

CPS TECHNOLOGIES CORP/DE/  
Form 10-K  
March 15, 2019

**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**, for the transition period from to

Commission file number: 0-16088

**CPS TECHNOLOGIES CORPORATION**  
(Exact Name of Registrant as Specified in its Charter)

Delaware	<b>04-2832509</b>
(State or Other Jurisdiction	(I.R.S. Employer
of Incorporation or Organization)	Identification No.)
111 South Worcester Street	02766-2102
Norton, MA	(Zip Code)
(Address of principal executive offices)	

Registrant's telephone no., including area code: 508-222-0614

Securities registered pursuant to Section 12(b) of the Act: None  
Securities registered pursuant to Section 12(g) of the Act:

Common Stock, par value, \$0.01 per share  
(Title of class)

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

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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 than the registrant was required to file such reports), and (2) has been subject to the filing requirements for the past 90 days.

☒ Yes ☐ No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

☒ Yes ☐ No

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

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

Large accelerated filer ☐ Accelerated filer ☐ Non-accelerated filer ☒ Smaller reporting company ☒

Emerging growth company ☐

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

The aggregate market value of the voting Common Stock held by non-affiliates of the Registrant was \$10 million based on the average of the reported closing bid and asked prices for the Common Stock as of the last business day of the registrant's most recently completed second fiscal quarter as reported on the NASDAQ Capital Market.

Number of shares of Common Stock outstanding as of March 1, 2019: 13,205,936 shares.

Documents incorporated by reference.

## Part I

### Item 1. Business.

CPS Technologies Corporation (the 'Company' or 'CPS') provides advanced material solutions to the transportation, automotive, energy, computing/internet, telecommunications, aerospace, defense and oil and gas end markets.

Our primary material solution is metal matrix composites. We design, manufacture and sell custom metal matrix composite components which improve the performance and reliability of systems in these end markets.

The Company is an important participant in the growing movement towards alternative energy and "green" lifestyles. For example, the Company's products are used in high-speed trains, mass transit, hybrid and electric cars, wind-turbines for electricity generation as well as routers and switches for the internet which enable telecommuting. These applications involve energy use or energy generation; the Company's products allow higher performance and improved energy efficiency.

Metal matrix composites (MMCs) are a class of materials consisting of a combination of metals and ceramics. Compared to conventional materials, MMCs provide superior thermal conductivity, improved thermal expansion matching, greater stiffness and lighter weight.

For 30 years CPS has been the leader in manufacturing MMC components. Products we provide include baseplates for motor controllers used in high-speed electric trains, subway cars, wind turbines, and hybrid and electric vehicles. We provide baseplates and housings used in radar, satellite and avionics applications. We provide lids and heatspreaders used with high performance integrated circuits for use in internet switches and routers. We provide baseplates and housings used in modules built with Wide Band Gap Semiconductors like SiC and GaN. CPS also assembles housings and packages for hybrid circuits. These housings and packages may include MMC components; they may also include components made of more traditional materials such as aluminum, copper-tungsten, etc.

CPS is a fully qualified manufacturer for many of the world's largest electronics OEMs.

CPS management believes our business model of providing advanced material solutions to a portfolio of high growth end markets in various stages of the technology adoption lifecycle provides CPS with the opportunity for sustained growth and a diversified customer base. We believe we have validated this model as we are now supplying customers at all stages of the technology adoption lifecycle.

Our products are manufactured by proprietary processes we have developed including the Quickset™ Injection Molding Process ('Quickset Process') and the QuickCast™ Pressure Infiltration Process ('QuickCast Process').

CPS was incorporated in Massachusetts in 1984 as Ceramics Process Systems Corporation and reincorporated in Delaware in April 1987 through a merger into a wholly-owned Delaware subsidiary organized for purposes of the reincorporation. In July 1987, CPS completed our initial public offering of 1.5 million shares of our Common Stock. In March 2007, the Company changed its name from Ceramics Process Systems Corporation to CPS Technologies Corporation.

CPS website is <http://www.alsic.com>.

## Overview of Markets and Products

### Electronics Markets Overview

End-user demand continues to motivate the electronics industry to produce products which:

- operate at higher speeds;
- are smaller in size; and
- operate with higher reliability.

While these three requirements result in products of ever-increasing performance, these requirements also create a fundamental challenge for the designer to manage the heat generated by the system operating at higher speeds and/or higher power. Smaller assemblies further concentrate the heat and increase the difficulty of removing it.

This challenge is found at each level in an electronic assembly: at the integrated circuit level speeds are increasing and line widths are decreasing; at the circuit board level higher density devices are placed closer together on circuit boards; and at the system level higher density circuit boards are being assembled closer together.

The designer must resolve the thermal management issues or the system will fail. For every 10 degree Celsius rise in temperature above a threshold level, the reliability of a circuit is decreased by approximately half. In addition, heat usually causes changes in parameters which degrade the performance of both active and passive electronic components.

To resolve thermal management issues the designer is primarily concerned with two properties of the materials which comprise the system: 1) thermal conductivity, which is the rate at which heat moves through materials, and 2) thermal expansion rate (Coefficient of Thermal Expansion or CTE) which is the rate at which materials expand or contract as temperature changes. The designer must ensure that the temperature of an electronic assembly stays within a range in which the differences in the expansion rates of the materials in the assembly do not cause a failure from breaking, delaminating, etc.

CPS combines at the microstructural level a ceramic with a metal to produce a metal matrix composite which has the thermal conductivity needed to remove heat, and a thermal expansion rate which is sufficiently close to other components in the assembly to ensure the assembly is reliable. The ceramic is silicon carbide (SiC), the metal is aluminum (Al), and the composite is aluminum silicon carbide (AlSiC), a metal-matrix composite. CPS can adjust the thermal expansion rate of AlSiC components to match the specific application by modifying the amount of SiC compared to the amount of Al in the component. The Company also has the capability of encapsulating Pyrolytic Graphite inserts to enhance the thermal conductivity of the AlSiC composite.

CPS produces products made of AlSiC in the shapes and configurations required for each application, for example, in the form of lids, substrates, housings, etc. Every product is made to a customer's blueprint. The CPS process technology allows most products to be made to net shape, requiring no or little final machining.

Although the Company's focus today is on AlSiC components, it believes its proprietary Quickset- Quickcast process technology can be used to produce other metal-matrix composites which may meet future market needs.

Today, the problem of thermal management is most acute in high-performance, high-density applