning cycle to keep the cloth damp. Braava jet works with Braava jet Cleaning Pads to tackle a range of hard-floor cleaning jobs, from wet mopping and damp sweeping to simple dusting.

Our Mirra Pool Cleaning Robot is used to clean residential pools and removes debris as small as two microns from pool floors, walls and stairs. Mirra is brought to market under the iRobot brand through a relationship with Aquatron, Inc., which develops and manufactures the pool cleaning robots.

In 2019, we plan to capitalize on the incremental investments we made in 2017 and 2018 with the introduction of Terra, and additional new products midyear 2019. In January 2019, we announced Terra, an autonomous robotic lawn mower that we believe will revolutionize the robotic lawnmower category with state-of-the-art mapping and navigation technology. Terra mows like people do, intelligently navigating the yard and cutting efficiently in systematic rows. We plan to make Terra available in limited quantities for purchase in Germany and for beta testing in the U.S. in 2019.

### Strategic Alliances

In addition to our internal technology development, we leverage relevant robotic technologies through licensing, acquisitions, venture investments and/or other partnerships. These strategic alliances are an important part of our product development, advanced research and distribution strategies. We rely on strategic alliances to provide technology and complementary product offerings to drive market adoption of our robotic products.

We seek to form relationships with organizations that can provide best-in-class technology or market advantages for establishing iRobot technology. This includes expanded collaborations with other smart home technologies that may leverage spatial understanding from our products to provide end users with a more intuitive and personalized smart home experience.

### Sales and Distribution Channels

We sell our consumer products through distributor and retail sales channels, as well as our online store. For the fiscal years ended December 29, 2018, December 30, 2017, and December 31, 2016, sales to non-U.S. customers accounted for 48.7%, 48.8%, and 51.2% of total revenue, respectively. For the fiscal years ended December 29, 2018 and December 30, 2017, the Company generated 17.3% and 13.5% of total revenue from one of its retailers (Amazon), respectively. For the fiscal year ended December 31, 2016, the Company generated 12.9%, 12.3% and 10.4% of total revenue from SODC, Robopolis, and Amazon, respectively. In April 2017, the Company acquired the iRobot-related distribution business of SODC, and in October 2017, the Company acquired Robopolis.

In the United States and Canada, we sell our consumer products primarily through a network of national retailers. Certain smaller domestic retail operations are supported by distributors to whom we sell our products directly. With the acquisition of SODC and Robopolis, iRobot now directly services retailers in Japan and countries that were previously serviced by Robopolis, including Austria, Belgium, France, Germany, Netherlands, Portugal and Spain. In support of sales in the United States, Canada, Japan and the seven European countries previously serviced by

Robopolis, we maintain in-house sales, marketing and product management teams. In China, retailers are serviced by two local distributors. Due to the special needs of this market, we maintain a local sales, marketing and product team to support the distributors, manage the local marketing plan and meet product needs. Throughout the rest of the world, our products are sold primarily through a network of in-country distributors who resell to retail stores in their respective countries. These distributors are supported by our international sales and product marketing team.

## Table of Contents

Our retail and distributor networks are our primary distribution channels for our products. We have established valuable databases and customer lists that allow us to target directly those consumers most likely to purchase a new robot or upgrade. With Wi-Fi connectivity implemented across Roomba 690 and higher models, iRobot can more directly provide customer support via the iRobot HOME App. In addition, connectivity enables us to provide direct marketing material and push new features/fixes to robots in the field. We believe we maintain a close connection with our customers in each of our markets, which provides an enhanced position from which to improve our distribution and product offerings.

### Customer Service and Support

We also provide ongoing customer service and support. Consumer customer service representatives, the majority of whom are employees of outsourced service organizations or our distribution partners, are extensively trained on the technical intricacies of our consumer products. Because of the connected nature of our new robot technology, our customer service representatives are able to access robot information remotely to identify issues and behaviors relevant in troubleshooting and address customer questions and concerns.

### Marketing and Brand

We market our consumer robots to end-user customers through our extensive network of retail partners with the support of our sales and marketing teams as well as in collaborations with in-country distributors. In addition, we sell directly to consumers through iRobot's e-commerce channels around the world. For consumers seeking information about our products, the iRobot website showcases our brand, allows consumers to learn more about our Roomba and Braava products, including the latest product innovations, and enables direct-to-consumer sales. The website also plays an important after-sales role for owners seeking spare parts and accessories, as well as a location for useful FAQ's and trouble-shooting solutions.

Our marketing strategy is to drive consumer awareness and interest in Roomba robot vacuums and Braava robot mops. Our sales and marketing expenses represented 19.3%, 18.3% and 17.4% of our total revenue in 2018, 2017 and 2016, respectively. We expect to continue to invest in national advertising, consumer and industry trade shows, direct marketing and public relations to further build brand awareness.

In 2017, iRobot launched our first ever Braava national television advertising campaign in the U.S., and category revenue grew 65% in 2017 over full-year 2016. In 2018, the momentum generated by this campaign continued driving U.S. revenue growth. We have built a trusted, recognized brand by providing high-quality robots. Customer word-of-mouth has been a significant driver of our brand's success to date. iRobot owner loyalty encourages repurchase, and positive customer experiences inspire others to adopt our products. Our marketing, public relations and consumer service efforts fuel this word-of-mouth momentum.

In April 2017, we acquired SODC, launching four new iRobot offices in Japan. In October 2017, we acquired our largest European distributor, Robopolis, launching new iRobot offices in seven countries, including Austria, Belgium, France, Germany, Netherlands, Portugal and Spain. These acquisitions afford us greater control and consistency in our approach to all market activities including sales, marketing, branding, channel relationships and customer service.

### Manufacturing

Our core competencies are the design, development and marketing of robots. Our manufacturing strategy is to outsource non-core competencies, such as the production of our robots, to third-party entities skilled in manufacturing. By relying on the outsourced manufacture of our robots, we can focus our engineering expertise on the design of robots and associated technologies.

Manufacturing a new product requires a close relationship between our product designers and the manufacturing organizations. Using multiple engineering techniques, our products are introduced to the selected production facility at an early-development stage and the feedback provided by manufacturing is incorporated into the design before tooling is finalized and mass production begins. As a result, we believe that we can significantly reduce the time required to move a product from its design phase to mass production deliveries, with improved quality and yields.

We outsource the manufacturing of our consumer products to three contract manufacturers, each of which manufactures our robots at a single plant in Southern China. In addition, one of our contract manufactures plans to begin partial production outside of China beginning in 2019. Our production processes give us the capacity to produce up to 20,000 robots a day, helping us to meet demand for peak seasons.

Under our agreements with our contract manufacturers, manufacturers supply us with specified quantities of products that align with demand forecasts that we establish based upon historical trends and analysis from our sales and product management functions.

7

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## Table of Contents

### Research and Development

We believe that our future success depends upon our ability to continue to develop new products and product accessories, and enhancements to and applications for our existing products. For the years ended December 29, 2018, December 30, 2017 and December 31, 2016, our research and development expenses were \$140.6 million, \$113.1 million and \$79.8 million, or 12.9%, 12.8% and 12.1% of revenue, respectively. We intend to continue our investment in research and development to respond to and anticipate customer needs, and to enable us to introduce new products over the next few years that will continue to address our existing and adjacent market sectors.

Our research and development is conducted by teams dedicated to particular projects. Our research and development efforts are primarily located at our headquarters in Bedford, Massachusetts and our office in Pasadena, California.

### Competition

The market for robots is highly competitive, rapidly evolving and subject to changing technologies, shifting customer needs and expectations and the likely increased introduction of new products. A number of established companies have developed or are developing robots that will compete directly with our product offerings, and many of our competitors have significantly more financial and other resources than we possess. Our competitors include consumer electronics companies such as Samsung, LG, Xiaomi, Cecotec and Shark, traditional floor cleaning brands with robotic offerings such as Dyson, Bissell and Hoover; and firms primarily focused on robotic cleaning such as Ecovacs and iLife.

While we believe many of our customers purchase our Roomba floor vacuuming robots and Braava mopping robots as a supplement to, rather than a replacement for, their traditional vacuum cleaners and wet floor cleaning methods, we do compete in some cases with providers of traditional cleaning products.

We believe that the principal competitive factors in the market for robots include product features, performance for the intended mission, cost of purchase, total cost of system operation, including maintenance and support, ease of use, integration with existing equipment, quality, reliability, customer support, brand and reputation.

Our ability to remain competitive will depend to a great extent upon our ongoing performance in the areas of product development and customer support. We cannot provide assurance that our products will continue to compete favorably or that we will be successful in the face of increasing competition from new products and enhancements introduced by existing competitors or new companies entering the markets in which we provide products.

### Intellectual Property

We believe that our continued success depends in large part on our proprietary technology, the technical competence and ability of our employees to continue to innovate. The ownership of intellectual property rights is an important factor in our business. This includes patents, copyrights, trademarks, service marks, trade dress and other forms of intellectual property rights in the U.S. and a number of foreign countries. The Company currently holds a significant number of patents and has filed numerous additional patent applications. As of December 29, 2018, we held 460 U.S. patents, more than 800 foreign patents, additional design registrations, and more than 500 patent applications pending worldwide. While our U.S. patents will begin to expire in 2022, no single intellectual property right is solely responsible for protecting our products. We will continue to file and prosecute patent (or design registration, as applicable) applications when and where appropriate to attempt to protect our rights in our proprietary technologies. We also encourage our employees to continue to invent and develop new technologies so as to maintain our competitiveness in the marketplace. It is possible that our current patents, or patents which we may later acquire, may be successfully challenged or invalidated in whole or in part. It is also possible that we may not obtain issued patents for our pending patent applications or other inventions we seek to protect. In that regard, we sometimes permit certain intellectual property to lapse or go abandoned under appropriate circumstances. It is also possible that we may not develop proprietary products or technologies in the future that are patentable, or that any patent issued to us may not provide us with any competitive advantages, or that the patents of others will harm or altogether preclude our ability to do business.

Our registered U.S. trademarks include iRobot and its stylized logo, Roomba, NorthStar, Create, iAdapt, Aware, Home Base, Looj, Braava, Braava jet, AeroForce, Better Together, Mirra, vSLAM and Virtual Wall. Our marks iRobot, Roomba, Braava, Braava jet, Virtual Wall, and certain other trademarks, have also been registered in selected foreign countries.

Our means of protecting our proprietary rights may not be adequate, and our competitors may independently develop technology that is similar to ours. Legal protections afford only limited protection for our technology. The laws of many countries do not protect our proprietary rights to as great an extent as do the laws of the United States. Despite our efforts to protect our proprietary rights, unauthorized parties have in the past attempted, and may in the future attempt, to copy aspects of our products or to obtain and use information that we regard as proprietary. Some of our competitors seek to compete primarily through aggressive pricing and low-cost structures while infringing on our intellectual property. In 2017, we initiated a multi-party litigation at the U.S. International Trade Commission ("ITC") as well as in federal district court in Massachusetts based on claims of patent infringement. In November 2018, the ITC issued a Notice of Final Determination confirming that U.S. Patent No. 9,038,233 is valid and infringed, and that the infringing products for bObsweep, Inc., bObsweep USA, Hoover, and

## Table of Contents

Shenzhen Silver Star Intelligent Technology Co., Ltd. should be barred from importation into the United States. Prior to the issuance of the Final Determination, iRobot entered into confidential settlements with Shenzhen Zhiyi Technology Co. Ltd. d/b/a iLife, Micro-Star International, Black & Decker, and Matsutek. There is no guarantee that we will prevail on other patent infringement claims against third parties. Third parties may also design around our proprietary rights, which may render our protected products less valuable, if the design around is favorably received in the marketplace. In addition, if any of our products or the technology underlying our products is covered by third-party patents or other intellectual property rights, we could be subject to various legal actions. We cannot assure you that our products do not infringe patents held by others or that they will not in the future. We have received in the past communications from third parties relating to technologies used in our various robot products that have alleged infringement of patents or violation of other intellectual property rights. Some of these allegations have resulted in actions filed against iRobot in foreign jurisdictions. In response to these communications, we have contacted these third parties to convey our good faith belief that we do not infringe the patents in question or otherwise violate those parties' rights. Where an action has been filed, we will defend iRobot against the allegations. We cannot assure you that we will not receive further correspondence from these parties, not be subject to additional allegations of infringement from others, and cannot assure you that iRobot will prevail in any ongoing or subsequently filed actions. Litigation may be necessary to enforce our intellectual property rights, to protect our trade secrets, to determine the validity and scope of the proprietary rights of others, or to defend against claims of infringement or invalidity, misappropriation, or other claims. Any such litigation could result in substantial costs and diversion of our resources. Moreover, any settlement of or adverse judgment resulting from such litigation could require us to obtain a license to continue to use the technology that is the subject of the claim, or otherwise restrict or prohibit our use of the technology. Any required licenses may not be available to us on acceptable terms, if at all. If we attempt to design around the technology at issue or to find another provider of suitable alternative technology to permit us to continue offering applicable software or product solutions, our continued supply of software or product solutions could be disrupted or our introduction of new or enhanced software or products could be significantly delayed.

### Seasonality

Historically, we have experienced higher revenue in the second half of the year compared to the first half of the year due in large part to seasonal holiday demand. In 2018, 2017 and 2016, our second-half consumer product revenue represented 59.4%, 60.2% and 57.5% of our annual consumer product revenue, respectively. We have also experienced higher selling and marketing expenses in the second half of the year compared to the first half of the year due to increase marketing campaigns to support seasonal holiday demand. In 2018, 2017 and 2016, our second-half selling and marketing expense represented 63.3%, 61.3% and 57.4% of our annual selling and marketing expense, respectively.

### Regulations

Our business requires compliance with a variety of laws and regulations in the United States and abroad regarding privacy, data protection, and data security. In particular, we are subject to numerous U.S. federal, state, and local laws and regulations and foreign laws and regulations regarding privacy and the collection, sharing, use, processing, disclosure, and protection of personal information and other user data. In addition, the global nature of our business operations also creates various domestic and foreign regulatory challenges and subject us to laws and regulations such as the U.S. Foreign Corrupt Practices Act, or FCPA, the U.K. Bribery Act, and similar anti-bribery and anti-corruption laws in other jurisdictions. Our products are also subject to U.S. export controls, including the U.S. Department of Commerce's Export Administration Regulations and various economic and trade sanctions regulations established by the Treasury Department's Office of Foreign Assets Controls.

The laws in each of these areas - in particular those related to data privacy - are continually changing and evolving in unpredictable ways. New laws and regulations in any of these areas, as well as compliance with these laws (and their derivatives) may have an adverse effect on our business. If we fail to comply with these laws, we may be subject to significant liabilities and other penalties.

We are also subject to international and U.S. federal, state, and local laws and regulations designed to protect the environment, regulate energy efficiency and to regulate the discharge of materials into the environment. We believe that our policies, practices, and procedures are properly designed to prevent unreasonable risk of environmental



damage and associated financial liability. To date, environmental control regulations have not had a significant adverse effect on our overall operations.

Prior to our divestiture of the defense and security business unit in April 2016, we were subject to various government regulations, including various U.S. federal government regulations as a contractor and subcontractor to the U.S. federal government. We continue to remain subject to certain of these regulations only as they pertain to matters related to our operation of the defense and security business unit prior to our completion of the sale of this business.

#### Employees

As of December 29, 2018, we had 1,032 full-time employees. Approximately 31% of our employees are based outside of the United States. None of our employees in the United States are represented by a labor union. In certain foreign subsidiaries,

Table of Contents

labor unions or workers' councils represent some of our employees. We believe that we have a good relationship with our employees.

Available Information

We were incorporated in California in August 1990 under the name IS Robotics, Inc. and reincorporated as IS Robotics Corporation in Massachusetts in June 1994. We reincorporated in Delaware as iRobot Corporation in December 2000. We conduct operations and maintain a number of subsidiaries in the United States and abroad, including operations in Austria, Belgium, China, France, Germany, Hong Kong, Japan, Netherlands, Portugal, Spain, and the United Kingdom. We also maintain iRobot Securities Corporation, a Massachusetts securities corporation, to invest our cash balances on a short-term basis. Our website address is [www.irobot.com](http://www.irobot.com). 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 Securities Exchange Act of 1934 are available free of charge through the investor relations page of our website as soon as reasonably practicable after we electronically file such material with, or furnish it to, the Securities and Exchange Commission. Alternatively, these reports may be accessed at the SEC's website at [www.sec.gov](http://www.sec.gov).

ITEM 1A. RISK FACTORS

We operate in a rapidly changing environment that involves a number of risks, some of which are beyond our control. This discussion highlights some of the risks which may affect future operating results. These are the risks and uncertainties we believe are most important for you to consider. Additional risks and uncertainties not presently known to us, which we currently deem immaterial or which are similar to those faced by other companies in our industry or business in general, may also impair our business operations. If any of the following risks or uncertainties actually occurs, our business, financial condition and operating results would likely suffer.

We operate in an emerging market, which makes it difficult to evaluate our business and future prospects.

Robots represent a new and emerging market. Accordingly, our business and future prospects are difficult to evaluate. We cannot accurately predict the extent to which demand for consumer robots will increase, if at all. You should consider the challenges, risks and uncertainties frequently encountered by companies using new and unproven business models in rapidly evolving markets. These challenges include our ability to:

- generate sufficient revenue and gross margin to maintain profitability;
- acquire and maintain market share in our consumer market;
- attract and retain customers of our consumer robots;
- attract and retain engineers and other highly-qualified personnel; and
- expand our product offerings beyond our existing robots.

If we fail to successfully address these and other challenges, risks and uncertainties, our business, results of operations and financial condition would be materially harmed.

Our business currently depends solely on our consumer robots, and our sales growth and operating results would be negatively impacted if we are unable to enhance our current consumer robots or develop new consumer robots at competitive prices or in a timely manner, or if the consumer robot market does not achieve broad market acceptance.

We primarily derive our revenue from consumer robot sales. For the foreseeable future, we expect that our revenue will be derived solely from sales of consumer robots in general, and home floor care products in particular.

Accordingly, our future success depends upon our ability to further penetrate the consumer home care market, to enhance our current consumer products and to develop and introduce new consumer products offering enhanced performance and functionality at competitive prices. The development and application of new technologies involves time, substantial costs and risks. Our inability to achieve significant sales of our newly introduced robots, or to enhance, develop and introduce other products in a timely manner, or at all, would materially harm our sales growth and operating results.

Even if consumer robots gain wide market acceptance, our robots may not adequately address market requirements and may not continue to gain market acceptance. If robots generally, or our robots specifically, do not gain wide market acceptance, we may not be able to achieve our anticipated level of growth, and our revenue and results of operations would suffer.



Table of Contents

We face intense competition from other providers of robots, including diversified technology providers, as well as competition from providers offering alternative products, which could negatively impact our results of operations and cause our market share to decline.

A number of companies have developed or are developing robots that will compete directly with our product offerings. Many current and potential competitors have substantially greater financial, marketing, research and manufacturing resources than we possess, and there can be no assurance that our current and future competitors will not be more successful than us. We also face competition from manufacturers of lower-cost devices, which may further drive down the average selling price in the marketplace for floor cleaning products. Moreover, while we believe many of our customers purchase our floor vacuuming robots as a supplement to, rather than a replacement for, their traditional vacuum cleaners, we also compete in some cases with providers of traditional vacuum cleaners. The global market for robots is highly competitive, rapidly evolving and subject to changing technologies, shifting customer needs and expectations and the likely increased introduction of new products. Our ability to remain competitive will depend to a great extent upon our ongoing performance in the areas of product development and customer support.

In the event that the robot market expands further, we expect that competition will intensify as additional competitors enter the market and current competitors expand their product lines. Companies competing with us may introduce products that are competitively priced, have increased performance or functionality, or incorporate technological advances that we have not yet developed or implemented. Increased competitive pressure could result in a loss of sales or market share or cause us to lower prices for our products, any of which would harm our business and operating results.

Some of our competitors may aggressively discount their products and services in order to gain market share, which could result in pricing pressures, reduced profit margins, lost market share, or a failure to grow market share for us. In addition, new products may have lower selling prices or higher costs than legacy products, which could negatively impact our gross margins and operating results.

We cannot assure you that our products will continue to compete favorably or that we will be successful in the face of increasing competition from new products and enhancements introduced by existing competitors or new companies entering the markets in which we provide products. Our failure to compete successfully could cause our revenue and market share to decline, which would negatively impact our results of operations and financial condition.

If we fail to enhance our brand, our ability to expand our customer base will be impaired and our operating results may suffer.

We believe that developing and maintaining awareness of the iRobot brand is critical to achieving widespread acceptance of our existing and future products and is an important element in attracting new customers. Furthermore, we expect the importance of global brand recognition to increase as competition develops. If customers do not perceive our products to be of high quality, our brand and reputation could be harmed, which could adversely impact our financial results. In addition, brand promotion efforts may not yield significant revenue or increased revenue sufficient to offset the additional expenses incurred in building our brand. Maintaining, protecting, and enhancing our brand may require us to make substantial investments, and these investments may not be successful. If we fail to successfully maintain, promote, and position our brand and protect our reputation, or if we incur significant expenses in this effort, our business, financial condition and operating results may be adversely affected.

Any efforts to expand our product offerings beyond our current markets may not succeed, which could negatively impact our operating results.

Efforts to expand our product offerings beyond our current markets may not succeed and may divert management resources from existing operations and require us to commit significant financial resources to an unproven business, either of which could significantly impair our operating results. Moreover, efforts to expand beyond our existing markets may never result in new products that achieve market acceptance, create additional revenue or become profitable.

Our financial results often vary significantly from quarter-to-quarter due to a number of factors, which may lead to volatility in our stock price.

Our quarterly revenue and other operating results have varied in the past and are likely to continue to vary significantly from quarter-to-quarter in the future. These fluctuations may be due to numerous factors including:

- the size, timing and mix of orders from retail stores and distributors for our consumer robots;
- the mix of products that we sell in the period;
- disruption of supply of our products from our manufacturers;
- disruptions to our supply chain due to inclement weather, labor disruptions or other factors beyond our control;

## Table of Contents

- seasonality in the sales of our products;
- the timing of new product introductions;
- unanticipated costs incurred in the introduction of new products;
- costs and availability of labor and raw materials;
- costs of freight;
- changes in our rate of returns for our consumer products;
- our ability to introduce new products and enhancements to our existing products on a timely basis; and
- warranty costs associated with our consumer products.

We cannot be certain that our revenues will grow at rates that will allow us to maintain profitability during every fiscal quarter, or even every fiscal year. We base our current and future expense levels on our internal operating plans and sales forecasts, including forecasts of holiday sales for our consumer products. A significant portion of our operating expenses, such as research and development expenses, certain marketing and promotional expenses and employee wages and salaries, do not vary directly with sales and are difficult to adjust in the short term. As a result, if sales for a quarter are below our expectations, we might not be able to reduce operating expenses for that quarter. Accordingly, a sales shortfall during a fiscal quarter, and in particular the fourth quarter of a fiscal year, could have a disproportionate effect on our operating results for that quarter or that year. Because of quarterly fluctuations, we believe that quarter-to-quarter comparisons of our operating results are not necessarily meaningful. Moreover, our operating results may not meet expectations of equity research analysts or investors. If this occurs, the trading price of our common stock could fall substantially either suddenly or over time.

We depend on single source manufacturers, and our reputation and results of operations would be harmed if these manufacturers fail to meet our requirements.

We currently depend largely on several single source contract manufacturers for the manufacture of certain of our products. All contract manufacturers for our current robots are currently located in China. These manufacturers supply substantially all of the raw materials and provide all facilities and labor required to manufacture our products. If these companies were to terminate their arrangements with us or fail to provide the required capacity and quality on a timely basis, we would be unable to manufacture our products until replacement contract manufacturing services could be obtained or volume transferred to an alternative manufacturing partner, each of which is a costly and time-consuming process. We cannot assure you that we would be able to establish alternative manufacturing arrangements on acceptable terms or in a timely manner.

Our reliance on these contract manufacturers involves certain risks, including the following:

- lack of direct control over production capacity and delivery schedules;
- lack of direct control over quality assurance, manufacturing yields and production costs;
- lack of enforceable contractual provisions over the production and costs of consumer products;
- risk of loss of inventory while in transit;
- risks associated with international commerce, including unexpected changes in legal and regulatory requirements, changes in tariffs and trade policies, risks associated with the protection of intellectual property and political and economic instability; and
- risks that our attempts to add additional manufacturing resources may be significantly delayed and thereby create disruptions in production of our products.

Any interruption in the manufacture of our products would be likely to result in delays in shipment, lost sales and revenue and damage to our reputation in the market, all of which would harm our business and results of operations. In addition, while our contract obligations with our contract manufacturers in China are typically denominated in U.S. dollars, changes in currency exchange rates could impact our suppliers and increase our prices.

If we fail to maintain or increase consumer robot sales through our distribution channels, our operating results would be negatively impacted.

We do not have long-term contracts regarding purchase volumes with any of our retail partners. As a result, purchases generally occur on an order-by-order basis, and the relationships, as well as particular orders, can generally be terminated or otherwise materially changed at any time prior to delivery, by our retail partners. A decision by a major retail partner, whether motivated by competitive considerations, financial difficulties, economic conditions or

otherwise, to decrease its purchases from us, to reduce the shelf space for our products or to change its manner of doing business with us could significantly damage our consumer product sales and negatively impact our business, financial condition and results of operations. In addition, during recent years, various retailers, including some of our partners, have experienced significant changes and difficulties, including consolidation of ownership, increased centralization of purchasing decisions, restructuring, bankruptcies and liquidations. These

Table of Contents

and other financial problems of some of our retailers increase the risk of extending credit to these retailers. A significant adverse change in a retail partner relationship with us or in a retail partner's financial position could cause us to limit or discontinue business with that partner, require us to assume more credit risk relating to that partner's receivables or limit our ability to collect amounts related to previous purchases by that partner, all of which could harm our business and financial condition. Disruption of the iRobot on-line store could also decrease our consumer robot sales.

If critical components of our products that we currently purchase from a small number of suppliers become unavailable, we may incur delays in shipment, which could damage our business.

We and our outsourced manufacturers obtain hardware components, various subsystems, raw materials and batteries from a limited group of suppliers, some of which are sole suppliers. We do not have any long-term agreements with these suppliers obligating them to continue to sell components or products to us. If we or our outsourced manufacturers are unable to obtain components from third-party suppliers in the quantities and of the quality that we require, on a timely basis and at acceptable prices, we may not be able to deliver our products on a timely or cost-effective basis to our customers, which could cause customers to terminate their contracts with us, reduce our gross margin and seriously harm our business, results of operations and financial condition. Moreover, if any of our suppliers become financially unstable, we may have to find new suppliers. It may take several months to locate alternative suppliers, if required, or to re-tool our products to accommodate components from different suppliers. We may experience significant delays in manufacturing and shipping our products to customers and incur additional development, manufacturing and other costs to establish alternative sources of supply if we lose any of these sources. We cannot predict if we will be able to obtain replacement components within the time frames that we require at an affordable cost, or at all.

Cybersecurity risks could adversely affect our business and disrupt our operations.

The threats to network and data security are increasingly diverse and sophisticated. Despite our efforts and processes to prevent breaches, our devices, as well as our servers, computer systems, and those of third parties that we use in our operations are vulnerable to cybersecurity risks, including cyber attacks such as viruses and worms, phishing attacks, denial-of-service attacks, and similar disruptions from unauthorized tampering with our servers and computer systems or those of third parties that we use in our operations, which could lead to interruptions, delays, loss of critical data, and loss of consumer confidence. In addition, we may be the target of email scams that attempt to acquire sensitive information or company assets. Despite our efforts to create security barriers to such threats, we may not be able to entirely mitigate these risks. Any cyber attack that attempts to obtain our data and assets, disrupt our service, or otherwise access our systems, or those of third parties we use, if successful, could adversely affect our business, operating results, and financial condition, be expensive to remedy, and damage our reputation.

If we suffer data breaches involving the designs, schematics or source code for our products, our brand, business and financial results could be adversely affected.

We attempt to securely store our designs, schematics and source code for our products as they are created. A breach, whether physical, electronic or otherwise, of the systems on which this sensitive data is stored could lead to damage or piracy of our products. If we or our partners are subject to data security breaches, we may have a loss in sales or increased costs arising from the restoration or implementation of additional security measures, either of which could materially and adversely affect our brand, business and financial results.

We collect, store, process, and use customer data, including certain personal and robot-specific information, which subjects us to governmental regulation and other legal obligations related to privacy, information security, and data protection, and any security breaches or our actual or perceived failure to comply with such legal obligations could harm our business.

Our latest Roomba products, as well as additional products in development, collect, store, process, and use certain customer data, which subjects us to governmental regulation and other legal obligations related to privacy, information security, and data protection, and any security breaches or our actual or perceived failure to comply with such legal obligations could harm our business. We collect, store, process, and use personal information and other user data, and we rely on third parties that are not directly under our control to do so as well. If our security measures, some of which are managed by third parties, are breached or fail, unauthorized persons may be able to obtain access to



or acquire sensitive user data, which may expose us to a risk of loss, litigation, or regulatory proceedings. Depending on the nature of the information compromised, in the event of a data breach or other unauthorized access to or acquisition of our user data, we may also have obligations to notify users about the incident, and we may need to provide some form of remedy, such as a subscription to a credit monitoring service, for the individuals affected by the incident. In addition, the regulatory environment surrounding information security and privacy is increasingly demanding, with frequent imposition of new and changing requirements. For example, the European Union's General Data Protection Regulation ("GDPR"), which became effective in May 2018, imposes significant new requirements on

Table of Contents

how we collect, process and transfer personal data, as well as significant fines for non-compliance. Compliance with changes in privacy and information security laws and standards may result in significant expense due to increased investment in technology and the development of new operational processes. Moreover, a growing number of legislative and regulatory bodies have adopted consumer notification requirements in the event of unauthorized access to or acquisition of certain types of personal data. Such breach notification laws continue to evolve and may be inconsistent from one jurisdiction to another. Complying with these obligations could cause us to incur substantial costs and could increase negative publicity surrounding any incident that compromises user data.

Further, we may be or become subject to data localization laws mandating that data collected in a foreign country be processed and stored only within that country. Russia adopted such a law in 2014, and it is expected that China will do so as well. If China or another country in which we have customers were to adopt a data localization law, we could be required to expand our data storage facilities there or build new ones in order to comply. The expenditure this would require, as well as costs of compliance generally, could harm our financial condition.

Acquisitions and potential future acquisitions may be difficult to integrate, divert the attention of key personnel, disrupt our business, dilute stockholder value and impair our financial results.

As part of our business strategy, we have recently acquired, and we intend to continue to consider additional acquisitions of companies, technologies and products that we believe could accelerate our ability to compete in our core markets or allow us to enter new markets. For example, in April 2017, we acquired the iRobot-related distribution business of Sales On Demand Corporation ("SODC"), a privately-held corporation based in Tokyo, Japan, and in October 2017, we acquired Robopolis SAS ("Robopolis"), a privately-held corporation distributing iRobot products from offices in seven European countries.

Acquisitions and combinations are accompanied by a number of risks, including the difficulty of integrating the operations and personnel of the acquired companies, the potential disruption of our ongoing business, the potential distraction of management, potential difficulty in managing and maintaining key customer relationships, expenses related to the acquisition and potential unknown liabilities associated with acquired businesses. Any inability to integrate completed acquisitions or combinations in an efficient and timely manner could have an adverse impact on our results of operations. In addition, we may not be able to recognize any expected synergies or benefits in connection with our recently completed acquisitions of SODC or Robopolis or any future acquisitions or combinations. If we are not successful in completing acquisitions or combinations that we may pursue in the future, we may incur substantial expenses and devote significant management time and resources without a successful result. In addition, future acquisitions could require use of substantial portions of our available cash or result in dilutive issuances of securities.

Our service providers may experience business interruptions, delays, or quality control issues, which may negatively impact our business and operating results.

As we expand our operations, we expect to use additional enterprise resource planning systems and account and technology service providers that may also be essential to managing our business. Our ability to manage our business would suffer if one or more of our providers suffer an interruption in their business, or experience delays, disruptions or quality control problems in their operations, or we have to change or add systems and services. While we conduct reasonable diligence on our service providers, we may not always be able to control the quality of the systems and services we receive from these providers, which could impair our ability to maintain appropriate internal controls over financial reporting and complete timely and accurate financial reporting, and may impact our business, operating results and financial condition.

Our valuation estimates for our recently completed and future acquisitions are based upon assumptions that may differ from actual results.

Charges to earnings as a result of acquisitions may adversely affect our operating results in the foreseeable future, which could have a material and adverse effect on the market value of our common stock. In particular, we have allocated the cost of acquiring businesses to the individual assets acquired and liabilities assumed, including various identifiable intangible assets such as acquired technology, acquired trade names and acquired customer relationships based on their respective fair values. Our estimates of fair value are based upon assumptions believed to be

reasonable, but which are inherently uncertain. After we complete an acquisition, the following factors could result in material charges and adversely affect our operating results and may adversely affect our cash flows:

- costs incurred to combine the operations of businesses we acquire, such as transitional employee expenses and employee retention, redeployment or relocation expenses;
- impairment of goodwill or intangible assets;
- amortization of intangible assets acquired;
- a reduction in the useful lives of intangible assets acquired;

Table of Contents

identification of or changes to assumed contingent liabilities, both income tax and non-income tax related after our final determination of the amounts for these contingencies or the conclusion of the measurement period (generally up to one year from the acquisition date), whichever comes first;

charges to our operating results to eliminate certain duplicative pre-merger activities, to restructure our operations or to reduce our cost structure; and

charges to our operating results resulting from expenses incurred to effect the acquisition.

If we are unable to attract and retain additional skilled personnel, we may be unable to grow our business.

To execute our growth plan, we must attract and retain additional, highly-qualified personnel. Competition for hiring these employees is intense, especially with regard to engineers with high levels of experience in designing, developing and integrating robots and engineers with expertise in artificial intelligence, machine learning and cloud applications. Many of the companies with which we compete for hiring experienced employees have greater resources than we have. If we fail to attract new technical personnel or fail to retain and motivate our current employees, our business and future growth prospects could be severely harmed.

We depend on the experience and expertise of our senior management team and key technical employees, and the loss of any key employee may impair our ability to operate effectively.

Our success depends upon the continued services of our senior management team and key technical employees, such as our project management personnel and senior engineers. Each of our executive officers, key technical personnel and other employees could terminate his or her relationship with us at any time. The loss of any member of our senior management team might significantly delay or prevent the achievement of our business objectives and could materially harm our business and customer relationships. In addition, because of the highly technical nature of our robots, the loss of any significant number of our existing engineering and project management personnel could have a material adverse effect on our business and operating results.

If we fail to protect, or incur significant costs in defending, our intellectual property and other proprietary rights, our business and results of operations could be materially harmed.

Our success depends on our ability to protect our intellectual property and other proprietary rights. We rely primarily on patents, trademarks, copyrights, trade secrets and unfair competition laws, as well as license agreements and other contractual provisions, to protect our intellectual property and other proprietary rights. Significant technology used in our products, however, is not the subject of any patent protection, and we may be unable to obtain patent protection on such technology in the future. Moreover, existing U.S. legal standards relating to the validity, enforceability and scope of protection of intellectual property rights offer only limited protection, may not provide us with any competitive advantages, and may be challenged by third parties. In addition, the laws of countries other than the United States in which we market our products may afford little or no effective protection of our intellectual property. Patents which may be granted to us in certain foreign countries may be subject to opposition proceedings brought by third parties or result in suits by us, which may be costly and result in adverse consequences for us. Accordingly, despite our efforts, we may be unable to prevent third parties from infringing upon or misappropriating our intellectual property or otherwise gaining access to our technology. Unauthorized third parties may try to copy or reverse engineer our products or portions of our products or otherwise obtain and use our intellectual property. If we fail to protect our intellectual property and other proprietary rights, our business, results of operations or financial condition could be materially harmed.

In addition, defending our intellectual property rights may entail significant expense. We believe that certain products in the marketplace may infringe our existing intellectual property rights. We have, from time to time, resorted to legal proceedings to protect our intellectual property and may continue to do so in the future. For example, in 2017 we initiated a multi-party litigation at the U.S. International Trade Commission as well as in federal district court in Massachusetts based on claims of patent infringement. In November 2018, the ITC issued a Notice of Final Determination confirming that U.S. Patent No. 9,038,233 is valid and infringed, and that the infringing products for bObsweep, Inc., bObsweep USA, Hoover, and Shenzhen Silver Star Intelligent Technology Co., Ltd. should be barred from importation into the United States. Prior to the issuance of the Final Determination, iRobot entered into confidential settlements with Shenzhen Zhiyi Technology Co. Ltd. d/b/a iLife, Micro-Star International, Black & Decker, and Matsutek. There is no guarantee that we will prevail on other patent infringement claims against third

parties. We may be required to expend significant resources to monitor and protect our intellectual property rights. In addition, any of our intellectual property rights may be challenged by others or invalidated through administrative processes or litigation. If we resort to legal proceedings to enforce our intellectual property rights or to determine the validity and scope of the intellectual property or other proprietary rights of others, the proceedings could result in significant expense to us and divert the attention and efforts of our management and technical employees, even if we were to prevail.

Table of Contents

We may be sued by third parties for alleged infringement of their proprietary rights, which could be costly, time-consuming and limit our ability to use certain technologies in the future.

We are currently defending multiple lawsuits based on claims of patent infringement. If the size of our markets increases, we would be more likely to be subject to claims that our technologies infringe upon the intellectual property or other proprietary rights of third parties. In addition, the vendors from which we license technology used in our products could become subject to similar infringement claims. Our vendors, or we, may not be able to withstand third-party infringement claims. Any claims, with or without merit, could be time-consuming and expensive, and could divert our management's attention away from the execution of our business plan. Moreover, any settlement or adverse judgment resulting from the claim could require us to pay substantial amounts or obtain a license to continue to use the technology that is the subject of the claim, or otherwise restrict or prohibit our use of the technology. There can be no assurance that we would be able to obtain a license from the third party asserting the claim on commercially reasonable terms, if at all, that we would be able to develop alternative technology on a timely basis, if at all, or that we would be able to obtain a license to use a suitable alternative technology to permit us to continue offering, and our customers to continue using, our affected product. In addition, we may be required to indemnify our retail and distribution partners for third-party intellectual property infringement claims, which would increase the cost to us of an adverse ruling in such a claim. An adverse determination could also prevent us from offering our products to others. Infringement claims asserted against us or our vendors may have a material adverse effect on our business, results of operations or financial condition.

In addition, we incorporate open source software into our products, and we may continue to incorporate open source software into our products in the future. Open source software is generally licensed by its authors or other third parties under open source licenses. Some of these licenses contain requirements that we make available source code for modifications or derivative works we create based upon the open source software, and that we license such modifications or derivative works under the terms of a particular open source license or other license granting third parties certain rights of further use. If an author or other third party that distributes open source software that we use or license were to allege that we had not complied with the conditions of the applicable license, we could be required to incur significant legal expenses defending against those allegations and could be subject to significant damages, enjoined from offering or selling our products that contained the open source software and required to comply with the foregoing conditions. Any of the foregoing could disrupt and harm our business and financial condition.

Global economic conditions and any associated impact on consumer spending could have a material adverse effect on our business, results of operations and financial condition.

Continued economic uncertainty and reductions in consumer spending, particularly in certain international markets such as the European Union, China and Japan, may result in reductions in sales of our consumer robots. Additionally, disruptions in credit markets may materially limit consumer credit availability and restrict credit availability of our retail customers, which would also impact purchases of our consumer robots. Any reduction in sales of our consumer robots, resulting from reductions in consumer spending or continued disruption in the availability of credit to retailers or consumers, could materially and adversely affect our business, results of operations and financial condition.

Because we are an increasingly global business that in the years ended December 29, 2018, December 30, 2017 and December 31, 2016 generated approximately 48.7%, 48.8% and 51.2%, respectively, of our total revenue from sales to customers outside of the United States, we are subject to a number of additional risks including foreign currency fluctuations. These risks are magnified with our expanding global presence as a result of our recent acquisitions of SODC and Robopolis. These foreign currency fluctuations may make our products more expensive to our distributors, which in turn may impact sales directly or the ability or willingness of our distribution partners to invest in growing product demand.

Our primary exposure to movements in foreign currency exchange rates relates to non-U.S. dollar denominated sales and operating expenses worldwide. Weakening of foreign currencies relative to the U.S. dollar could adversely affect the U.S. dollar value of our foreign currency-denominated sales and earnings, and lead us to raise international pricing, which may reduce demand for our products. In some circumstances, for competitive or other reasons, we may decide not to raise local prices to fully offset the strengthening of the U.S. dollar, or for any other reason, which would adversely affect the U.S. dollar value of our foreign currency denominated sales and earnings. Conversely, a

strengthening of foreign currencies relative to the U.S. dollar, while generally beneficial to our foreign currency-denominated sales and earnings, could cause us to reduce international pricing, incur losses on our foreign currency derivative instruments, and incur increased operating expenses, thereby limiting any benefit. Additionally, strengthening of foreign currencies may also increase our cost of product components denominated in those currencies, thus adversely affecting gross margins.

We use derivative instruments, such as foreign currency forward contracts, to hedge certain exposures to fluctuations in foreign currency exchange rates. The use of such hedging activities may not offset any, or more than a portion, of the adverse financial effects of unfavorable movements in foreign exchange rates over the limited time the hedges are in place. In addition, our counterparties may be unable to meet the terms of the agreements. We seek to mitigate this risk by limiting counterparties to major financial institutions and by spreading the risk across several major financial institutions.

Table of Contents

We are subject to a variety of U.S. and foreign laws and regulations that are central to our business; our failure to comply with these laws and regulations could harm our business or our operating results.

We are or may become subject to a variety of laws and regulations in the United States and abroad that involve matters central to our business, including laws and regulations regarding consumer protection, advertising, electronic commerce, intellectual property, manufacturing, anti-bribery and anti-corruption, and economic or other trade prohibitions or sanctions.

The increasingly global nature of our business operations subjects us to domestic and foreign laws and regulations such as the U.S. Foreign Corrupt Practices Act, or FCPA, the U.K. Bribery Act, and similar anti-bribery and anti-corruption laws in other jurisdictions. Our products are also subject to U.S. export controls, including the U.S. Department of Commerce's Export Administration Regulations and various economic and trade sanctions regulations established by the Treasury Department's Office of Foreign Assets Controls. Given the increasing number of foreign laws to which we are subject and the high level of complexity of these laws, there is a risk that some provisions may be inadvertently breached by us or by our subsidiaries, for example through fraudulent or negligent behavior of individual employees, our failure to comply with certain formal documentation requirements, or otherwise. If we incur liability for noncompliance under these laws or regulations, we may be forced to implement new measures to reduce our exposure to this liability. This may require us to expend substantial resources or to discontinue certain products or services, which would negatively affect our business, financial condition, and operating results. In addition, any negative publicity directed to us as a result of lawsuits, regulatory proceedings, and legislative proposals could harm our brand or otherwise impact the growth of our business. Any costs incurred as a result of compliance efforts or other liabilities under these laws or regulations could harm our business and operating results.

Environmental laws and regulations and unforeseen costs could negatively impact our future earnings.

The manufacture and sale of our products in certain states and countries may subject us to environmental and other regulations. We also face increasing complexity in our product design as we adjust to legal and regulatory requirements relating to our products. There is no assurance that such existing laws or future laws will not impair future earnings or results of operations.

Business disruptions resulting from international uncertainties could negatively impact our profitability.

We derive, and expect to continue to derive, a significant portion of our revenue from international sales in various European and Far East markets, and Canada, particularly following our acquisitions of SODC and Robopolis. For the fiscal years ended December 29, 2018, December 30, 2017 and, December 31, 2016, sales to non-U.S. customers accounted for 48.7%, 48.8% and 51.2% of total revenue, respectively. We expect that international revenues will continue to account for a significant percentage of our revenues for the foreseeable future. Our international revenue and operations are subject to a number of material risks, including, but not limited to:

- difficulties in staffing, managing and supporting operations in multiple countries;
- difficulties in enforcing agreements and collecting receivables through foreign legal systems and other relevant legal issues;
- fewer legal protections for intellectual property;
- foreign and U.S. taxation issues, tariffs, and international trade barriers;
- difficulties in obtaining any necessary governmental authorizations for the export of our products to certain foreign jurisdictions;
- potential fluctuations in foreign economies;
- government currency control and restrictions on repatriation of earnings;
- fluctuations in the value of foreign currencies and interest rates;
- general economic and political conditions in the markets in which we operate;
- domestic and international economic or political changes, hostilities and other disruptions in regions where we currently operate or may operate in the future;
- changes in foreign currency exchange rates;
- different and changing legal and regulatory requirements in the jurisdictions in which we currently operate or may operate in the future; and
- our relationships with international distributors, some of whom may be operating without written contracts.



Negative developments in any of these areas in one or more countries could result in a reduction in demand for our products, the cancellation or delay of orders already placed, threats to our intellectual property, difficulty in collecting receivables, and a higher cost of doing business, any of which could negatively impact our business, financial condition or results of operations. Moreover, our sales, including direct sales to customers outside the United States, are primarily

17

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Table of Contents

denominated in U.S. dollars, and downward fluctuations in the value of foreign currencies relative to the U.S. dollar may make our products more expensive than other products, which could harm our business.

Moreover, the United Kingdom ("UK") held a referendum on June 23, 2016 in which a majority of voters voted to exit the European Union ("EU"). Due to the unprecedented nature of the proposed withdrawal, significant uncertainty exists surrounding the timing and terms of the proposed exit, and negotiations remain ongoing to determine the future terms of the UK's relationship with the EU. We have operations in the UK and business activities in several EU member states whose currencies, namely British Pound Sterling and Euro, economies, taxation, and trade regulation, among other factors, could be adversely impacted by the negotiations and outcomes of the UK's leaving the EU, which is likely to be a lengthy and complicated process. While we do not anticipate near term adverse effects on business operations, these events could have a material adverse effect on our business operations, results of operations and financial condition over time.

If we experience a disaster or other business continuity problem, we may not be able to recover successfully, which could cause material financial loss, loss of human capital, regulatory actions, reputational harm, or legal liability. If we experience a local or regional disaster or other business continuity problem, such as an earthquake, terrorist attack, pandemic or other natural or man-made disaster, our continued success will depend, in part, on the availability of our personnel, our office facilities, and the proper functioning of our computer, telecommunication and other related systems and operations. As we grow our operations in new geographic regions, the potential for particular types of natural or man-made disasters, political, economic or infrastructure instabilities, or other country- or region-specific business continuity risks increases.

The effects of regulations relating to conflict minerals may adversely affect our business.

On August 22, 2012, under the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, the SEC adopted new requirements for companies that use certain minerals and metals, known as conflict minerals, in their products, whether or not these products are manufactured by third parties. These requirements require companies to research, disclose and report whether or not such minerals originate from the Democratic Republic of Congo and adjoining countries. The implementation of these requirements could adversely affect the sourcing, availability and pricing of such minerals if they are found to be used in the manufacture of our products. In addition, we continue to incur additional costs to comply with the disclosure requirements, including costs related to determining the source of any of the relevant minerals and metals used in our products. Since our supply chain is complex, we may not be able to sufficiently verify the origins for these minerals and metals used in our products through the due diligence procedures that we implement, which may harm our reputation. In such event, we may also face difficulties in satisfying customers who require that all of the components of our products are certified as conflict mineral free.

Our income tax provision and other tax liabilities may be insufficient if taxing authorities are successful in asserting tax positions that are contrary to our position. Additionally, there is no guarantee that we will realize our deferred tax assets.

From time to time, we are audited by various federal, state, local and foreign authorities regarding income tax matters. Significant judgment is required to determine our provision for income taxes and our liabilities for federal, state, local and foreign taxes. Although we believe our approach to determining the appropriate tax treatment is supportable and in accordance with relevant authoritative guidance it is possible that a tax authority will take a final tax position that is materially different than that which is reflected in our income tax provision. Such differences could have a material adverse effect on our income tax provision or benefit, in the reporting period in which such determination is made and, consequently, on our results of operations, financial position and/or cash flows for such period.

The realization of our deferred tax assets ultimately depends on the existence of sufficient income in either the carryback or carryforward periods under the tax law. Due to significant estimates utilized in establishing a valuation allowance and the potential for changes in facts and circumstances, it is possible that we will be required to record a valuation allowance in future reporting periods. Our results of operations would be impacted negatively if we determine that a deferred tax asset valuation allowance is required in a future reporting period.

Provisions in our certificate of incorporation and by-laws or Delaware law might discourage, delay or prevent a change of control of our company or changes in our management and, therefore, depress the trading price of our common stock.

Provisions of our certificate of incorporation and by-laws and Delaware law may discourage, delay or prevent a merger, acquisition or other change in control that stockholders may consider favorable, including transactions in which you might otherwise receive a premium for your shares of our common stock. These provisions may also prevent or frustrate attempts by our stockholders to replace or remove our management. These provisions include:

- limitations on the removal of directors;
- a classified board of directors so that not all members of our board are elected at one time;
- advance notice requirements for stockholder proposals and nominations;

Table of Contents

the inability of stockholders to act by written consent or to call special meetings;  
the ability of our board of directors to make, alter or repeal our by-laws; and  
the ability of our board of directors to designate the terms of and issue new series of preferred stock without stockholder approval.

The affirmative vote of the holders of at least 75% of our shares of capital stock entitled to vote is necessary to amend or repeal the above provisions of our certificate of incorporation. In addition, absent approval of our board of directors, our by-laws may only be amended or repealed by the affirmative vote of the holders of at least 75% of our shares of capital stock entitled to vote.

In addition, Section 203 of the Delaware General Corporation Law prohibits a publicly-held Delaware corporation from engaging in a business combination with an interested stockholder, generally a person which together with its affiliates owns, or within the last three years has owned, 15% of our voting stock, for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner.

The existence of the foregoing provisions and anti-takeover measures could limit the price that investors might be willing to pay in the future for shares of our common stock. They could also deter potential acquirers of our company, thereby reducing the likelihood that you could receive a premium for your common stock in an acquisition.

Significant developments from the recent and potential changes in U.S. trade policies could have a material adverse effect on us.

The U.S. government has indicated its intent to alter its approach to international trade policy and in some cases to renegotiate, or potentially terminate, certain existing bilateral or multi-lateral trade agreements and treaties with foreign countries. Effective September 24, 2018, the U.S. government implemented a 10% tariff on certain goods imported from China, which include the majority of those imported by the Company. Effective March 2, 2019, these tariffs will increase to 25%. These new tariffs, and other governmental action relating to international trade agreements or policies, may adversely impact demand for our products, our costs, customers, suppliers and/or the U.S. economy or certain sectors thereof and, as a result, adversely impact our business. The implemented and announced tariffs may cause us to increase prices to our customers which may reduce demand, or, if we are unable to increase prices, result in lowering our margin on products sold. It remains unclear what the U.S. or foreign governments will or will not do with respect to tariffs, international trade agreements and policies on a short-term or long-term basis. We cannot predict future trade policy or the terms of any renegotiated trade agreements and their impacts on our business. The adoption and expansion of trade restrictions, the occurrence of a trade war, or other governmental action related to tariffs or trade agreements or policies has the potential to adversely impact demand for our products, our costs, our customers, our suppliers, and the U.S. economy, which in turn could adversely impact our business, financial condition and results of operations.

Our products are complex and could have unknown defects or errors, which may give rise to claims against us, diminish our brand or divert our resources from other purposes.

Our robots rely on the interplay among behavior-based artificially intelligent systems, real-world dynamic sensors, user-friendly interfaces and tightly-integrated, electromechanical designs to accomplish their missions. Despite testing, our new or existing products have contained defects and errors and may in the future contain defects, errors or performance problems when first introduced, when new versions or enhancements are released, or even after these products have been used by our customers for a period of time. These problems could result in expensive and time-consuming design modifications or warranty charges, delays in the introduction of new products or enhancements, significant increases in our service and maintenance costs, exposure to liability for damages, mandatory or voluntary recall or product upgrades, damaged customer relationships and harm to our reputation, any of which could materially harm our results of operations and ability to achieve market acceptance. Our quality control procedures relating to the raw materials and components that it receives from third-party suppliers as well as our quality control procedures relating to its products after those products are designed, manufactured and packaged may not be sufficient. In addition, increased development and warranty costs, including the costs of any mandatory or voluntary recall, could be substantial and could reduce our operating margins. The existence of any defects, errors, or failures in our products could also lead to product liability claims or lawsuits against us. A successful product liability

claim could result in substantial cost, diminish our brand and divert management's attention and resources, which could have a negative impact on our business, financial condition and results of operations.

Table of Contents

We spend significant amounts on advertising and other marketing campaigns, which may not be successful or cost effective.

We spend significant amounts on advertising and other marketing campaigns, such as television, print advertising, and social media, as well as increased promotional activities, to acquire new customers, and we expect our marketing expenses to increase in the future as we continue to spend significant amounts to increase awareness of our consumer robot products. For the years ended December 29, 2018, December 30, 2017 and December 31, 2016, sales and marketing expenses were \$210.4 million, \$162.1 million and \$115.1 million, respectively, representing approximately 19.3%, 18.3%, and 17.4% of our revenue, respectively. While we seek to structure our advertising campaigns in the manner that we believe is most likely to encourage people to purchase our products, we may fail to identify advertising opportunities that satisfy our anticipated return on advertising spend as we scale our investments in marketing or to fully understand or estimate the conditions and behaviors that drive customer behavior. If any of our advertising campaigns prove less successful than anticipated in attracting customers, we may not be able to recover our advertising spend, and our revenue may fail to meet market expectations, either of which could have an adverse effect on our business. There can be no assurance that our advertising and other marketing efforts will result in increased sales of our products.

We may not be able to obtain capital when desired on favorable terms, if at all, or without dilution to our stockholders. We anticipate that our current cash, cash equivalents, cash provided by operating activities and funds available through our credit facility, will be sufficient to meet our current and anticipated needs for general corporate purposes. We operate in an emerging technology market, however, which makes our prospects difficult to evaluate. It is possible that we may not generate sufficient cash flow from operations or otherwise have the capital resources to meet our future capital needs. In such cases we may need additional financing to execute on our current or future business strategies. If we raise additional funds through the issuance of equity or convertible debt securities, the percentage ownership of our stockholders could be significantly diluted, and these newly-issued securities may have rights, preferences or privileges senior to those of existing stockholders. We cannot assure you that additional financing will be available on terms favorable to us, or at all. If adequate funds are not available or are not available on acceptable terms, if and when needed, our ability to fund our operations, take advantage of unanticipated opportunities, develop or enhance our products, or otherwise respond to competitive pressures would be significantly limited. In addition, our access to credit through our credit facility may be limited by the restrictive financial covenants contained in that agreement, which require us to maintain profitability.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Our corporate headquarters are located in Bedford, Massachusetts, where we lease approximately 240,000 square feet. This lease expires on April 30, 2030. We also lease smaller facilities around the world. We believe that our leased facilities and additional or alternative space available to us will be adequate to meet our needs for the foreseeable future.

ITEM 3. LEGAL PROCEEDINGS

From time to time and in the ordinary course of business, we are subject to various claims, charges and litigation. The outcome of litigation cannot be predicted with certainty and some lawsuits, claims or proceedings may be disposed of unfavorably to us, which could materially affect our financial condition or results of operations.

ITEM 4. MINE SAFETY DISCLOSURES

Not Applicable.

Table of Contents

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND  
ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock is listed on The Nasdaq Global Select Market under the symbol "IRBT." As of January 31, 2019, there were approximately 27,796,614 shares of our common stock outstanding held by approximately 152 stockholders of record.

Dividend Policy

We have never declared or paid any cash dividends on our capital stock. We currently expect to retain future earnings, if any, to finance the growth and development of our business and we do not anticipate paying any cash dividends in the foreseeable future.

Table of Contents

## ITEM 6. SELECTED FINANCIAL DATA

The following selected consolidated financial data are derived from the audited financial statements of the Company, and should be read in conjunction with our consolidated financial statements, the related notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere in this Annual Report on Form 10-K. The historical results are not necessarily indicative of the results of future operations.

	Year Ended				
	December 29, 2018	December 30, 2017	December 31, 2016	January 2, 2016	December 27, 2014
(In thousands, except earnings per share amounts)					
Consolidated Statements of Income:					
Total revenue	\$1,092,584	\$ 883,911	\$ 660,604	\$ 616,778	\$ 556,846
Gross profit	555,428	433,159	319,315	288,926	258,055
Operating income	105,822	72,690	57,557	60,618	53,117
Income tax expense	20,630	25,402	19,422	18,841	14,606
Net income	87,992	50,964	41,939	44,130	37,803
Net Income Per Share:					
Basic	\$3.18	\$ 1.85	\$ 1.51	\$ 1.49	\$ 1.28
Diluted	\$3.07	\$ 1.77	\$ 1.48	\$ 1.47	\$ 1.25
Shares Used In Per Share Calculations:					
Basic	27,692	27,611	27,698	29,550	29,485
Diluted	28,640	28,753	28,292	30,107	30,210
Consolidated Balance Sheet Data:					
Cash and cash equivalents	\$130,373	\$ 128,635	\$ 214,523	\$ 179,915	\$ 185,957
Short term investments	31,605	37,225	39,930	33,124	36,166
Total assets	766,961	691,522	507,912	521,743	493,213
Total liabilities	231,639	221,195	118,956	104,332	102,777
Total stockholders' equity	535,322	470,327	388,956	417,411	390,436



Table of Contents

## ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The information contained in this section has been derived from our consolidated financial statements and should be read together with our consolidated financial statements and related notes included elsewhere in this Annual Report on Form 10-K. This Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities and Exchange Act of 1934, as amended, or the Exchange Act, and are subject to the "safe harbor" created by those sections. In particular, statements contained in this Annual Report on Form 10-K that are not historical facts, including, but not limited to statements concerning new product sales, product development and offerings, our consumer robots, our competition, our strategy, our market position, market acceptance of our products, seasonal factors, the impact of our recent acquisitions of SODC and Robopolis, revenue recognition, our profits, growth of our revenues, composition of our revenues, our cost of revenues, units shipped, average selling prices, operating expenses, selling and marketing expenses, general and administrative expenses, research and development expenses, and compensation costs, our projected income tax rate, our credit and letter of credit facilities, our valuations of investments, valuation and composition of our stock-based awards, and liquidity, constitute forward-looking statements and are made under these safe harbor provisions. Some of the forward-looking statements can be identified by the use of forward-looking terms such as "believes," "expects," "may," "will," "should," "could," "seek," "intends," "plans," "estimates," "anticipates," or other comparable terms. Forward-looking statements involve inherent risks and uncertainties, which could cause actual results to differ materially from those in the forward-looking statements. We urge you to consider the risks and uncertainties discussed in greater detail under the heading "Risk Factors" in evaluating our forward-looking statements. We have no plans to update our forward-looking statements to reflect events or circumstances after the date of this report. We caution readers not to place undue reliance upon any such forward-looking statements, which speak only as of the date made.

## Overview

iRobot is a leading global consumer robot company that designs and builds robots that empower people to do more both inside and outside of the home. The Company's consumer robots help people find smarter ways to clean and accomplish more in their daily lives. iRobot's portfolio of solutions features proprietary technologies for the connected home and advanced concepts in cleaning, mapping and navigation, human-robot interaction, and physical solutions. Leveraging this portfolio, iRobot's engineers are building an ecosystem of robots to empower the smart home. For more than 25 years, we have been a pioneer in the robotics and consumer products industries. We sell our robots through a variety of distribution channels, including chain stores and other national retailers, through our on-line store, and through value-added distributors and resellers worldwide.

Over the past seventeen years, we have sold more than 25 million consumer robots worldwide. During 2016, we took several steps to become more focused on our well-established consumer robot business in order to capitalize on the substantial opportunities available to us within consumer markets. 2016 was a pivotal year for iRobot as we exited our non-consumer businesses to focus solely on products for the home. In the second quarter of 2016, we completed the sale of our defense and security business and exited the remote presence business. These actions were taken to solidify our position as the leader in diversified consumer robots and to focus on key technologies, with an emphasis on software, that allow our robots to more effectively understand the homes in which they operate.

During 2017, we expanded our global operations with the acquisition of two of our major distributors in Japan and Europe. On April 3, 2017, we closed the acquisition of the iRobot-related distribution business of Sales On Demand Corporation ("SODC") based in Tokyo, Japan for approximately \$16.6 million in cash. On October 2, 2017, we closed the acquisition of our largest European distributor, Robopolis SAS ("Robopolis"), a French company, for a final purchase price, following adjustments for working capital pursuant to the agreement with Robopolis, of \$169.4 million in cash, net of acquired cash of \$38.0 million. This provided us more direct control of 75% of our global revenue through a direct presence in countries including Austria, Belgium, France, Germany, Japan, the Netherlands, Portugal and Spain.

In 2017, we launched Roomba 690 and 890, extending Wi-Fi connectivity to the entire Roomba line. In addition, we launched several connected product features, including push notifications, Clean Map Reports and integrations with Amazon Alexa, Google Assistant and IFTTT platform technology.

In 2018, iRobot sold more than \$1 billion in consumer robots. The Company capitalized on incremental investments in research and development made and introduced new products in 2018. In the third quarter of 2018, iRobot introduced the Roomba i7 and i7+ in the U.S., robot vacuums that remember a home's floor plan and clean specific rooms by name. The Roomba i7+ allows customers to clean specific rooms in the home. Using Imprint™ Smart Mapping, the Roomba i7+ learns the home's floor plan, giving customers total control to choose which rooms to clean and when. When the Roomba i7+ robot vacuum is finished cleaning, it empties its own dust bin into the Clean Base™, which holds 30 bins of dirt.

## Table of Contents

The Roomba i7 and i7+ further extend our product ecosystem, bringing a new level of intelligence and automation to robotic vacuum cleaners with the ability to learn, map and adapt to a home's floor plan. In the third quarter of 2018, the Company also introduced the Roomba e5 in the U.S., a highly-featured product at a more accessible price, to our lineup. In the fourth quarter of 2018, we also introduced the Roomba e5 in markets outside of the U.S. in advance of the holiday season.

As of December 29, 2018, we had 1,032 full-time employees. We have developed expertise in the disciplines necessary to design and build durable, high-performance and cost-effective robots through the close integration of software, electronics and hardware. Our core technologies serve as reusable building blocks that we adapt and expand to develop next generation and new products, reducing the time, cost and risk associated with product development. Our significant expertise in consumer needs, robot design, engineering and smart home technologies and trends positions us to capitalize on the growth we expect in the market for robot-based consumer products.

Our continued success depends upon our ability to respond to a number of future challenges. We believe the most significant of these include increasing competition and our ability to successfully develop and introduce products and product enhancements into both new and existing markets.

Our total revenue for 2018 was \$1,092.6 million, which represents a 23.6% increase from 2017 revenue of \$883.9 million. Domestic revenue grew \$108.4 million, primarily as a result of strong sales of the Roomba 900 and 600 series robots, as well as the significant investments in advertising media and national promotions. International revenue grew by \$100.2 million in 2018 with increases in most markets.

### Fiscal Periods

We operate and report using a 52-53 week fiscal year ending on the Saturday closest to December 31. Accordingly, our fiscal quarters will end on the Saturday that falls closest to the last day of the third month of each quarter.

### Critical Accounting Policies and Estimates

The preparation of financial statements in conformity with generally accepted accounting principles in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, revenue and expenses and the disclosure of contingent assets and liabilities in the consolidated financial statements. These estimates and judgments, include but are not limited to, revenue recognition including performance obligations, variable consideration and other obligations such as product returns and incentives; warranty costs; valuation of goodwill and acquired intangible assets; valuation of financial instruments; accounting for business combinations; evaluating loss contingencies; accounting for stock-based compensation including performance-based assessments; and accounting for income taxes and related valuation allowances. We base these estimates and judgments on historical experience, market participant fair value considerations, projected future cash flows and various other factors that we believe are reasonable under the circumstances. Actual results may differ from our estimates.

We believe that of our significant accounting policies, which are described in the notes to our consolidated financial statements, the following accounting policies involve a greater degree of judgment and complexity. Accordingly, we believe that the following accounting policies are the most critical to aid in fully understanding and evaluating our consolidated financial condition and results of operations.

### Revenue Recognition

We primarily derive our revenue from product sales. We sell products directly to consumers through on-line stores and indirectly through resellers and distributors. Revenue is recognized upon transfer of control of promised products or services to customers, generally as title and risk of loss pass, in an amount that reflects the consideration we expect to receive in exchange for those products or services. Taxes collected from customers, which are subsequently remitted to governmental authorities, are excluded from revenue. Shipping and handling expenses are considered fulfillment activities and are expensed as incurred.

Our product portfolio includes various consumer robots, many of which are Wi-Fi connected. The consumer robots are generally highly dependent on, and interrelated with, the embedded software and cannot function without the software. As such, the consumer robots are accounted for as a single performance obligation, and the revenue is recognized at a point in time when the control is transferred to distributors, resellers or directly to end customers through online stores. For consumer robots with Wi-Fi capability ("connected robots"), each sale represents an

arrangement with multiple promises consisting of the robot, an app, cloud services and potential future unspecified software upgrades. We have determined that the app, cloud services and potential future unspecified software upgrades represent one promised service to the customer to enhance the functionality and interaction with the robot (referred to collectively as "Cloud Services"). Under the previous revenue accounting standard, revenue allocated to the app and future unspecified software upgrades was deferred and recognized on a straight-line basis over the expected life of the connected robot.

Upon the adoption of ASU No. 2014-09, "Revenue from Contracts with Customers," ("ASC 606") as of the beginning of fiscal year 2018, we concluded that, on a quantitative and qualitative basis, the Cloud Services did not constitute a material

## Table of Contents

performance obligation for the then existing products and, as such, these services were not considered a separate performance obligation that required allocation of transaction price.

During the third quarter of 2018, we launched Roomba i7 and i7+ which have the ability to learn, map and adapt to a home's floor plan. We have concluded that the Cloud Services related to these new products are a material performance obligation. For contracts that contain multiple performance obligations, the transaction price is allocated to each performance obligation based on a relative standalone selling price ("SSP"). The SSP reflects our best estimate of what the selling prices of elements would be if they were sold regularly on a standalone basis. Revenue allocated to the robots is recognized at a point in time when control is transferred. Revenue allocated to the Cloud Services is deferred and recognized on a straight-line basis over the estimated period the software upgrades and services are expected to be provided.

Our products generally carry a one-year limited warranty that promises customers that delivered products are as specified. We do not consider these assurance-type warranties as a separate performance obligation and therefore, we account for such warranties under ASC 460, "Guarantees."

We provide limited rights of returns for direct-to-consumer sales generated through our on-line stores as well as certain resellers and distributors. In addition, we may provide other credits or incentives, including price protection, which are accounted for as variable consideration when estimating the amount of revenue to recognize. Where appropriate, these estimates take into consideration relevant factors such as our historical experience, current contractual requirements, specific known market events and trends and forecasted customer buying and payment patterns. Overall, these reserves reflect our best estimates, and the actual amounts of consideration ultimately received may differ from our estimates. Returns and credits are estimated at contract inception and updated at the end of each reporting period as additional information becomes available and only to the extent that it is probable that a significant reversal of any incremental revenue will not occur. As of December 29, 2018, we had reserves for product returns of \$53.9 million and other credits and incentives of \$97.7 million. As of December 30, 2017, we had reserves for product returns of \$42.7 million and other credits and incentives of \$61.4 million.

### Business Combinations

We account for transactions that represent business combinations under the acquisition method of accounting. We allocate the total consideration paid for each acquisition to the assets we acquire and liabilities we assume based on their fair values as of the date of acquisition, including identifiable intangible assets. We base the fair value of identifiable intangible assets acquired in a business combination on valuations that use information and assumptions determined by management and which consider management's best estimates of inputs and assumptions that a market participant would use. While we use best estimates and assumptions as part of the purchase price allocation process to accurately value assets acquired and liabilities assumed at the business combination date, the estimates and assumptions are inherently uncertain and subject to refinement. As a result, during the measurement period, which is generally one year from the acquisition date, any adjustment to the assets acquired and liabilities assumed is recorded against goodwill in the period in which the amount is determined. Any adjustment identified subsequent to the measurement period is included in operating results in the period in which the amount is determined.

### Inventory

Inventory is stated at the lower of cost or net realizable value with cost being determined using the first-in, first-out ("FIFO") method. We maintain a reserve for inventory items to provide for an estimated amount of excess or obsolete inventory.

### Warranty

We typically provide a one-year warranty (with the exception of European consumer products, which typically have a two-year warranty period) against defects in materials and workmanship and will either repair the goods, provide replacement products at no charge to the customer or refund amounts to the customer for defective products. We record estimated warranty costs, based on historical experience by product, at the time revenue is recognized. Actual results could differ from these estimates, which could cause increases or decreases to the warranty reserves in future periods.

### Goodwill and Other Long-Lived Assets

Goodwill represents the excess of the purchase price in a business combination over the fair value of the net tangible and intangible assets acquired. Goodwill is not amortized but rather is assessed for impairment at the reporting unit level (operating segment or one level below an operating segment) annually during our fourth quarter of each fiscal year or more frequently if we believe indicators of impairment exist. Goodwill impairment, if any, is determined by comparing the reporting unit's fair value to its carrying value. An impairment loss is recognized in an amount equal to the excess of the reporting unit's carrying value over its fair value, up to the amount of goodwill allocated to the reporting unit.

Other long-lived assets consist principally of completed technology, tradename, customer relationships, reacquired distribution rights and non-competition agreements. Reacquired distribution rights are amortized on an accelerated basis while

## Table of Contents

all other intangible assets are amortized over their respective estimated useful lives on a straight-line basis, consistent with the pattern in which the economic benefits are being utilized.

We periodically evaluate the recoverability of other long-lived assets whenever events and changes in circumstances, such as reductions in demand or significant economic slowdowns in the industry, indicate that the carrying amount of an asset may not be fully recoverable. When indicators of impairment are present, the carrying values of the asset group are evaluated in relation to the future undiscounted cash flows of the underlying business. The net book value of the underlying asset is adjusted to fair value if the sum of the expected discounted cash flows is less than book value. Fair values are based on estimates of market prices and assumptions concerning the amount and timing of estimated future cash flows and assumed discount rates, reflecting varying degrees of perceived risk.

The impairment assessment of goodwill and other long-lived assets involves significant estimates and assumptions, which may be unpredictable and inherently uncertain. These estimates and assumptions include identification of reporting units and asset groups, long-term growth rates, profitability, estimated useful lives, comparable market multiples, and discount rates. Any changes in these assumptions could impact the result of the impairment assessment. There was no impairment of goodwill or other long-lived assets during fiscal 2018, 2017 and 2016.

### Stock-Based Compensation

We account for stock-based compensation through recognition of the fair value of the stock-based compensation as a charge against earnings. The fair value of employee stock options is estimated at the grant date using the Black-Scholes option-pricing model. The fair value for time-based restricted stock units and performance-based restricted stock units is based on the closing share price of our common stock on the date of grant. For performance-based restricted stock units, the compensation cost is recognized based on the number of units expected to vest upon the achievement of the performance conditions. We recognize stock-based compensation as an expense on a straight-line basis, over the requisite service period. We account for forfeitures as they occur, rather than applying an estimated forfeiture rate, following our adoption of ASU No. 2016-09 in the first quarter of 2017.

### Accounting for Income Taxes

Deferred tax assets and liabilities are determined based on the difference between the financial statement and tax basis using enacted tax rates in effect in the years in which those temporary differences are expected to be recovered or settled in each jurisdiction. A valuation allowance is provided if, based upon the weight of available evidence, it is more likely than not that the related benefits will not be realized. We regularly review the deferred tax assets for recoverability considering historical profitability, projected future taxable income, future reversals of existing taxable temporary differences, as well as feasible tax planning strategies in each jurisdiction. As of December 29, 2018, December 30, 2017 and December 31, 2016, we recorded a valuation allowance of \$1.1 million, \$0.8 million and \$0.0 million, respectively, for certain foreign deferred tax assets for which we believe do not meet the "more likely than not" criteria for recognition.

We report a liability for unrecognized tax benefits resulting from uncertain tax positions taken or expected to be taken in a tax return. We recognize interest and penalties, if any, related to unrecognized tax benefits in the income tax provision.

On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (the "Act") was signed into law making significant changes to the Internal Revenue Code. Effective for our 2018 tax year, the Act reduces the statutory federal corporate tax rate from 35% to 21% and implements certain additional provisions including the Global Intangible Low-Taxed Income ("GILTI") inclusion and the Foreign Derived Intangible Income ("FDII") deduction. Upon the enactment of the Act in December 2017, we recorded a one-time provisional income tax provision of \$11.9 million in the fourth quarter of 2017 which included a provisional amount of \$8.9 million related to the remeasurement of certain deferred tax assets and liabilities based on the tax rates at which they are expected to reverse in the future and \$3.0 million related to the one-time transition tax on the mandatory deemed repatriation of foreign earnings. On December 22, 2017, the SEC staff issued Staff Accounting Bulletin No. 118 ("SAB 118") to address the application of U.S. GAAP in situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Act. In accordance with SAB 118, during the fourth quarter of 2018, we finalized our analysis of the income tax effects of the Act and determined no material adjustments to the provisional amounts recorded were required.





Table of Contents

## Overview of Results of Operations

The following table sets forth our results of operations for the periods shown (in thousands):

	Fiscal Year Ended		
	December 29, 2018	December 30, 2017	December 31, 2016
Revenue	\$1,092,584	\$ 883,911	\$ 660,604
Cost of revenue:			
Cost of product revenue	518,612	438,114	337,832
Amortization of acquired intangible assets	18,544	12,638	3,457
Total cost of revenue	537,156	450,752	341,289
Gross profit	555,428	433,159	319,315
Operating expenses:			
Research and development	140,629	113,149	79,805
Selling and marketing	210,411	162,110	115,125
General and administrative	97,501	84,771	66,828
Amortization of acquired intangible assets	1,065	439	—
Total operating expenses	449,606	360,469	261,758
Operating income	105,822	72,690	57,557
Other income, net	2,800	3,676	3,804
Income before income taxes	108,622	76,366	61,361
Income tax expense	20,630	25,402	19,422
Net income	\$87,992	\$ 50,964	\$ 41,939

The following table sets forth our results of operations as a percentage of revenue for the periods shown:

	Fiscal Year Ended				
	December 29, 2018	December 30, 2017	December 31, 2016	%	%
Revenue	100.0%	100.0	100.0	%	%
Cost of revenue:					
Cost of product revenue	47.5	49.6	51.1		
Amortization of acquired intangible assets	1.7	1.4	0.6		
Total cost of revenue	49.2	51.0	51.7		
Gross margin	50.8	49.0	48.3		
Operating expenses:					
Research and development	12.9	12.8	12.1		
Selling and marketing	19.3	18.3	17.4		
General and administrative	8.9	9.6	10.1		
Amortization of acquired intangible assets	0.1	0.1	—		
Total operating expenses	41.2	40.8	39.6		
Operating income	9.6	8.2	8.7		
Other income, net	0.3	0.5	0.5		
Income before income taxes	9.9	8.7	9.2		
Income tax expense	1.9	2.9	2.9		
Net income	8.0	% 5.8	6.3	%	%

Table of Contents

Comparison of Years Ended December 29, 2018, December 30, 2017 and December 31, 2016

## Revenue

We primarily derive our revenue from product sales. We sell products directly to consumers through on-line stores and indirectly through resellers and distributors. We recognize revenue upon transfer of control of promised products or services to customers, generally as title and risk of loss pass, in an amount that reflects total consideration, net of estimated returns and allowances.

The following table shows revenue for fiscal years 2018, 2017 and 2016 (dollars in thousands):

## Fiscal Year Ended

	December 29, 2018	December 30, 2017	December 31, 2016	\$ Change 2018 vs. 2017	\$ Change 2017 vs. 2016
Revenue	\$1,092,584	\$ 883,911	\$ 660,604	\$208,673	\$223,307

Year ended December 29, 2018 as compared to the year ended December 30, 2017

Revenue increased 23.6% to \$1,092.6 million in fiscal 2018 from \$883.9 million in fiscal 2017. The \$208.7 million increase in revenue was driven by a 21.6% increase in units shipped, primarily related to growth of sales of our Roomba 900 and 600 series robots, and a 6.5% increase in average selling price, partially due to the acquisition of Robopolis. Total robots shipped in fiscal 2018 were approximately 4.5 million units compared to approximately 3.7 million units in fiscal 2017. In fiscal 2018, domestic revenue increased \$108.4 million, or 24.0%, and international revenue increased \$100.2 million, or 23.2%, compared to fiscal 2017. Although the impact of the recent increases to tariffs on certain goods imported from China was not material for the year ended December 29, 2018, demand for our robots in 2019 could be adversely affected by these tariffs, including as a result of any tariff-related price increases we may implement.

Year ended December 30, 2017 as compared to the year ended December 31, 2016

Revenue increased 33.8% to \$883.9 million in fiscal 2017 from \$660.6 million in fiscal 2016. Revenue increased approximately \$227.8 million, or 34.7%, in our consumer business while revenue decreased \$3.1 million in our defense and security business as a result of the sale of our defense and security business unit in April 2016. The \$227.8 million increase in revenue from our consumer business was driven by a 25.7% increase in units shipped and a 10.8% increase in average selling price. In fiscal 2017, domestic consumer revenue increased \$133.2 million, or 41.8%, and international consumer revenue increased \$94.6 million, or 28.1%, compared to fiscal 2016. Total consumer robots shipped in fiscal 2017 were approximately 3.7 million units compared to approximately 2.9 million units in fiscal 2016.

## Cost of Product Revenue

Cost of product revenue includes the cost of materials, labor and overhead costs that go into the manufacture of our products. Overhead primarily includes costs such as freight, import duties, depreciation, warranty, tools and quality assurance costs. Material costs, which are our most significant cost items, can fluctuate materially on a periodic basis, although many components have been historically stable. There can be no assurance that our costs of materials will not increase. Contract manufacturer labor costs also comprise a significant portion of our cost of materials. We outsource the manufacture of our robots to contract manufacturers in Southern China. While labor costs in China traditionally have been favorable compared to labor costs elsewhere in the world, including the United States, they have been increasing for the last few years. In addition, fluctuations in currency exchange rates could increase the cost of labor. Consequently, the labor costs for our robots could increase in the future.

The following table shows cost of product revenue for fiscal years 2018, 2017 and 2016 (dollars in thousands):

## Fiscal Year Ended

	December 29, 2018	December 30, 2017	December 31, 2016	\$ Change 2018 vs. 2017	\$ Change 2017 vs. 2016
Cost of product revenue	\$518,612	\$ 438,114	\$ 337,832	\$80,498	\$100,282
As a percentage of total revenue	47.5	% 49.6	% 51.1	%	

Year ended December 29, 2018 as compared to the year ended December 30, 2017

Cost of product revenue increased \$80.5 million, or 18.4% to \$518.6 million in fiscal 2018, compared to \$438.1 million in fiscal 2017. The increase is primarily due to the 23.6% increase in revenue, partially offset by improvements in product cost. Although the impact of the recent increases to tariffs on certain goods imported from China was not material for the year ended December 29, 2018, our cost of product revenue could materially increase in 2019 as a result of these tariffs and adversely impact our results of operations.

28

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Table of Contents

Year ended December 30, 2017 as compared to the year ended December 31, 2016

Cost of product revenue increased \$100.3 million, or 29.7% to \$438.1 million in fiscal 2017, compared to \$337.8 million in fiscal 2016. The increase is primarily due to the 33.8% increase in revenue as well as the impact from our acquisitions of the iRobot-related distribution business of SODC in April 2017 and Robopolis in October 2017.

**Gross Profit**

Our gross profit as a percentage of revenue, referred to as our gross margin, varies according to the mix of products sold, total sales volume, the level of defective product returns, and levels of other product costs such as warranty, scrap, re-work and overhead.

The following table shows gross profit for fiscal years 2018, 2017 and 2016 (dollars in thousands):

	Fiscal Year Ended			\$ Change 2018 vs. 2017	\$ Change 2017 vs. 2016
	December 29, 2018	December 30, 2017	December 31, 2016		
Gross profit	\$555,428	\$433,159	\$319,315	\$122,269	\$113,844
Gross margin	50.8%	49.0%	48.3%		

Year ended December 29, 2018 as compared to the year ended December 30, 2017

Gross profit increased \$122.3 million, or 28.2%, to \$555.4 million (50.8% of revenue) in fiscal 2018 from \$433.2 million (49.0% of revenue) in fiscal 2017. The increase in gross margin was primarily driven by favorable product and region mix as well as the increase in average selling price resulting from our acquisition of Robopolis. Although the impact of the recent increases to tariffs on certain goods imported from China was not material for the year ended December 29, 2018, our cost of product revenue could materially increase, and accordingly, our gross margin could materially decrease, in 2019 as a result of these tariffs, and adversely impact our results of operations.

Year ended December 30, 2017 as compared to the year ended December 31, 2016

Gross profit increased \$113.8 million, or 35.7%, to \$433.2 million (49.0% of revenue) in fiscal 2017 from \$319.3 million (48.3% of revenue) in fiscal 2016. The increase in gross margin was primarily driven by favorable product and region mix, partially offset by an increase in promotional support to our customers as well as the impact from our acquisitions of the iRobot-related distribution business of SODC in April 2017 and Robopolis in October 2017.

**Research and Development**

Research and development expenses consist primarily of:

- salaries and related costs for our engineers;
- costs for high technology components used in product and prototype development;
- costs of test equipment used during product development; and
- occupancy and other overhead costs.

We have significantly expanded our research and development capabilities and expect to continue to expand these capabilities in the future. We are committed to consistently maintaining the level of innovative design and development of new products as we strive to enhance our ability to serve our existing consumer markets as well as new markets for robots. We anticipate that research and development expenses will increase in absolute dollars but remain relatively consistent as a percentage of revenue in the foreseeable future.

The following table shows research and development costs for fiscal years 2018, 2017 and 2016 (dollars in thousands):

	Fiscal Year Ended			\$ Change 2018 vs. 2017	\$ Change 2017 vs. 2016
	December 29, 2018	December 30, 2017	December 31, 2016		
Research and development	\$140,629	\$113,149	\$79,805	\$27,480	\$33,344
As a percentage of total revenue	12.9%	12.8%	12.1%		



Table of Contents

Year ended December 29, 2018 as compared to the year ended December 30, 2017

Research and development expenses increased \$27.5 million, or 24.3%, to \$140.6 million (12.9% of revenue) in fiscal 2018 from \$113.1 million (12.8% of revenue) in fiscal 2017. This increase is attributable to increased efforts in product development and continued product enhancements. These investments enabled us to launch new products including Roomba i7, i7+ and e5 during 2018, and we anticipate these investments will enable us to launch Terra and other new products in 2019. During 2018, people and program related costs increased \$15.0 million and \$11.5 million, respectively, compared to fiscal 2017.

Year ended December 30, 2017 as compared to the year ended December 31, 2016

Research and development expenses increased \$33.3 million, or 41.8%, to \$113.1 million (12.8% of revenue) in fiscal 2017 from \$79.8 million (12.1% of revenue) in fiscal 2016. This increase is attributable to increased efforts in product development and continued product enhancements. During 2017, people and program related costs increased \$19.7 million and \$13.2 million, respectively, compared to fiscal 2016.

#### Selling and Marketing

Our selling and marketing expenses consist primarily of:

- salaries and related costs for sales and marketing personnel;
- advertising, marketing and other brand-building costs;
- customer service costs;
- and
- travel and related costs.

We anticipate that in 2019, selling and marketing expenses will increase in absolute dollars but remain relatively consistent as a percentage of revenue in the foreseeable future as we launch new products and continue to build awareness of our products.

The following table shows selling and marketing costs for fiscal years 2018, 2017 and 2016 (dollars in thousands):

	Fiscal Year Ended				
	December 29, 2018	December 30, 2017	December 31, 2016	\$ Change 2018 vs. 2017	\$ Change 2017 vs. 2016
Selling and marketing	\$210,411	\$162,110	\$115,125	\$48,301	\$46,985
As a percentage of total revenue	19.3%	18.3%	17.4%		

Year ended December 29, 2018 as compared to the year ended December 30, 2017

Selling and marketing expenses increased by \$48.3 million, or 29.8%, to \$210.4 million (19.3% of revenue) in fiscal 2018 from \$162.1 million (18.3% of revenue) in fiscal 2017. This increase is primarily attributable to marketing investments of \$35.1 million to support our continued global marketing and branding efforts and higher people-related costs of \$13.3 million including additional headcount related to our acquisitions of SODC and Robopolis in 2017.

Year ended December 30, 2017 as compared to the year ended December 31, 2016

Selling and marketing expenses increased by \$47.0 million, or 40.8%, to \$162.1 million (18.3% of revenue) in fiscal 2017 from \$115.1 million (17.4% of revenue) in fiscal 2016. This increase is primarily attributable to increases of \$35.3 million in investments in advertising media, national promotions and other selling and marketing costs incurred to support our continued global marketing and branding efforts and approximately \$8.7 million in people-related costs including additional headcount related to our acquisitions of SODC and Robopolis.

#### General and Administrative

Our general and administrative expenses consist primarily of:

- salaries and related costs for executives and administrative personnel;
- professional services costs;
- information systems and infrastructure costs;
- travel and related costs; and
- occupancy and other overhead costs.



Table of Contents

The following table shows general and administrative costs for fiscal years 2018, 2017 and 2016 (dollars in thousands):

	Fiscal Year Ended				
	December 29, 2018	December 30, 2017	December 31, 2016	Change 2018 vs. 2017	Change 2017 vs. 2016
General and administrative	\$97,501	\$ 84,771	\$66,828	\$ 12,730	17,943
As a percentage of total revenue	8.9 %	9.6 %	10.1 %		

Year ended December 29, 2018 as compared to the year ended December 30, 2017

General and administrative expenses increased by \$12.7 million, or 15.0%, to \$97.5 million (8.9% of revenue) in fiscal 2018 from \$84.8 million (9.6% of revenue) in fiscal 2017. This increase is primarily attributable to an increase of \$8.6 million in people-related costs including additional headcount related to our acquisitions of SODC and Robopolis in 2017 and \$2.4 million related to investments in enterprise hardware and software maintenance, support and services.

Year ended December 30, 2017 as compared to the year ended December 31, 2016

General and administrative expenses increased by \$17.9 million, or 26.8%, to \$84.8 million (9.6% of revenue) in fiscal 2017 from \$66.8 million (10.1% of revenue) in fiscal 2016. This increase is primarily attributable to an increase of \$7.6 million in legal and consulting costs mainly driven by acquisition expense and litigation expense where we continued to defend and protect our intellectual property, as well as increases of \$7.0 million in people-related costs including additional headcount related to our acquisitions of SODC and Robopolis and \$1.2 million related to investments in enterprise hardware and software maintenance, support and services.

#### Amortization of Acquired Intangible Assets

Amortization of acquired technology and reacquired distribution rights are recorded within cost of revenue whereas the amortization of acquired customer relationships, non-compete agreements and tradenames are recorded within operating expenses. All acquired intangible assets, with the exception of the reacquired distribution rights, which are being amortized on an accelerated basis, are being amortized on a straight-line basis, which is consistent when the pattern in which the economic benefits are being utilized.

The following table shows total amortization expense for fiscal years 2018, 2017 and 2016 (dollars in thousands):

	Fiscal Year Ended				
	December 29, 2018	December 30, 2017	December 31, 2016	Change 2018 vs. 2017	Change 2017 vs. 2016
Cost of revenue	\$18,544	\$ 12,638	\$ 3,457	\$ 5,906	9,181
Operating expense	1,065	439	—	626	439
Total amortization expense	19,609	13,077	3,457	6,532	9,620
As a percentage of total revenue	1.8 %	1.5 %	0.5 %		

The increase in amortization of acquired intangible assets during fiscal 2018, as compared to fiscal 2017, and fiscal 2017, as compared to fiscal 2016 was related to acquired intangible assets from our acquisitions of SODC and Robopolis in 2017.

#### Other Income, Net

Other income, net includes interest income, interest expense, foreign currency gains (losses) as well as gains (losses) from strategic investments. The following table shows other income, net for fiscal years 2018, 2017 and 2016 (dollars in thousands):

	Fiscal Year Ended				
	December 29, 2018	December 30, 2017	December 31, 2016	Change	Change
				\$	\$



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			2018 vs. 2017 vs.	
			2017	2016
Other income, net	\$2,800	\$ 3,676	\$ 3,804	\$(876 ) \$(128 )
As a percentage of total revenue	0.3	% 0.5	% 0.5	%

Other income, net, amounted to \$2.8 million, \$3.7 million and \$3.8 million for fiscal 2018, 2017 and 2016, respectively. During the year ended December 30, 2017, other income, net, also included a \$2.2 million gain on business acquisition related to our acquisition of SODC, which represents the excess of the fair value of the net assets acquired over the purchase price. During the year ended December 31, 2016, other income, net, also included defense and security business transition services income of \$1.2 million.

Table of Contents

## Income Tax Provision

The following table shows income tax provision for fiscal years 2018, 2017 and 2016 (dollars in thousands):

	Fiscal Year Ended				
	December 29, 2018	December 30, 2017	December 31, 2016	\$ Change 2018 vs. 2017	\$ Change 2017 vs. 2016
Income tax provision	\$20,630	\$ 25,402	\$19,422	\$(4,772)	\$ 5,980
As a percentage of pre-tax income	19.0 %	33.3 %	31.7 %		

## Year ended December 29, 2018 as compared to the year ended December 30, 2017

We recorded an income tax provision of \$20.6 million and \$25.4 million for fiscal 2018 and fiscal 2017, respectively. The \$20.6 million provision for fiscal 2018 resulted in an effective income tax rate of 19.0%. The \$25.4 million provision for fiscal 2017 resulted in an effective income tax rate of 33.3%.

Our effective income tax rate of 19.0% for fiscal 2018 differed from the federal statutory tax rate of 21% primarily due to the recognition of tax benefits related to stock-based compensation, partially offset by estimated taxes associated with a restructuring of the EMEA business and the remeasurement of certain deferred tax charges based on the tax rate at which it reversed. The decrease in the effective income tax rate of 19.0% for fiscal 2018 as compared to 33.3% for fiscal 2017 is primarily due to the recognition of benefits related to the reduction of the federal statutory tax rate from 35% in fiscal 2017 to 21% in fiscal 2018.

## Year ended December 30, 2017 as compared to the year ended December 31, 2016

We recorded an income tax provision of \$25.4 million and \$19.4 million for fiscal 2017 and fiscal 2016, respectively. The increase in our effective tax rate is primarily due to jurisdictional mix of earnings and the one-time income tax provision of \$11.9 million related to the enactment of the Act during the fourth quarter of 2017, partially offset by the excess tax benefits of \$11.7 million related to ASU 2016-09.

## Liquidity and Capital Resources

At December 29, 2018, our principal sources of liquidity were cash and cash equivalents totaling \$130.4 million, short-term investments of \$31.6 million and accounts receivable of \$162.2 million. Our working capital, which represents our total current assets less total current liabilities, was \$300.7 million as of December 29, 2018, compared to \$237.0 million as of December 30, 2017.

We manufacture and distribute our products through contract manufacturers and third-party logistics providers. We believe that this approach gives us the advantages of relatively low capital investment and significant flexibility in scheduling production and managing inventory levels. By leasing our office facilities, we also minimize the cash needed for expansion. Accordingly, our capital spending is generally limited to leasehold improvements, computers, office furniture, product-specific production tooling, internal use software and test equipment. In the fiscal years ended December 29, 2018, December 30, 2017 and December 31, 2016, we spent \$32.4 million, \$23.4 million and \$10.8 million respectively, on capital expenditures.

Our strategy for delivering consumer products to our distributors and retail customers gives us the flexibility to provide container shipments directly from our contract manufacturers in Southern China to our customers and, alternatively, allows our distributors and certain retail customers to take possession of product on a domestic basis. Accordingly, our inventory consists of goods shipped to our third-party logistics providers for the fulfillment of distributor, retail and direct-to-consumer sales. Our contract manufacturers are also responsible for purchasing and stocking components required for the production of our products, and they typically invoice us when the finished goods are shipped.

## Cash provided by operating activities

## Year ended December 29, 2018 as compared to the year ended December 30, 2017

As of December 29, 2018, we held cash, cash equivalents and short-term investments of \$162.0 million. Net cash provided by our operations for the fiscal year ended December 29, 2018 was \$71.7 million, of which the principal components were our net income of \$88.0 million and non-cash charges of \$53.4 million, partially offset by changes

in working capital. The changes in working capital include an increase in inventory of \$58.5 million and accounts receivable of \$23.9 million, partially offset by an \$18.9 million increase in accounts payable and accrued liabilities primarily due to growth in our inventory. As of December 29, 2018, we did not have any borrowings outstanding under our credit facility.

Year ended December 30, 2017 as compared to the year ended December 31, 2016

Net cash provided by our operations for the fiscal year ended December 30, 2017 was \$76.3 million, of which the principal components were our net income of \$51.0 million and non-cash charges of \$42.9 million, partially offset by changes

## Table of Contents

in working capital. The changes in working capital include an increase in accounts receivable of \$53.3 million primarily due to increased sales, partially offset by a \$40.9 million increase in accounts payable and accrued liabilities primarily due to growth in the business and timing of payments to our suppliers. As of December 30, 2017, we did not have any borrowings outstanding under our credit facility.

### Cash used in investing activities

Year ended December 29, 2018 as compared to the year ended December 30, 2017

During the year ended December 29, 2018, we invested \$32.4 million in the purchase of property and equipment, including machinery and tooling for new products. We also purchased \$6.4 million of marketable securities, while sales and maturities of marketable securities amounted to \$14.0 million. In addition, we made strategic investments of \$4.2 million and received proceeds from equity investments of \$0.9 million.

Year ended December 30, 2017 as compared to the year ended December 31, 2016

During the year ended December 30, 2017, we acquired SODC and Robopolis for a total of \$148.8 million, net of cash acquired, and invested \$23.4 million in the purchase of property and equipment, including machinery and tooling for new products. We also purchased \$10.6 million of marketable securities, while sales and maturities of marketable securities amounted to \$13.1 million. In addition, we received an earn-out payment of \$1.3 million from a sold cost method investment.

### Cash (used in) provided by financing activities

Year ended December 29, 2018 as compared to the year ended December 30, 2017

During the year ended December 29, 2018, we completed our previously announced stock repurchase program and repurchased 798,794 shares of common stock for an aggregate purchase price of \$50.0 million and received \$10.4 million from employee stock plans. Shares issued upon vesting of restricted stock were net of 50,884 shares retained by us to cover employee tax withholdings of \$3.5 million.

Year ended December 30, 2017 as compared to the year ended December 31, 2016

During the year ended December 30, 2017, we received \$10.6 million from the exercise of stock options. Shares issued upon vesting of restricted stock were net of 51,229 shares retained by us to cover employee tax withholdings of \$3.0 million.

### Working Capital Facility

#### Credit Facility

In June 2018, we entered into a new agreement with Bank of America, N.A., increasing the amount of our unsecured revolving line of credit from \$75.0 million to \$150.0 million. As of December 29, 2018, the full amount was available for borrowing. The new revolving line of credit is available to fund working capital and other corporate purposes. The new agreement extends the term of the credit facilities to June 2023. The interest on loans under the credit facility accrues, at our election, at either (1) LIBOR plus a margin, currently equal to 1.0%, based on our ratio of indebtedness to Adjusted EBITDA (the "Eurodollar Rate"), or (2) the lender's base rate. The lender's base rate is equal to the highest of (1) the federal funds rate plus 0.5%, (2) the lender's prime rate or (3) the Eurodollar Rate plus 1.0%.

As of December 29, 2018, we had no outstanding borrowings under our revolving credit facility. This credit facility contains customary terms and conditions for credit facilities of this type, including restrictions on our ability to incur or guarantee additional indebtedness, create liens, enter into transactions with affiliates, make loans or investments, sell assets, pay dividends or make distributions on, or repurchase, our stock, and consolidate or merge with other entities. In addition, we are required to meet certain financial covenants customary with this type of agreement, including maintaining a maximum ratio of indebtedness to Adjusted EBITDA and a minimum specified interest coverage ratio.

This credit facility contains customary events of default, including for payment defaults, breaches of representations, breaches of affirmative or negative covenants, cross defaults to other material indebtedness, bankruptcy and failure to discharge certain judgments. If a default occurs and is not cured within any applicable cure period or is not waived, our obligations under the credit facility may be accelerated.

As of December 29, 2018, we were in compliance with all covenants under the revolving credit facility.

#### Working Capital and Capital Expenditure Needs

We currently have no material cash commitments, except for normal recurring trade payables, expense accruals and operating leases, all of which we anticipate funding through working capital, funds provided by operating activities and our existing credit facility. We do not currently anticipate significant investment in property, plant and equipment, and we believe that our outsourced approach to manufacturing provides us with flexibility in both managing inventory levels and financing our inventory. We believe our existing cash and cash equivalents, short-term investments, cash provided by operating activities, and

33

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Table of Contents

funds available through our credit facility will be sufficient to meet our working capital and capital expenditure needs over at least the next twelve months. In the event that our revenue plan does not meet our expectations, we may eliminate or curtail expenditures to mitigate the impact on our working capital. Our future capital requirements will depend on many factors, including our rate of revenue growth, the expansion of our marketing and sales activities, the timing and extent of spending to support product development efforts, the timing of introductions of new products and enhancements to existing products, the acquisition of new capabilities or technologies, and the continuing market acceptance of our products and services. Moreover, to the extent that existing cash and cash equivalents, short-term investments, cash from operations, and cash from short-term borrowing are insufficient to fund our future activities, we may need to raise additional funds through public or private equity or debt financing. As part of our business strategy, we may consider additional acquisitions of companies, technologies and products, which could also require us to seek additional equity or debt financing. Additional funds may not be available on terms favorable to us or at all.

**Contractual Obligations**

We generally do not enter into binding purchase commitments. Our principal commitments consist of obligations under our credit facility, leases for office space and minimum contractual obligations. Other obligations consist primarily of subscription services. The following table describes our commitments to settle contractual obligations in cash as of December 29, 2018 (in thousands):

	Payments Due by Period				Total
	Less Than 1 Year	3 to 5 Years	3 to 5 Years	More Than 5 Years	
Operating leases	\$7,848	\$14,742	\$14,313	\$34,806	\$71,709
Minimum contractual payments	2,804	3,594	—	—	6,398
Other obligations	1,692	2,412	—	—	4,104
Total	\$12,344	\$20,748	\$14,313	\$34,806	\$82,211

At December 29, 2018, we had outstanding purchase orders aggregating approximately \$113.6 million. The purchase orders, the majority of which are with our contract manufacturers for the purchase of inventory in the normal course of business, are for manufacturing and non-manufacturing related goods and services, and are generally cancelable without penalty. In circumstances where we determine that we have financial exposure associated with any of these commitments, we record a liability in the period in which that exposure is identified.

**Off-Balance Sheet Arrangements**

As of December 29, 2018, we had no off-balance sheet arrangements as defined in Item 303(a)(4) of Regulation S-K.

**Recently Adopted Accounting Pronouncements**

See Note 2 to the accompanying consolidated financial statements for a description of recently adopted accounting standards.

**Recently Issued Accounting Pronouncements**

See Note 2 to the accompanying consolidated financial statements for a description of certain recently issued accounting standards which may impact our financial statements in future reporting periods.

**ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK****Exchange Rate Sensitivity**

Our international revenue and expenses are denominated in multiple currencies, including Japanese Yen, Canadian Dollars, Chinese Renminbi and Euros. As such, we have exposure to adverse changes in exchange rates associated with the revenue and operating expenses of our foreign operations. Any fluctuations in other currencies will have minimal direct impact on our international revenue.

In addition to international business conducted in foreign currencies, we have international revenue denominated in U.S. dollars. As the U.S. dollar strengthens or weakens against other currencies, our international distributors may be impacted, which could affect their profitability and our ability to maintain current pricing levels on our international consumer products.

We regularly monitor the forecast of non-U.S. dollar revenue and expenses and the level of non-U.S. dollar monetary asset and liability balances to determine if any actions, including possibly entering into foreign currency contracts, should be taken to minimize the impact of fluctuating exchange rates on our results of operations. Periodically, we enter into forward

Table of Contents

exchange contracts to hedge against foreign currency fluctuations. These contracts may or may not be designated as cash flow hedges for accounting purposes. We use cash flow hedges primarily to reduce the effects of foreign exchange rate changes on purchase and sales, primarily in Japanese Yen and Euros. At December 29, 2018 and December 30, 2017, we had outstanding cash flow hedges with a total notional value of \$366.7 million and \$73.7 million, respectively.

We also enter into economic hedges that are not designated as hedges from an accounting standpoint to reduce or eliminate the effects of foreign exchange rate changes typically related to short term trade receivables and payables. These contracts have maturities of two months or less. At December 29, 2018 and December 30, 2017, we had outstanding economic hedges with a total notional value of \$56.0 million and \$36.6 million, respectively.

At December 29, 2018, assuming all other variables are constant, if the U.S. Dollar weakened or strengthened by 10%, the fair market value of our foreign currency contracts would increase or decrease by approximately \$40.0 million.

Interest Rate Sensitivity

At December 29, 2018, we had unrestricted cash and cash equivalents of \$130.4 million and short term investments of \$31.6 million. The unrestricted cash and cash equivalents are held for working capital purposes. We do not enter into investments for trading or speculative purposes. Some of the securities in which we invest, however, may be subject to market risk. This means that a change in prevailing interest rates may cause the fair market value of the investment to fluctuate. To minimize this risk in the future, we intend to maintain our portfolio of cash equivalents in a variety of securities, commercial paper, money market funds, debt securities and certificates of deposit. Due to the short-term nature of these investments, we believe we do not have any material exposure to changes in the fair value of our investment portfolio as a result of changes in interest rates. As of December 29, 2018, all of our cash and cash equivalents were held in demand deposits and money market funds.



Table of Contents

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

iROBOT CORPORATION

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

	Page
<u>Report of Independent Registered Public Accounting Firm</u>	<u>37</u>
<u>Consolidated Balance Sheets at December 29, 2018 and December 30, 2017</u>	<u>39</u>
<u>Consolidated Statements of Income for the Years ended December 29, 2018, December 30, 2017 and December 31, 2016</u>	<u>40</u>
<u>Consolidated Statements of Comprehensive Income for the Years ended December 29, 2018, December 30, 2017 and December 31, 2016</u>	<u>40</u>
<u>Consolidated Statements of Stockholders' Equity for the Years ended December 29, 2018, December 30, 2017 and December 31, 2016</u>	<u>42</u>
<u>Consolidated Statements of Cash Flows for the Years ended December 29, 2018, December 30, 2017 and December 31, 2016</u>	<u>43</u>
<u>Notes to Consolidated Financial Statements</u>	<u>44</u>

Table of Contents

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of  
iRobot Corporation:

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of iRobot Corporation and its subsidiaries (the "Company") as of December 29, 2018 and December 30, 2017, and the related consolidated statements of income, comprehensive income, stockholders' equity and cash flows for each of the three years in the period ended December 29, 2018, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 29, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 29, 2018 and December 30, 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 29, 2018 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 29, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Table of Contents

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts  
February 14, 2019

We have served as the Company's auditor since 1999.

Table of Contents

iROBOT CORPORATION  
 CONSOLIDATED BALANCE SHEETS  
 (in thousands, except per share amounts)

	December 29, 2018	December 30, 2017
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 130,373	\$ 128,635
Short term investments	31,605	37,225
Accounts receivable, net	162,166	142,829
Inventory	164,633	106,932
Other current assets	25,660	19,105
Total current assets	514,437	434,726
Property and equipment, net	57,026	44,579
Deferred tax assets	36,979	31,531
Goodwill	118,896	121,440
Intangible assets, net	24,273	44,712
Other assets	15,350	14,534
Total assets	\$ 766,961	\$ 691,522
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Accounts payable	\$ 136,742	\$ 116,316
Accrued expenses	71,259	73,647
Deferred revenue and customer advances	5,756	7,761
Total current liabilities	213,757	197,724
Deferred tax liabilities	4,005	9,539
Other long-term liabilities	13,877	13,932
Total long-term liabilities	17,882	23,471
Total liabilities	231,639	221,195
Commitments and contingencies (Note 14)		
Preferred stock, 5,000 shares authorized and none outstanding	—	—
Common stock, \$0.01 par value, 100,000 shares authorized; 27,788 and 27,945 shares issued and outstanding, respectively	278	279
Additional paid-in capital	172,771	190,067
Retained earnings	367,021	277,989
Accumulated other comprehensive (loss) income	(4,748	) 1,992
Total stockholders' equity	535,322	470,327
Total liabilities and stockholders' equity	\$ 766,961	\$ 691,522

See accompanying Notes to Consolidated Financial Statements

Table of Contents

iROBOT CORPORATION  
 CONSOLIDATED STATEMENTS OF INCOME  
 (in thousands, except per share amounts)

	Fiscal Year Ended		
	December 29, 2018	December 30, 2017	December 31, 2016
Revenue	\$ 1,092,584	\$ 883,911	\$ 660,604
Cost of revenue:			
Cost of product revenue	518,612	438,114	337,832
Amortization of acquired intangible assets	18,544	12,638	3,457
Total cost of revenue	537,156	450,752	341,289
Gross profit	555,428	433,159	319,315
Operating expenses:			
Research and development	140,629	113,149	79,805
Selling and marketing	210,411	162,110	115,125
General and administrative	97,501	84,771	66,828
Amortization of acquired intangible assets	1,065	439	—
Total operating expenses	449,606	360,469	261,758
Operating income	105,822	72,690	57,557
Other income, net	2,800	3,676	3,804
Income before income taxes	108,622	76,366	61,361
Income tax expense	20,630	25,402	19,422
Net income	\$ 87,992	\$ 50,964	\$ 41,939
Net income per share:			
Basic	\$ 3.18	\$ 1.85	\$ 1.51
Diluted	\$ 3.07	\$ 1.77	\$ 1.48
Number of shares used in per share calculations:			
Basic	27,692	27,611	27,698
Diluted	28,640	28,753	28,292

See accompanying Notes to Consolidated Financial Statements

Table of Contents

iROBOT CORPORATION  
 CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME  
 (in thousands)

	Fiscal Year Ended		
	December 2018	December 30, 2017	December 31, 2016
Net income	\$87,992	\$ 50,964	\$ 41,939
Other comprehensive income (loss):			
Net foreign currency translation adjustments	(5,896 )	1,994	—
Net unrealized (losses) gains on cash flow hedges, net of tax	(327 )	490	—
Net gains on cash flow hedge reclassified into earnings, net of tax	(499 )	(295 )	—
Net unrealized (losses) gains on marketable securities, net of tax	(18 )	(46 )	85
Total comprehensive income	\$81,252	\$ 53,107	\$ 42,024
See accompanying Notes to Consolidated Financial Statements			

Table of Contents

iROBOT CORPORATION  
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY  
(in thousands)

	Common Stock Shares	Value	Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Stockholders' Equity
Balance at January 2, 2016	29,092	\$291	\$232,345	\$185,011	\$ (236 )	\$ 417,411
Issuance of common stock under employee stock plans	456	4	9,340			9,344
Conversion of deferred compensation	7	—	—			—
Vesting of restricted stock units	364	4	(4 )			—
Tax benefit of excess stock-based compensation deduction			2,421			2,421
Stock-based compensation			15,995			15,995
Stock withheld to cover tax withholdings requirements upon restricted stock vesting	(40 )	—	(1,300 )			(1,300 )
Other comprehensive income					85	85
Directors' deferred compensation			82			82
Stock repurchases	(2,641 )	(27 )	(96,994 )			(97,021 )
Net income				41,939		41,939
Balance at December 31, 2016	27,238	\$272	\$161,885	\$226,950	\$ (151 )	\$ 388,956
Issuance of common stock under employee stock plans	367	4	10,569			10,573
Conversion of deferred compensation	15	—	—			—
Vesting of restricted stock units	376	4	(4 )			—
Stock-based compensation			19,751			19,751
Stock withheld to cover tax withholdings requirements upon restricted stock vesting	(51 )	(1 )	(2,982 )			(2,983 )
Other comprehensive income			—		2,143	2,143
Directors' deferred compensation			65			65
Cumulative effect of a change in accounting principle related to stock-based compensation			783	75		858
Net income				50,964		50,964
Balance at December 30, 2017	27,945	\$279	\$190,067	\$277,989	\$ 1,992	\$ 470,327
Issuance of common stock under employee stock plans	285	3	10,363			10,366
Vesting of restricted stock units	408	4	(4 )			—
Stock-based compensation			25,804			25,804
Stock withheld to cover tax withholdings requirements upon restricted stock vesting	(51 )	—	(3,532 )			(3,532 )
Other comprehensive loss					(6,740 )	(6,740 )
Directors' deferred compensation			65			65
Stock repurchases	(799 )	(8 )	(49,992 )			(50,000 )
Cumulative effect of a change in accounting principle related to adoption of ASC 606				1,040		1,040
Net income				87,992		87,992
Balance at December 29, 2018	27,788	\$278	\$172,771	\$367,021	\$ (4,748 )	\$ 535,322

See accompanying Notes to Consolidated Financial Statements





Table of Contents

iROBOT CORPORATION  
CONSOLIDATED STATEMENTS OF CASH FLOWS  
(in thousands)

	Fiscal Year Ended		
	December 31, 2018	December 30, 2017	December 31, 2016
Cash flows from operating activities:			
Net income	\$87,992	\$ 50,964	\$ 41,939
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	36,574	25,499	13,606
Gain on business acquisition	—	(2,243	) —
Stock-based compensation	25,804	19,751	15,995
Deferred income taxes, net	(10,848	) (999	) 3,557
Tax benefit of excess stock-based compensation deductions	—	—	(2,971
Deferred rent	1,374	—	—
Other	463	864	(2,361
Changes in operating assets and liabilities — (use) source			
Accounts receivable	(23,920	) (53,251	) 25,682
Inventory	(58,546	) (1,470	) (981
Other assets	(8,533	) (10,562	) 3,187
Accounts payable	22,470	17,457	6,502
Accrued expenses	(3,618	) 23,447	10,181
Deferred revenue and customer advances	2,392	2,149	2,996
Long-term liabilities	81	4,709	(908
Net cash provided by operating activities	71,685	76,315	116,424
Cash flows from investing activities:			
Additions of property and equipment	(32,422	) (23,371	) (10,817
Change in other assets	(2,363	) (1,542	) (2,093
Proceeds from sale of equity investments	856	1,267	634
Proceeds from sale of business unit	—	—	23,520
Cash paid for business acquisitions, net of cash acquired	—	(148,765	) —
Purchases of investments	(6,438	) (10,578	) (16,554
Sales and maturities of investments	14,000	13,066	9,500
Net cash (used in) provided by investing activities	(26,367	) (169,923	) 4,190
Cash flows from financing activities:			
Proceeds from employee stock plans	10,366	10,573	9,344
Income tax withholding payment associated with restricted stock vesting	(3,532	) (2,983	) (1,300
Stock repurchases	(50,000	) —	(97,021
Tax benefit of excess stock-based compensation deductions	—	—	2,971
Net cash (used in) provided by financing activities	(43,166	) 7,590	(86,006
Effect of exchange rate changes on cash and cash equivalents	(414	) 130	—
Net increase (decrease) in cash and cash equivalents	1,738	(85,888	) 34,608
Cash and cash equivalents, at beginning of period	128,635	214,523	179,915
Cash and cash equivalents, at end of period	\$130,373	\$ 128,635	\$ 214,523
Supplemental disclosure of cash flow information			
Cash paid for income taxes	\$39,517	\$ 25,879	\$ 14,061
Non-cash investing and financing activities:			
Additions of property and equipment included in accounts payable	\$2,795	\$ 5,001	\$ 1,550

See accompanying Notes to Consolidated Financial Statements

43

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Table of Contents

iROBOT CORPORATION  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Nature of the Business

iRobot Corporation ("iRobot" or the "Company") designs and builds robots that empower people to do more. The Company develops robotic technology and applies it to produce and market consumer robots. The Company's revenue is primarily generated from product sales through distributor and retail sales channels, as well as its on-line stores.

2. Summary of Significant Accounting Policies

Basis of Presentation and Foreign Currency Translation

The accompanying consolidated financial statements include those of iRobot and its subsidiaries, after elimination of all intercompany balances and transactions. iRobot has prepared the accompanying consolidated financial statements in conformity with accounting principles generally accepted in the United States of America ("GAAP"). In addition, certain prior year amounts have been reclassified to conform to the current year presentation.

For the Company's subsidiaries that transact in a functional currency other than the U.S. dollar, assets and liabilities are translated into U.S. dollars at period-end foreign exchange rates. Revenues and expenses are translated into U.S. dollars at the average foreign exchange rates for the period. Translation adjustments are excluded from the determination of net income and are recorded in accumulated other comprehensive income (loss), a separate component of stockholders' equity.

Use of Estimates

The preparation of these financial statements in conformity with GAAP requires the Company to make estimates and assumptions that affect the reported amounts of assets and liabilities and revenue and expenses. These estimates and judgments, include but are not limited to, revenue recognition, including performance obligations, variable consideration and other obligations such as product returns and incentives; warranty costs; valuation of goodwill and acquired intangible assets; valuation of financial instruments; accounting for business combinations; evaluating loss contingencies; accounting for stock-based compensation including performance-based assessments; and accounting for income taxes and related valuation allowances. The Company bases these estimates and judgments on historical experience, market participant fair value considerations, projected future cash flows and various other factors that the Company believes are reasonable under the circumstances. Actual results may differ from the Company's estimates.

Fiscal Year-End

The Company operates and reports using a 52-53 week fiscal year ending on the Saturday closest to December 31. Accordingly, the Company's fiscal quarters end on the Saturday that falls closest to the last day of the third month of each quarter.

Business Combinations

The Company accounts for transactions that represent business combinations under the acquisition method of accounting. The Company allocates the total consideration paid for each acquisition to the assets it acquires and liabilities it assumes based on their fair values as of the date of acquisition, including identifiable intangible assets.

The Company bases the fair value of identifiable intangible assets acquired in a business combination on valuations that use information and assumptions determined by management and which consider management's best estimates of inputs and assumptions that a market participant would use. While the Company uses its best estimates and assumptions as part of the purchase price allocation process to accurately value assets acquired and liabilities assumed at the business combination date, its estimates and assumptions are inherently uncertain and subject to refinement. As a result, during the measurement period, which is generally one year from the acquisition date, any adjustment to the assets acquired and liabilities assumed is recorded against goodwill in the period in which the amount is determined. Any adjustment identified subsequent to the measurement period is included in operating results in the period in which the amount is determined.

Cash and Cash Equivalents

The Company considers all highly liquid investments with maturity of three months or less at the time of purchase to be cash and cash equivalents. The Company invests its excess cash primarily in money market funds or demand

deposit accounts of major financial institutions. Accordingly, its cash and cash equivalents are subject to minimal credit and market risk. At December 29, 2018 and December 30, 2017, cash and cash equivalents totaled \$130.4 million and \$128.6 million, respectively. These cash and cash equivalents are carried at cost, which approximates fair value.

Table of Contents

## iROBOT CORPORATION

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

## Short Term Investments

The Company's investments are classified as available-for-sale and are recorded at fair value with any unrealized gain or loss recorded as an element of stockholders' equity. The fair value of investments is determined based on quoted market prices at the reporting date for those instruments. As of December 29, 2018 and December 30, 2017, investments consisted of (in thousands):

	December 29, 2018		December 30, 2017	
	Cost	Fair Market Value	Cost	Fair Market Value
Corporate and government bonds	\$30,035	\$ 29,605	\$37,767	\$ 37,225
Convertible note	2,000	2,000	—	—
Total short term investments	\$32,035	\$ 31,605	\$37,767	\$ 37,225

As of December 29, 2018, the Company's investments had maturity dates ranging from March 2019 to March 2021. The Company invests primarily in investment grade securities and limits the amount of investment in any single issuer.

## Accounts receivable allowances

Allowance for product returns: The Company records an allowance for product returns for the estimated amount of product that may be returned. The allowance is based on specific terms and conditions included in the customer agreements, historical returns experience and various other assumptions that the Company believes are reasonable.

Allowance for other credits and incentives: The Company records an allowance related to customer incentives such as discounts, promotions, price protection and other support programs. The allowance is based on specific programs, expected usage and historical experience.

Allowance for doubtful accounts: The Company records an allowance for doubtful accounts for the estimated amount of accounts receivable that may not be collected based on an assessment of the potential risk of loss associated with delinquent accounts. The allowance including the activity within the allowance was immaterial for fiscal years 2018, 2017 and 2016.

Activity related to accounts receivable allowances was as follows (in thousands):

	Fiscal Year Ended		
	December 29, 2018	December 30, 2017	December 31, 2016
Allowance for product returns			
Balance at beginning of period	\$42,693	\$ 27,673	\$ 25,992
Acquired balance	—	6,088	—
Provision	68,476	54,981	33,992
Deduction	(56,164 )	(43,831 )	(28,826 )
Other adjustments	(1,085 )	(2,218 )	(3,485 )
Balance at end of period	\$53,920	\$ 42,693	\$ 27,673
Allowance for other credits and incentives			
Balance at beginning of period	\$61,359	\$ 23,658	\$ 23,005
Acquired balance	—	11,932	—
Adjustment related to adoption of ASC 606	1,192	—	—
Provision	198,371	110,605	47,419
Deduction	(161,672)	(81,269 )	(46,610 )
Other adjustments	(1,513 )	(3,567 )	(156 )
Balance at end of period	\$97,737	\$ 61,359	\$ 23,658

Inventory

Inventory is stated at the lower of cost or net realizable value with cost being determined using the first-in, first-out ("FIFO") method. The Company maintains a reserve for inventory items to provide for an estimated amount of excess or obsolete inventory.

45

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Table of Contents

iROBOT CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

## Warranty

The Company typically provides a one-year warranty (with the exception of European consumer products, which typically have a two-year warranty period) against defects in materials and workmanship and will either repair the goods, provide replacement products at no charge to the customer or refund amounts to the customer for defective products. The Company records estimated warranty costs, based on historical experience by product, at the time revenue is recognized. Actual results could differ from these estimates, which could cause increases or decreases to the warranty reserves in future periods.

## Property and Equipment

Property and equipment are recorded at cost and consist primarily of computer equipment, leasehold improvements, business applications software, tooling and machinery. Depreciation is computed using the straight-line method over the estimated useful lives as follows:

	Estimated Useful Life
Computer and research equipment	2-5 years
Furniture	5
Machinery	2-5
Tooling	2-5
Business applications software	3-7
Leasehold improvements	Lesser of economic benefit period or term of lease

Expenditures for additions, renewals and betterments of property and equipment are capitalized. Expenditures for repairs and maintenance are charged to expense as incurred. As assets are retired or sold, the related cost and accumulated depreciation are removed from the accounts and any resulting gain or loss is recognized.

## Goodwill and Other Long-Lived Assets

Goodwill represents the excess of the purchase price in a business combination over the fair value of the net tangible and intangible assets acquired. Goodwill is not amortized but rather is assessed for impairment at the reporting unit level (operating segment or one level below an operating segment) annually during its fourth quarter of each fiscal year or more frequently if the Company believes indicators of impairment exist. Goodwill impairment, if any, is determined by comparing the reporting unit's fair value to its carrying value. An impairment loss is recognized in an amount equal to the excess of the reporting unit's carrying value over its fair value, up to the amount of goodwill allocated to the reporting unit.

Other long-lived assets consist principally of completed technology, tradename, customer relationships, reacquired distribution rights and non-competition agreements. Reacquired distribution rights are amortized on an accelerated basis while all other intangible assets are amortized over their respective estimated useful lives on a straight-line basis, consistent with the pattern in which the economic benefits are being utilized.

The Company periodically evaluates the recoverability of other long-lived assets whenever events and changes in circumstances, such as reductions in demand or significant economic slowdowns in the industry, indicate that the carrying amount of an asset may not be fully recoverable. When indicators of impairment are present, the carrying values of the asset group are evaluated in relation to the future undiscounted cash flows of the underlying business. The net book value of the underlying asset is adjusted to fair value if the sum of the expected discounted cash flows is less than book value. Fair values are based on estimates of market prices and assumptions concerning the amount and timing of estimated future cash flows and assumed discount rates, reflecting varying degrees of perceived risk.

The impairment assessment of goodwill and other long-lived assets involves significant estimates and assumptions, which may be unpredictable and inherently uncertain. These estimates and assumptions include identification of reporting units and asset groups, long-term growth rates, profitability, estimated useful lives, comparable market multiples, and discount rates. Any changes in these assumptions could impact the result of the impairment assessment. There was no impairment of goodwill or other long-lived assets during fiscal 2018, 2017 and 2016.





Table of Contents

iROBOT CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Other Assets

The Company holds non-marketable equity securities as part of its strategic investments portfolio. During the first quarter of 2018, the Company adopted Accounting Standards Update No. 2016-01, "Recognition and Measurement of Financial Assets and Financial Liabilities," which revises the classification and measurement of financial instruments. Upon adoption of this standard, the Company now classifies its cost method investments as equity securities without readily determinable fair values and measures these investments at cost, less any impairment, adjusted for observable price changes. These investments are valued using significant unobservable inputs or data in an inactive market and the valuation requires the Company's judgment due to the absence of market prices and inherent lack of liquidity. The estimated fair value is based on quantitative and qualitative factors including, but not limited to, subsequent financing activities by the investee and projected discounted cash flows. At December 29, 2018, other assets consisted primarily of equity securities without readily determinable fair values and an equity method investment totaling \$15.1 million. There was no adjustment recorded to the carrying value of the Company's equity securities without readily determinable fair values as a result of the adoption of ASU 2016-01. At December 30, 2017, other assets consisted primarily of cost method investments and an equity method investment totaling \$14.2 million.

Financial Instruments and Hedging Activities

The Company utilizes derivative instruments to hedge specific financial risks including foreign exchange risk. The Company does not engage in speculative hedging activity. In order to account for a derivative instrument as a hedge, specific criteria must be met, including: (i) ensuring at the inception of the hedge that formal documentation exists for both the hedging relationship and the entity's risk management objective and strategy for undertaking the hedge and (ii) at the inception of the hedge and on an ongoing basis, the hedging relationship is expected to be highly effective in achieving offsetting changes in fair value attributed to the hedged risk during the period that the hedge is designated. Further, an assessment of effectiveness is required whenever financial statements or earnings are reported. Absent meeting these criteria, changes in fair value are recognized in other income, net, in the consolidated statements of income. Once the underlying forecasted transaction is realized, the gain or loss from the derivative designated as a hedge of the transaction is reclassified from accumulated other comprehensive income (loss) to the statement of income, in revenue or cost of revenue.

Fair Value Measurements

The Company accounts for certain assets and liabilities at fair value. The fair value is established based on a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value. These tiers include:

- Level 1 - observable inputs such as quoted prices for identical instruments in active markets;
- Level 2 - inputs other than quoted prices in active markets that are either directly or indirectly observable; and
- Level 3 - unobservable inputs in which little or no market data exists, therefore requiring an entity to develop its own assumptions.

Stock-Based Compensation

The Company accounts for stock-based compensation through recognition of the fair value of the stock-based compensation as a charge against earnings. The fair value of employee stock options is estimated at the grant date using the Black-Scholes option-pricing model. The fair value for time-based restricted stock units and performance-based restricted stock units is based on the closing share price of the Company's common stock on the date of grant. For performance-based restricted stock units, the compensation cost is recognized based on the number of units expected to vest upon the achievement of the performance conditions. The Company recognizes stock-based compensation as an expense on a straight-line basis, over the requisite service period. The Company accounts for forfeitures as they occur, rather than applying an estimated forfeiture rate, following its adoption of ASU No. 2016-09 in the first quarter of 2017.

Research and Development

Costs incurred in the research and development of the Company's products are expensed as incurred.

Advertising Expense

The Company expenses advertising costs as they are incurred. During the years ended December 29, 2018, December 30, 2017 and December 31, 2016 advertising expense totaled \$114.0 million, \$91.8 million and \$64.4 million, respectively, and are recorded within the selling and marketing expenses line item.

Table of Contents

## iROBOT CORPORATION

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

## Income Taxes

Deferred tax assets and liabilities are determined based on the difference between the financial statement and tax basis using enacted tax rates in effect in the years in which those temporary differences are expected to be recovered or settled in each jurisdiction. A valuation allowance is provided if, based upon the weight of available evidence, it is more likely than not that the related benefits will not be realized. The Company regularly reviews the deferred tax assets for recoverability considering historical profitability, projected future taxable income, future reversals of existing taxable temporary differences, as well as feasible tax planning strategies in each jurisdiction. As of December 29, 2018, December 30, 2017 and December 30, 2016, the Company recorded a valuation allowance of \$1.1 million, \$0.8 million and \$0.0 million, respectively, for certain foreign deferred tax assets for which the Company believes do not meet the "more likely than not" criteria for recognition.

The Company reports a liability for unrecognized tax benefits resulting from uncertain tax positions taken or expected to be taken in a tax return. The Company recognizes interest and penalties, if any, related to unrecognized tax benefits in the income tax provision.

On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (the "Act") was signed into law making significant changes to the Internal Revenue Code. Effective for the Company's 2018 tax year, the Act reduces the statutory federal corporate tax rate from 35% to 21% and implements certain additional provisions including the Global Intangible Low-Taxed Income ("GILTI") inclusion and the Foreign Derived Intangible Income ("FDII") deduction. Upon the enactment of the Act in December 2017, the Company recorded a one-time provisional income tax provision of \$11.9 million in the fourth quarter of 2017 which included a provisional amount of \$8.9 million related to the remeasurement of certain deferred tax assets and liabilities based on the tax rates at which they are expected to reverse in the future and \$3.0 million related to the one-time transition tax on the mandatory deemed repatriation of foreign earnings. On December 22, 2017, the SEC staff issued Staff Accounting Bulletin No. 118 ("SAB 118") to address the application of U.S. GAAP in situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Act. In accordance with SAB 118, during the fourth quarter of 2018, the Company finalized its analysis of the income tax effects of the Act and there were no material adjustments to the provisional amounts recorded.

## Concentration of Credit Risk and Significant Customers

Financial instruments which potentially expose the Company to concentrations of credit risk consist of accounts receivable. Management believes its credit policies are prudent and reflect normal industry terms and business risk. At December 29, 2018, two customers accounted for a total of 23.1% of the Company's accounts receivable balance. At December 30, 2017, one customer accounted for a total of 11.5% of the Company's accounts receivable balance. For the fiscal year ended December 29, 2018 and December 30, 2017, the Company generated 17.3% and 13.5%, respectively, of total revenue from one of its retailers (Amazon). For the fiscal year ended December 31, 2016 the Company generated 12.9%, 12.3% and 10.4% of total revenue from its distributor in Japan, Sales On Demand Corporation ("SODC"), Robopolis SAS, a network of affiliated European distributors ("Robopolis") and Amazon, respectively.

The Company maintains its cash in bank deposit accounts and money market funds at high quality financial institutions. The individual balances, at times, may exceed federally insured limits.

## Net Income Per Share

Basic income per share is calculated using the Company's weighted-average outstanding common shares. Diluted income per share is calculated using the Company's weighted-average outstanding common shares including the dilutive effect of stock awards as determined under the treasury stock method. The following table presents the calculation of both basic and diluted net income per share:

Fiscal Year Ended		
December 29,	December 30,	December 31,
2018	2017	2016

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Net income	\$87,992	\$ 50,964	\$ 41,939
Weighted-average shares outstanding	27,692	27,611	27,698
Dilutive effect of employee stock options and restricted stock units	948	1,142	594
Diluted weighted-average shares outstanding	28,640	28,753	28,292
Basic income per share	\$3.18	\$ 1.85	\$ 1.51
Diluted income per share	\$3.07	\$ 1.77	\$ 1.48

48

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Table of Contents

## iROBOT CORPORATION

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Restricted stock units and stock options representing approximately 0.0 million, 0.0 million and 0.4 million shares of common stock for the fiscal years ended December 29, 2018, December 30, 2017 and December 31, 2016, respectively, were excluded from the computation of diluted earnings per share as their effect would have been antidilutive.

**Recently Adopted Accounting Standards**

In February 2018, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2018-02, "Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income," which provides an option to reclassify stranded tax effects within accumulated other comprehensive income to retained earnings in each period in which the effect of the change in the U.S. federal corporate income tax rate under the Tax Cuts and Jobs Act is recorded. This guidance is effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years, with early adoption permitted. During the first quarter of 2018, the Company early adopted this standard, which did not have a material impact on the Company's consolidated financial statements and related disclosures.

In August 2017, the FASB issued ASU No. 2017-12, "Derivatives and Hedging," that was created to better align accounting rules with a company's risk management activities, better reflect the economic results of hedging in the financial statements, and simplify hedge accounting treatment. The guidance is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years, with early adoption permitted. For cash flow hedges existing at the adoption date, the standard requires adoption on a modified retrospective basis with a cumulative-effect adjustment to the consolidated balance sheet as of the beginning of the year of adoption. During the fourth quarter of 2018, the Company early adopted this standard, which did not have a material impact on the Company's consolidated financial statements. The amended guidance requires modification to existing disclosure requirements on a prospective basis which have been updated in Note 10, "Derivative Instruments and Hedging."

In March 2017, the FASB issued ASU No. 2017-08, "Receivables – Nonrefundable Fees and Other Costs," which shortens the amortization period of certain callable debt securities held at a premium. The guidance is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years, with early adoption permitted. During the fourth quarter of 2018, the Company early adopted this standard, which did not have a material impact on the Company's consolidated financial statements and related disclosures.

In October 2016, FASB issued ASU No. 2016-16, "Income Taxes: Intra-Entity Transfers of Assets Other Than Inventory." ASU 2016-16 clarifies the accounting for the current and deferred income taxes for an intra-entity transfer of an asset other than inventory. ASU 2016-16 is effective for fiscal years beginning after December 15, 2017. During the first quarter of 2018, the Company adopted this standard, which did not have a material impact on the Company's consolidated financial statements and related disclosures.

In January 2016, the FASB issued ASU No. 2016-01, "Recognition and Measurement of Financial Assets and Financial Liabilities," as amended by ASU No. 2018-03 in February 2018, which revises various aspects of the recognition, measurement, presentation and disclosure of financial instruments. The standard requires that marketable equity investments be measured at fair value with changes to fair value recognized in net income. ASU No. 2016-01 also provides a new measurement alternative for non-marketable equity investments that do not have a readily determinable fair value. Under the measurement alternative, investments are measured at cost, less any impairment, adjusted for changes from observable transactions for identical or similar investments of the same issuer. The Company adopted this guidance on December 31, 2017 and elected to record its non-marketable equity investments using the alternative measurement method, which did not have a material impact on the Company's consolidated financial statements and related disclosures.

In May 2014, the FASB issued ASU No. 2014-09, "Revenue from Contracts with Customers," ("ASC 606") which provides guidance for revenue recognition. The standard's core principle is that a company will recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the company expects to be entitled in exchange for those goods or services. On December 31, 2017, the Company adopted

the guidance using the modified retrospective method applied to those contracts that were not completed as of the adoption date. Under the modified retrospective method, the Company recognized the cumulative effect of the adoption and recorded a net increase of \$1.0 million to the beginning retained earnings as of December 31, 2017. See Note 3, "Revenue Recognition," for the required disclosures related to the impact of adopting this standard and a discussion of the Company's updated policies related to revenue recognition.

Recently Issued Accounting Standards

In August 2018, the FASB issued ASU No. 2018-15, "Intangibles - Goodwill and Other Internal-Use Software." The new standard aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software (and hosting arrangements that include an internal use software license). The amendments to this ASU are effective for fiscal years,

Table of Contents

## iROBOT CORPORATION

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

and interim periods within those fiscal years, beginning after December 15, 2019, with early adoption permitted. Implementation should be applied either retrospectively or prospectively to all implementation costs incurred after the date of adoption. The Company is currently evaluating the impact of the standard on its consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-13, "Fair Value Measurement: Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement." The amendment modifies disclosure requirements related to fair value measurement. The amendments to this ASU are effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. Implementation on a prospective or retrospective basis varies by specific disclosure requirement. Early adoption is permitted. The standard also allows for early adoption of any removed or modified disclosures upon issuance of this ASU while delaying adoption of the additional disclosures until their effective date. The Company does not believe this amendment will have a material impact on its consolidated financial statements.

In June 2018, the FASB issued ASU No. 2018-07, "Compensation - Stock Compensation: Improvements to Nonemployee Share-Based Payment Accounting (Topic 718)." The amendments in ASU No. 2018-07 expand the scope of Topic 718 to include share-based payments issued to nonemployees for goods or services. The amendments in this ASU are effective for annual periods beginning after December 15, 2018 and interim periods within those annual periods. Early adoption is permitted. The Company does not believe this amendment will have a material impact on its consolidated financial statements.

In June 2016, the FASB issued ASU No. 2016-13, "Measurement of Credit Losses on Financial Instruments," which amends the impairment model by requiring entities to use a forward-looking approach based on expected losses rather than incurred losses to estimate credit losses on certain types of financial instruments. This may result in the earlier recognition of allowances for losses. The guidance is effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years, with early adoption permitted. The Company is currently evaluating the impact of the standard on its consolidated financial statements.

In February 2016, the FASB issued ASU No. 2016-02, "Leases." ASU No. 2016-02 requires lessees to recognize the assets and liabilities on their balance sheet for the rights and obligations created by most leases and continue to recognize expenses on their income statements over the lease term. The guidance is effective for annual reporting periods beginning after December 15, 2018 and interim periods within those fiscal years, with early adoption permitted. In July 2018, the FASB issued ASU No. 2018-11, "Leases: Targeted Improvements," which provided either a modified retrospective transition approach with application in all comparative periods presented, or an alternative transition method, which permits a company to use its effective date as the date of initial application without restating comparative period financial statements. The Company expects to elect this alternative transition method and adopt the guidance prospectively. The Company also expects to elect the practical expedients allowed under the standard. The Company is in the process of aggregating and evaluating lease arrangements and implementing new processes and a lease accounting system. The Company expects the adoption will result in a material increase in the assets and liabilities upon adoption. The impact on the Company's results of operations and cash flows is not expected to be material.

From time to time, new accounting pronouncements are issued by FASB that are adopted by the Company as of the specified effective date. Unless otherwise discussed, the Company believes that recently issued standards, which are not yet effective, will not have a material impact on the Company's consolidated financial statements upon adoption.

### 3. Revenue Recognition

The Company primarily derives its revenue from product sales. The Company sells products directly to consumers through on-line stores and indirectly through resellers and distributors. Revenue is recognized upon transfer of control of promised products or services to customers, generally as title and risk of loss pass, in an amount that reflects the consideration the Company expects to receive in exchange for those products or services. Taxes collected from



customers, which are subsequently remitted to governmental authorities, are excluded from revenue. Shipping and handling expenses are considered fulfillment activities and are expensed as incurred.

The Company's product portfolio includes various consumer robots, many of which are Wi-Fi connected. The consumer robots are generally highly dependent on, and interrelated with, the embedded software and cannot function without the software. As such, the consumer robots are accounted for as a single performance obligation, and the revenue is recognized at a point in time when the control is transferred to distributors, resellers or directly to end customers through online stores. For consumer robots with Wi-Fi capability ("connected robots"), each sale represents an arrangement with multiple promises consisting of the robot, an app, cloud services and potential future unspecified software upgrades. The Company has determined that the app, cloud services and potential future unspecified software upgrades represent one promised service to the customer to enhance the functionality and interaction with the robot (referred to collectively as "Cloud Services"). Under

Table of Contents

## iROBOT CORPORATION

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

the previous revenue accounting standard, revenue allocated to the app and future unspecified software upgrades was deferred and recognized on a straight-line basis over the expected life of the connected robot.

Upon the adoption of ASU No. 2014-09, "Revenue from Contracts with Customers," ("ASC 606") as of the beginning of fiscal year 2018, the Company concluded that, on a quantitative and qualitative basis, the Cloud Services did not constitute a material performance obligation for the then existing products and, as such, these services were not considered a separate performance obligation that required allocation of transaction price.

During the third quarter of 2018, the Company launched Roomba i7 and i7+ which have the ability to learn, map and adapt to a home's floor plan. The Company has concluded that the Cloud Services related to these new products are a material performance obligation. For contracts that contain multiple performance obligations, the transaction price is allocated to each performance obligation based on a relative standalone selling price ("SSP"). The SSP reflects the Company's best estimate of what the selling prices of elements would be if they were sold regularly on a standalone basis. Revenue allocated to the robots is recognized at a point in time when control is transferred. Revenue allocated to the Cloud Services is deferred and recognized on a straight-line basis over the estimated period the software upgrades and services are expected to be provided. The transaction price allocated to performance obligations that are unsatisfied as of December 29, 2018 is not material.

The Company's products generally carry a one-year limited warranty (with the exception of European consumer products, which typically have a two-year warranty period) that promises customers that delivered products are as specified. The Company does not consider these assurance-type warranties as a separate performance obligation and therefore, the Company accounts for such warranties under ASC 460, "Guarantees."

**Significant Judgments**

The Company provides limited rights of returns for direct-to-consumer sales generated through its on-line stores as well as certain resellers and distributors. In addition, the Company may provide other credits or incentives, including price protection, which are accounted for as variable consideration when estimating the amount of revenue to recognize. Where appropriate, these estimates take into consideration relevant factors such as the Company's historical experience, current contractual requirements, specific known market events and trends and forecasted customer buying and payment patterns. Overall, these reserves reflect the Company's best estimates, and the actual amounts of consideration ultimately received may differ from the Company's estimates. Returns and credits are estimated at contract inception and updated at the end of each reporting period as additional information becomes available and only to the extent that it is probable that a significant reversal of any incremental revenue will not occur. As of December 29, 2018, the Company has reserves for product returns of \$53.9 million and other credits and incentives of \$97.7 million. As of December 30, 2017, the Company had reserves for product returns of \$42.7 million and other credits and incentives of \$61.4 million.

**Disaggregation of Revenue**

The following table provides information about disaggregated revenue by geographical region for the year ended December 29, 2018 (in thousands):

	December 29, 2018
Americas	\$610,294
EMEA	311,659
APAC	170,631
Total revenue	\$1,092,584

**Contract Balances**

The following table provides information about receivables and contract liabilities from contracts with customers (in thousands):

	December 29, 2018	December 31, 2017

	(closing balance)	(opening balance)
Accounts receivable, net	\$ 162,166	\$ 141,637
Contract liabilities	5,756	6,685

The Company invoices customers based upon contractual billing schedules, and accounts receivable are recorded when the right to consideration becomes unconditional. Contract liabilities primarily relate to prepayments received from customers in advance of product shipments. The change in the opening and closing balances of the Company's contract assets and contract liabilities primarily results from the timing difference between the Company's performance and the customer's payment. During the year ended December 29, 2018, the Company recognized \$6.7 million of the opening contract liability balance as

Table of Contents

## iROBOT CORPORATION

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

revenue upon transfer of the products to customers. Revenue recognized during the year ended December 29, 2018 related to performance obligations satisfied in a prior period is not material.

**Practical Expedients and Exemptions**

The Company generally expenses sales commissions when incurred because the amortization period is generally one year or less. These costs are recorded within sales and marketing expenses.

The Company does not assess whether a prepayment received represents a significant financing component as the period between when the payment is received and the transfer of the products to the customer is generally one year or less.

The Company does not disclose the value of unsatisfied performance obligations for contracts with an original expected duration of one year or less.

**Financial Statement Impact of Adopting ASC 606**

The Company adopted ASC 606 using the modified retrospective method. The cumulative effect of applying the new guidance to all contracts with customers that were not completed as of December 30, 2017 was recorded as an increase of \$1.0 million to retained earnings as of the adoption date. The adoption of the new guidance had an immaterial impact to the Company's consolidated balance sheet and statement of income as of and for the year ended December 29, 2018.

**4. Business Combinations****Acquisition of Robopolis**

On October 2, 2017, the Company closed the acquisition of its largest European distributor, Robopolis SAS, a French company ("Robopolis"), subsequently renamed iRobot France SAS. The acquisition will better enable the Company to maintain its leadership position and grow its business in several Western European countries through direct control of pre- and post-sales market activities including sales, marketing, branding, channel relationships and customer service. The initial purchase price was approximately \$170.1 million in cash, net of acquired cash of \$38.0 million, subject to the finalization of the working capital adjustment in accordance with the stock purchase agreement. During the first quarter of 2018, the working capital adjustment was finalized and resulted in a reduction in the purchase price of \$0.7 million. During the fourth quarter of 2018, the Company finalized the allocation of the purchase price and recorded a \$1.5 million adjustment for uncertain pre-acquisition income tax positions in various taxing jurisdictions against goodwill. The acquisition was a stock purchase. The results of operations for this acquisition have been included in the Company's operating results since the acquisition date.

The following table summarizes the final allocation of the purchase price (in thousands):

Cash	\$37,981
Accounts receivable, net (1)	21,426
Inventory	36,304
Goodwill	80,419
Intangible assets	36,597
Other assets	2,456
Total assets	215,183
Accounts payable	(29,391 )
Accrued expenses	(3,376 )
Deferred tax liabilities	(10,864 )
Other liabilities	(2,138 )
Total liabilities assumed	(45,769 )
Net assets acquired	\$ 169,414

(1) The accounts receivable balance includes reserves for product returns, discounts and promotions assumed as part of the acquisition.

52

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Table of Contents

## iROBOT CORPORATION

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following table reflects the fair value of the acquired identifiable intangible assets and related estimates of useful lives (in thousands):

	Useful Life	Fair Value
Reacquired distribution rights	2.25 years	\$29,296
Customer relationships	14 years	7,029
Non-competition agreements	3 years	272
Total		\$36,597

## Acquisition of Sales On Demand Corporation

On April 3, 2017, the Company closed its acquisition of the iRobot-related distribution business of Sales On Demand Corporation ("SODC"), iRobot Japan G.K., for approximately \$16.6 million in cash, equal to the book value of the acquired assets. The acquisition will better enable the Company to maintain its leadership position and accelerate the growth of its business in Japan through direct control of pre- and post-sales market activities including sales, marketing, branding, channel relationships and customer service. It also expands the Company's presence and customer outreach opportunities in Japan. The acquisition was a stock purchase. The results of operations for this acquisition have been included in the Company's operating results since the acquisition date.

During the three months ended September 30, 2017, the Company finalized the purchase price allocation and made measurement period adjustments to the provisional amounts reported as the estimated fair values of assets acquired. These measurement period adjustments resulted in a \$2.2 million non-taxable gain on business acquisition which represents the excess of the fair value of the net assets acquired over the purchase price. The gain on business acquisition was recorded within other income, net in the consolidated statements of income. The Company believes that the gain on business acquisition was due to the transaction not being subjected to a competitive bidding process and the purchase price being determined based on the net book value of the net assets acquired.

The following table summarizes the final allocation of the purchase price (in thousands):

Cash	\$	125	
Accounts receivable, net (1)	(5,496	)	
Inventory	18,290		
Other assets	2,065		
Deferred tax assets, net	409		
Goodwill	—		
Intangible assets	8,640		
Total assets acquired	24,033		
Accrued expenses and other current liabilities	(4,450	)	
Other liabilities	(691	)	
Total liabilities assumed	(5,141	)	
Net assets acquired	\$	18,892	
Gain on business acquisition	(2,243	)	

Total purchase price \$ 16,649

(1) The accounts receivable balance reflects reserves for product returns, discounts and promotions assumed as part of the acquisition.

53

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Table of Contents

iROBOT CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following table reflects the fair value of the acquired identifiable intangible assets and related estimates of useful lives (in thousands):

	Useful Life	Fair Value
Customer relationships	13 years	\$4,490
Reacquired distribution rights	9 months	4,150
Total		\$8,640

## Pro Forma Results (Unaudited)

The following table shows unaudited pro forma results of operations as if the Company had acquired Robopolis on January 3, 2016 (in thousands, except per share amounts):

	Fiscal Year Ended		
	December 29, 2018	December 30, 2017	December 31, 2016
Revenue	\$1,092,584	\$901,612	\$718,917
Net income	87,992	51,887	53,320
Net income per share:			
Basic income per share	\$3.18	\$1.88	\$1.93
Diluted income per share	\$3.07	\$1.80	\$1.88

The Company has not furnished pro forma financial information relating to its acquisition of SODC, because such information is not material, individually or in the aggregate, to its financial results. The unaudited pro forma results of operations are not necessarily indicative of the actual results that would have occurred had the transactions taken place at the beginning of the periods indicated.

## 5. Inventory

Inventory consists of the following (in thousands):

	December 29, 2018	December 30, 2017
Raw materials	\$ 2,992	\$ 4,036
Finished goods	161,641	102,896
	\$ 164,633	\$ 106,932

## 6. Property and Equipment

Property and equipment consists of the following (in thousands):

	December 29, 2018	December 30, 2017
Computer and equipment	\$ 12,339	\$ 10,669
Furniture	5,231	4,120
Machinery	20,606	14,202
Tooling	39,675	31,783
Leasehold improvements	28,701	26,136
Business applications software	15,638	12,757
Subtotal	122,190	99,667
Less: accumulated depreciation	65,164	55,088



Property and equipment, net    \$ 57,026      \$ 44,579

54

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Table of Contents

## iROBOT CORPORATION

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

As of December 29, 2018 and December 30, 2017, the net book value of capitalized internal-use software costs was \$4.7 million and \$2.8 million, respectively, which are included within business applications software. Depreciation expense for the years ended December 29, 2018, December 30, 2017 and December 31, 2016 was \$17.0 million, \$12.3 million, and \$10.0 million, respectively, which included amortization expense of \$1.2 million, \$1.5 million and \$0.4 million, respectively, for capitalized internal-use software.

## 7. Goodwill and other intangible assets

The following table summarizes the activity in the carrying amount of goodwill for fiscal years 2018 and 2017 (in thousands):

Balance as of December 31, 2016	\$41,041
Acquisitions (Note 4)	79,558
Effect of foreign currency translation	841
Balance as of December 30, 2017	121,440
Purchase accounting adjustments (Note 4)	830
Effect of foreign currency translation	(3,374 )
Balance as of December 29, 2018	\$118,896

Intangible assets at December 29, 2018 and December 30, 2017 consisted of the following (in thousands):

	December 29, 2018			December 30, 2017		
	Cost	Accumulated Amortization	Net	Cost	Accumulated Amortization	Net
Completed technology	\$26,900	\$ 21,607	\$5,293	\$26,900	\$ 18,150	\$8,750
Tradename	100	100	—	100	100	—
Customer relationships	11,291	1,365	9,926	11,594	418	11,176
Reacquired distribution rights	32,499	23,598	8,901	33,760	9,226	24,534
Non-competition agreements	263	110	153	275	23	252
Total	\$71,053	\$ 46,780	\$24,273	\$72,629	\$ 27,917	\$44,712

Amortization expense related to acquired intangible assets was \$19.6 million, \$13.1 million, and \$3.5 million for the fiscal years ended December 29, 2018, December 30, 2017 and December 31, 2016, respectively.

The estimated future amortization expense related to current intangible assets in each of the five succeeding fiscal years is expected to be as follows (in thousands):

	Cost of Revenue	Operating Expenses	Total
2019	\$ 11,719	\$ 1,042	\$12,761
2020	900	1,020	1,920
2021	900	794	1,694
2022	675	794	1,469
2023	—	794	794
Thereafter	—	5,635	5,635
Total	\$ 14,194	\$ 10,079	\$24,273

Table of Contents

## iROBOT CORPORATION

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

## 8. Accrued Expenses

Accrued expenses consist of the following at (in thousands):

	December 29, 2018	December 30, 2017
Accrued bonus	\$ 21,226	\$ 20,443
Accrued warranty	11,964	11,264
Accrued sales and other taxes	11,397	7,256
Accrued other compensation	10,518	9,071
Accrued direct fulfillment costs	5,372	1,885
Accrued accounting fees	2,052	1,221
Accrued federal and state income taxes	1,936	7,110
Accrued other	6,794	15,397
	\$ 71,259	\$ 73,647

## 9. Working Capital Facility

## Credit Facility

In June 2018, the Company entered into a new agreement with Bank of America, N.A., increasing the amount of its unsecured revolving line of credit from \$75.0 million to \$150.0 million. As of December 29, 2018, the full amount was available for borrowing. The new revolving line of credit is available to fund working capital and other corporate purposes. The new agreement extends the term of the credit facilities to June 2023. The interest on loans under the credit facility accrues, at the Company's election, at either (1) LIBOR plus a margin, currently equal to 1.0%, based on the Company's ratio of indebtedness to Adjusted EBITDA (the "Eurodollar Rate"), or (2) the lender's base rate. The lender's base rate is equal to the highest of (1) the federal funds rate plus 0.5%, (2) the lender's prime rate or (3) the Eurodollar Rate plus 1.0%.

As of December 29, 2018, the Company had no outstanding borrowings under its revolving credit facility. This credit facility contains customary terms and conditions for credit facilities of this type, including restrictions on the Company's ability to incur or guarantee additional indebtedness, create liens, enter into transactions with affiliates, make loans or investments, sell assets, pay dividends or make distributions on, or repurchase, the Company's stock, and consolidate or merge with other entities. In addition, the Company is required to meet certain financial covenants customary with this type of agreement, including maintaining a maximum ratio of indebtedness to Adjusted EBITDA and a minimum specified interest coverage ratio.

This credit facility contains customary events of default, including for payment defaults, breaches of representations, breaches of affirmative or negative covenants, cross defaults to other material indebtedness, bankruptcy and failure to discharge certain judgments. If a default occurs and is not cured within any applicable cure period or is not waived, the Company's obligations under the credit facility may be accelerated.

As of December 29, 2018, the Company was in compliance with all covenants under the revolving credit facility.

## 10. Derivative Instruments and Hedging Activities

The Company operates internationally and, in the normal course of business, is exposed to fluctuations in foreign currency exchange rates. The foreign currency exposures typically arise from transactions denominated in currencies other than the functional currency of the Company's operations, primarily the Japanese Yen, Canadian dollar and the Euro. The Company uses derivative instruments that are designated in cash flow hedge relationships to reduce or eliminate the effects of foreign exchange rate changes on purchases and sales. These contracts have maturities of thirty-seven months or less. At December 29, 2018 and December 30, 2017, the Company had outstanding cash flow hedges with a total notional value of \$366.7 million and \$73.7 million, respectively.

The Company also enters into economic hedges that are not designated as hedges from an accounting standpoint to reduce or eliminate the effects of foreign exchange rate changes typically related to short term trade receivables and payables. These contracts typically have maturities of two months or less. At December 29, 2018 and December 30, 2017, the Company had outstanding economic hedges with a total notional value of \$56.0 million and \$36.6 million, respectively.

Table of Contents

iROBOT CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The fair values of derivative instruments are as follows (in thousands):

Classification	Fair Value	
	December 29, 2018	December 30, 2017
Derivatives not designated as hedging instruments:		
Foreign currency forward contracts Other current assets	\$551	\$ 413
Foreign currency forward contracts Accrued expenses	—	221
Derivatives designated as cash flow hedges:		
Foreign currency forward contracts Other current assets	\$53	\$ 488
Foreign currency forward contracts Other assets	172	116
Foreign currency forward contracts Accrued expenses	335	279
Foreign currency forward contracts Long-term liabilities	795	—

Gains (losses) associated with derivative instruments not designated as hedging instruments are as follows (in thousands):

Classification	Fiscal year ended	
	December 29, 2018	December 30, 2017
Gain (loss) recognized in income Other income, net	\$ 1,568	\$ (444 )

The following tables reflect the effect of derivatives designated as cash flow hedging for the years ended December 29, 2018 and December 30, 2017 (in thousands):

Gain (loss) recognized in OCI on Derivative (1)	Fiscal year ended	
	December 29, 2018	December 30, 2017
Foreign currency forward contracts	\$(686)	\$ 584

Foreign currency forward contracts \$(686) \$ 584

(1) The amount represents the change in fair value of derivative contracts due to changes in spot rates.

	Gain (loss) recognized in earnings on cash flow hedging instruments			
	December 29, 2018		December 30, 2017	
	Revenue	Cost of revenue	Revenue	Cost of revenue
Consolidated statements of income in which the effects of cash flow hedging instruments are recorded	\$1,092,584	\$537,156	\$883,911	\$450,752

Gain or (loss) on cash flow hedging relationships:

Foreign currency forward contracts:

Amount of gain (loss) reclassified from AOCI into earnings \$948 \$(386 ) \$320 \$(63 )

11. Fair Value Measurements

57

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Table of Contents

## iROBOT CORPORATION

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The Company's financial assets and liabilities measured at fair value on a recurring basis at December 29, 2018, were as follows (in thousands):

	Fair Value		
	Measurements as of		
	December 29, 2018		
	Level 1	Level 2	Level 3
	1	(1)	(2)
<b>Assets:</b>			
Money market funds	\$3,730	\$—	\$—
Corporate and government bonds, \$30,035 at cost (3)	—	29,605	—
Convertible note	—	—	2,000
Derivative instruments (Note 10)	—	776	—
Total assets measured at fair value	\$3,730	\$30,381	\$2,000
<b>Liabilities:</b>			
Derivative instruments (Note 10)	\$—	\$1,130	\$—
Total liabilities measured at fair value	\$—	\$1,130	\$—

The Company's financial assets and liabilities measured at fair value on a recurring basis at December 30, 2017, were as follows (in thousands):

	Fair Value		
	Measurements as of		
	December 30, 2017		
	Level 1	Level 2	Level 3
	1	(1)	(2)
<b>Assets:</b>			
Money market funds	\$3,165	\$—	\$ —
Corporate and government bonds, \$37,767 at cost	—	37,225	—
Derivative instruments (Note 10)	—	1,017	—
Total assets measured at fair value	\$3,165	\$38,242	\$ —
<b>Liabilities:</b>			
Derivative instruments (Note 10)	\$—	\$500	\$ —
Total liabilities measured at fair value	\$—	\$500	\$ —

(1) Level 2 fair value estimates are based on observable inputs other than quoted prices in active markets for identical assets and liabilities, quoted prices for identical or similar assets or liabilities in inactive markets, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

(2) Level 3 fair value estimates are based on inputs that are generally unobservable and typically reflect management's estimates of assumptions that market participants would use in pricing the asset or liability. The fair values are therefore determined using model-based techniques, including option pricing and discounted cash flow models. Unobservable inputs used in the models are significant to the fair values of the assets and liabilities.

(3) As of December 29, 2018, the Company's investments had maturity dates ranging from March 2019 to March 2021. During the year ended December 29, 2018, the Company invested in a non-marketable convertible note. The debt security is classified as available-for-sale and is included in short term investments on the consolidated balance sheet. The following table provides a summary of changes in fair value of our Level 3 investment for the year ended

December 29, 2018 (in thousands):

Balance as of December 30, 2017	\$—
Investment	2,000
Balance as of December 29, 2018	\$2,000



Table of Contents

## iROBOT CORPORATION

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

## 12. Stockholders' Equity

## Preferred Stock

The Company has authorized 5,000,000 shares of undesignated preferred stock with a par value of \$0.01 per share. None of the preferred shares were issued and outstanding at December 29, 2018 and December 30, 2017.

## Common Stock

Common stockholders are entitled to one vote for each share held and to receive dividends if and when declared by the Board of Directors and subject to and qualified by the rights of holders of the preferred stock. Upon dissolution or liquidation of the Company, holders of common stock will be entitled to receive all available assets subject to any preferential rights of any then outstanding preferred stock.

## Share Repurchase Activity

On February 27, 2018, the Company's board of directors approved a stock repurchase program authorizing up to \$50.0 million in share repurchases. This share repurchase program commenced on March 28, 2018 with an expiration date of December 28, 2018. As of June 30, 2018, the Company completed the repurchase program and repurchased 798,794 shares of common stock totaling \$50.0 million.

On December 28, 2015, the Company announced a stock repurchase program, effective January 4, 2016 and ending on December 31, 2016, authorizing up to one million shares or \$40 million in share repurchases. On March 1, 2016, the Company replaced the then-current stock repurchase program and entered into an accelerated share repurchase ("ASR") agreement to repurchase an aggregate of \$85.0 million of common stock. During fiscal year 2016, the Company completed the repurchase program and repurchased 2,641,122 shares of common stock totaling \$97.0 million.

## 13. Stock-Based Compensation

The Company has awards and options outstanding under four stock incentive plans: the 2005 Stock Option and Incentive Plan (the "2005 Plan"), the Evolution Robotics, Inc. 2007 Stock Plan (the "2007 Plan"), the 2015 Stock Option and Incentive Plan (the "2015 Plan") and the 2018 Stock Option and Incentive Plan (the "2018 Plan" and together with 2005 Plan, the 2007 Plan, and the 2015 Plan, the "Plans"). The 2018 Plan is the only one of the four plans under which new awards may currently be granted. Under the 2018 Plan, which became effective on May 23, 2018, 1,750,000 shares were initially reserved for issuance in the form of incentive stock options, non-qualified stock options, stock appreciation rights, restricted stock awards, restricted stock units, unrestricted stock awards, cash-based awards, and dividend equivalent rights. Stock awards returned to the Plans, with the exception of those issued under the 2005 Plan and the 2007 Plan, as a result of their expiration, cancellation or termination are automatically made available for issuance under the 2018 Plan. Eligibility for incentive stock options is limited to those individuals whose employment status would qualify them for the tax treatment associated with incentive stock options in accordance with the Internal Revenue Code of 1986, as amended. As of December 29, 2018, there were 1,623,670 shares available for future grant under the 2018 Plan. The Company recognized \$25.8 million, \$19.8 million and \$16.0 million of stock-based compensation expense during the fiscal years ended December 29, 2018, December 30, 2017, and December 31, 2016, respectively. Stock-based compensation breaks down by expense classification as follows (in thousands):

	Fiscal Year Ended		
	December 29, 2018	December 30, 2017	December 31, 2016
Cost of revenue	\$ 1,407	\$ 1,082	\$ 760
Research and development	7,494	5,009	3,646
Selling and marketing	2,842	2,571	2,008
General and administrative	14,061	11,089	9,581

Total \$25,804 \$ 19,751 \$ 15,995

Stock Options

Options granted under the Plans are exercisable in full at any time subsequent to vesting, generally vest over four years, and expire five or ten years from the date of grant or, if earlier, 90 days from employee termination. The exercise price of stock options is typically equal to the Company's closing stock price on the date of grant.

59

---

Table of Contents

## iROBOT CORPORATION

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

As of December 29, 2018, the unamortized compensation costs associated with stock options was \$1.8 million with a weighted-average remaining recognition period of 1.29 years.

The following table summarizes stock option activity for fiscal years 2018, 2017 and 2016:

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value(1)
Outstanding at January 2, 2016	1,287,550	\$ 26.73		
Granted	314,770	38.03		
Exercised	(456,498 )	20.47		
Canceled	(57,648 )	33.28		
Outstanding at December 31, 2016	1,088,174	\$ 32.27		
Granted	10,975	57.33		
Exercised	(367,267 )	28.79		
Canceled	(18,928 )	36.72		
Outstanding at December 30, 2017	712,954	\$ 34.34		
Granted	—	—		
Exercised	(239,830 )	33.40		
Canceled	(10,863 )	46.20		
Outstanding at December 29, 2018	462,261	\$ 34.55	3.58 years	\$21.6 million
Vested and expected to vest at December 29, 2018	462,261	\$ 34.55	3.58 years	\$21.6 million
Exercisable as of December 29, 2018	317,997	\$ 33.10	3.26 years	\$15.3 million

(1) The aggregate intrinsic value on the table above represents the difference between the Company's closing stock price on December 29, 2018 of \$81.32 and the exercise price of the underlying in-the-money option.

There were no options granted for the fiscal year ended December 29, 2018. The fair value of each option grant for the fiscal years ended December 30, 2017, and December 31, 2016 was computed on the grant date using the Black-Scholes option-pricing model with the following assumptions:

	Fiscal Year Ended		
	December 29, 2018	December 30, 2017	December 31, 2016
Risk-free interest rate	—	2.11%	1.17% — 1.89%
Expected dividend yield	—	—	—
Expected life	—	4.01 years	4.01 — 4.03 years
Expected volatility	—	38.0%	38.9% — 42.1%

The risk-free interest rate is derived from the average U.S. Treasury constant maturity rate, which approximates the rate in effect at the time of grant, commensurate with the expected life of the instrument. The dividend yield is zero based upon the fact the Company has never paid and has no present intention to pay cash dividends. The Company utilizes company specific historical data for purposes of establishing expected volatility and expected term.

During fiscal years 2018, 2017, and 2016, the total intrinsic value of stock options exercised was \$14.9 million, \$21.8 million, and \$10.3 million, respectively.

Table of Contents

## iROBOT CORPORATION

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following table summarizes information about stock options outstanding at December 29, 2018:

Range of Exercise Prices	Options Outstanding		Weighted Average Exercise Price	Options Exercisable	
	Number Outstanding	Weighted Average Remaining Contractual Life		Number Exercisable	Weighted Average Exercise Price
\$ 3.54 - \$ 22.86	46,918	1.55 years	\$ 19.84	46,918	\$ 19.84
26.59 - 32.38	83,084	3.51	30.98	62,968	31.05
33.14 - 33.14	85,984	4.19	33.14	48,436	33.14
33.29 - 34.30	71,864	3.26	34.07	57,664	34.07
35.43 - 37.08	28,276	2.52	35.69	28,276	35.69
37.62 - 37.62	78,419	4.44	37.62	38,874	37.62
39.09 - 39.09	23,367	4.70	39.09	7,566	39.09
43.35 - 43.35	19,194	2.19	43.35	19,194	43.35
57.33 - 57.33	8,046	5.19	57.33	2,985	57.33
58.55 - 58.55	17,109	4.95	58.55	5,116	58.55
\$ 3.54 - \$58.55	462,261	3.58 years	\$ 34.55	317,997	\$ 33.10

**Time-based Restricted Stock Units**

Time-based restricted stock units entitle the holder to a specific number of shares of common stock upon vesting, typically over a four-year period. As of December 29, 2018, the unamortized compensation costs associated with restricted stock units was \$44.0 million with a weighted-average remaining recognition period of 2.33 years.

The following table summarizes the time-based restricted stock unit activity for fiscal years 2018, 2017 and 2016:

	Number of Shares Underlying Restricted Stock	Weighted Average Grant Date Fair Value
Outstanding at January 2, 2016	933,877	\$ 31.42
Granted	458,237	37.93
Vested	(358,018)	30.81
Forfeited	(98,917)	32.13
Outstanding at December 31, 2016	935,179	\$ 35.07
Granted	396,164	72.63
Vested	(351,543)	33.73
Forfeited	(41,347)	39.52
Outstanding at December 30, 2017	938,453	\$ 51.24
Granted	307,614	81.55
Vested	(351,816)	47.30
Forfeited	(38,362)	60.62
Outstanding at December 29, 2018	855,889	\$ 63.32

The aggregate intrinsic value of outstanding time-based restricted stock units at December 29, 2018 was \$69.6 million based on the Company's closing stock price on December 29, 2018 of \$81.32, with a weighted average remaining contractual term of 1.40 years.

**Performance-Based Restricted Stock Units**

The Company grants performance-based restricted stock units ("PSUs") to certain of its employees. The PSUs have performance metrics based on financial performance of the Company measured at the end of a three-year performance

period. For the 2017 and 2016 grant years, the performance metric for these awards is based on revenue, operating income and/or

61

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Table of Contents

## iROBOT CORPORATION

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

operating income percent, with a threshold requirement for a minimum amount of revenue growth. Starting in 2018, the Company has removed revenue as a performance metric in the PSU plan design and changed the payout metric from three-year cumulative operating income as a percentage of annual revenue to three-year cumulative operating income in dollars. The number of shares actually earned at the end of the three-year period will range from 0% to 200% of the target number of PSUs granted based on the Company's performance against the performance conditions. The unamortized fair value as of December 29, 2018 associated with performance based restricted stock units was \$7.1 million with a weighted-average remaining recognition period of 1.24 years.

The following table summarizes the performance-based restricted stock unit activity for fiscal years 2018, 2017 and 2016:

	Number of Shares Underlying PSU (1)	Weighted Average Grant Date Fair Value
Outstanding at January 2, 2016	90,492	\$ 36.78
Granted	82,085	33.36
Vested	(5,625 )	34.30
Forfeited	(3,041 )	34.30
Outstanding at December 31, 2016	163,911	\$ 35.03
Granted	105,650	57.33
Vested	(24,792 )	43.35
Forfeited	(2,708 )	39.71
Outstanding at December 30, 2017	242,061	\$ 43.97
Granted	91,538	68.41
Vested	(56,259 )	34.30
Forfeited	(3,221 )	45.71
Outstanding at December 29, 2018	274,119	\$ 54.10

(1) Includes the target number of PSUs.

The aggregate intrinsic value of outstanding PSUs was \$22.3 million based on the Company's closing stock price on December 29, 2018 of \$81.32 with a weighted average remaining contractual term of 1.24 years.

#### Employee Stock Purchase Plan

In May 2017, the Company's stockholders approved the 2017 Employee Stock Purchase Plan ("ESPP"). Eligible employees may purchase the Company's common stock through payroll deductions at a price equal to 85% of the lower of the fair market values of the stock as of the beginning or the end of six-month offering periods beginning November 15 and May 15 of each year. An employee's payroll deductions under the ESPP are limited to 15% of the employee's compensation, up to \$4,000 each period, for the purchase of common stock not to exceed 1,000 shares per offering period. As of December 29, 2018, there were 631,542 shares reserved for future issuance under the ESPP. The Company recognized \$1.0 million and \$0.1 million of stock-based compensation expense during the fiscal years ended December 29, 2018 and December 30, 2017, respectively.

#### 14. Commitments and Contingencies

##### Legal Proceedings

From time to time and in the ordinary course of business, the Company is subject to various claims, charges and litigation. The outcome of litigation cannot be predicted with certainty and some lawsuits, claims or proceedings may be disposed of unfavorably to us, which could materially affect our financial condition or results of operations.



Table of Contents

## iROBOT CORPORATION

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

## Lease Obligations

The Company leases its facilities. Rental expense under operating leases for fiscal years 2018, 2017 and 2016 amounted to \$12.9 million, \$8.9 million, and \$6.0 million, respectively. Future minimum rental payments under operating leases were as follows as of December 29, 2018 (in thousands):

	Operating Leases
2019	\$ 7,848
2020	7,397
2021	7,345
2022	7,292
2023	7,021
Thereafter	34,806
Total minimum lease payments	\$ 71,709

## Outstanding Purchase Orders

At December 29, 2018, we had outstanding purchase orders aggregating approximately \$113.6 million. The purchase orders, the majority of which are with our contract manufacturers for the purchase of inventory in the normal course of business, are for manufacturing and non-manufacturing related goods and services, and are generally cancelable without penalty. In circumstances where we determine that we have financial exposure associated with any of these commitments, we record a liability in the period in which that exposure is identified.

## Guarantees and Indemnification Obligations

The Company enters into standard indemnification agreements in the ordinary course of business. Pursuant to these agreements, the Company indemnifies and agrees to reimburse the indemnified party for losses incurred by the indemnified party, generally the Company's customers, in connection with any patent, copyright, trade secret or other proprietary right infringement claim by any third party. The term of these indemnification agreements is generally perpetual any time after execution of the agreement. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is unlimited. The Company has never incurred costs to defend lawsuits or settle claims related to these indemnification agreements. As a result, the Company believes the estimated fair value of these agreements is minimal. Accordingly, the Company has no liabilities recorded for these agreements as of December 29, 2018 and December 30, 2017, respectively.

## Warranty

The Company provides warranties on most products and has established a reserve for warranty obligations based on estimated warranty costs. The reserve is included as part of accrued expenses (Note 8) in the accompanying consolidated balance sheets.

Activity related to the warranty accrual was as follows (in thousands):

	Fiscal Year Ended		
	December 29, 2018	December 30, 2017	December 31, 2016
Balance at beginning of period	\$ 11,264	\$ 8,464	\$ 6,907
Liability assumed (1)	—	2,186	—
Provision	10,798	8,591	7,494
Warranty usage (2)	(10,098 )	(7,977 )	(5,937 )
Balance at end of period	\$ 11,964	\$ 11,264	\$ 8,464

(1) Warranty assumed as part of the acquisition of the iRobot-related distribution business of Sales On Demand Corporation.



(2)Warranty usage includes costs incurred for warranty obligations.

63

---

Table of Contents

## iROBOT CORPORATION

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

## 15. Employee Benefits

The Company sponsors a retirement plan under Section 401(k) of the Internal Revenue Code (the "Retirement Plan"). All Company employees, with the exception of temporary, contract and international employees are eligible to participate in the Retirement Plan after satisfying age requirements prescribed by the plan. Under the Retirement Plan, employees may make tax-deferred contributions, and the Company, at its sole discretion, and subject to the limits prescribed by the IRS, may make either a nonelective contribution on behalf of all eligible employees or a matching contribution on behalf of all plan participants.

The Company elected to make a matching contribution of approximately \$2.8 million, \$2.4 million and \$1.7 million for the plan years ended December 29, 2018, December 30, 2017 and December 31, 2016, respectively. The employer contribution represents a matching contribution at a rate of 50% of each employee's first six percent contribution. Accordingly, each employee participating is entitled up to a maximum of three percent of his or her eligible annual payroll.

## 16. Income Taxes

Income (loss) before provision for income taxes was as follows (in thousands):

	Fiscal Year Ended		
	December 29, 2018	December 30, 2017	December 31, 2016
Domestic	113,078	71,382	61,706
Foreign	(4,456 )	4,984	(345 )
Income before income taxes	\$ 108,622	\$ 76,366	\$ 61,361

The components of income tax expense were as follows (in thousands):

	Fiscal Year Ended		
	December 29, 2018	December 30, 2017	December 31, 2016
Current			
Federal	\$ 17,627	\$ 17,555	\$ 17,639
State	3,676	1,691	1,054
Foreign	10,732	7,355	310
Total current income tax provision	32,035	26,601	19,003
Deferred			
Federal	\$(2,475 )	\$ 6,664	\$ 781
State	(1,149 )	(2,470 )	(95 )
Foreign	(7,781 )	(5,393 )	(267 )
Total deferred income tax provision	(11,405 )	(1,199 )	419
Total income tax provision	\$ 20,630	\$ 25,402	\$ 19,422

Due to the adoption of ASU 2016-09 in 2017, all excess tax benefits and deficiencies are recognized as income tax expense in the Company's consolidated statement of income. This will result in increased volatility in the Company's effective tax rate.

On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (the "Act") was signed into law making significant changes to the Internal Revenue Code. Effective for the Company's 2018 tax year, the Act reduces the statutory federal corporate tax rate from 35% to 21% and implements certain additional provisions including the Global Intangible Low-Taxed Income ("GILTI") inclusion and the Foreign Derived Intangible Income ("FDII") deduction.

Upon the enactment of the Act in December 2017, the Company recorded a one-time provisional income tax provision of \$11.9 million in the fourth quarter of 2017 which included a provisional amount of \$8.9 million related to the remeasurement of certain deferred tax assets and liabilities based on the tax rates at which they are expected to reverse in the future and \$3.0 million related to the one-time transition tax on the mandatory deemed repatriation of foreign earnings. On December 22, 2017, the SEC staff issued Staff Accounting Bulletin No. 118 ("SAB

Table of Contents

## iROBOT CORPORATION

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

118") to address the application of U.S. GAAP in situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Act. In accordance with SAB 118, during the fourth quarter of 2018, the Company finalized its analysis of the income tax effects of the Act and determined no material adjustments to the provisional amounts recorded were required.

The reconciliation of statutory federal income tax to actual tax expense is as follows (in thousands):

	Fiscal Year Ended		
	December 29, 2018	December 30, 2017	December 31, 2016
Statutory federal income tax	\$22,812	\$ 26,728	\$ 21,476
Miscellaneous permanent items	1,837	2,979	516
State taxes (net of federal benefit)	4,312	2,089	1,360
Federal and state credits	(5,638 )	(4,486 )	(2,233 )
Domestic production activities deduction	—	(1,528 )	(1,731 )
Excess tax benefits relating to stock-based compensation	(6,529 )	(11,709 )	—
Tax Cuts and Jobs Act of 2017	2,127	11,861	—
Foreign-derived intangible income deduction	(2,678 )	—	—
EMEA business restructuring	2,292	—	—
Other	2,095	(532 )	34
	\$20,630	\$ 25,402	\$ 19,422

The components of net deferred tax assets were as follows (in thousands):

	December 29, 2018	December 30, 2017
Deferred tax assets		
Reserves and accruals	\$ 27,991	\$ 24,315
Tax credits and net operating loss carryforwards	7,781	6,810
Property and equipment	1,360	1,382
Stock-based compensation	4,975	4,277
Gross deferred tax assets	42,107	36,784
Valuation allowance	(1,148 )	(800 )
Total deferred tax assets	40,959	35,984
Deferred tax liabilities		
Intangible assets	7,317	13,419
Other	668	573
Total deferred tax liabilities	7,985	13,992
Net deferred tax assets	\$ 32,974	\$ 21,992

The Company intends to continue to invest all of its unremitted foreign earnings, as well as the capital in its foreign subsidiaries, indefinitely outside of the U.S. At December 29, 2018, the Company has immaterial unremitted foreign earnings and any unrecognized deferred tax liability on these unremitted earnings would be immaterial.

The Company has foreign net operating loss carryforwards of \$3.4 million and \$0.1 million as of December 29, 2018 and December 30, 2017, respectively. The Company has state research and development credit carryforwards of \$10.7 million and \$10.1 million as of December 29, 2018 and December 30, 2017, respectively, which expire from 2027 to 2033. Under the Internal Revenue Code and state law, certain substantial changes in the Company's ownership could result in an annual limitation on the amount of these tax carryforwards which can be utilized in future years.

As of December 29, 2018, December 30, 2017 and December 31, 2016, the Company recorded a valuation allowance of \$1.1 million, \$0.8 million and \$0.0 million, respectively, for certain foreign deferred tax assets for which the Company believes do not meet the "more likely than not" criteria for recognition.

Table of Contents

iROBOT CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

A summary of the Company's adjustments to its gross unrecognized tax benefits in the current year is as follows (in thousands):

	Fiscal Year Ended		
	December 31, 2018	December 31, 2017	December 31, 2016
Balance at beginning of period	\$4,590	\$ 5,146	\$ 6,616
Increase for tax positions related to the current year	2,891	580	2,851
Increase for tax positions related to acquisition	1,493	—	—
Increase (decrease) for tax positions related to prior years	407	(523	) (4,224
Decreases for settlements with applicable taxing authorities	(2,262	) —	—
Decreases for lapses of statute of limitations	—	(613	) (97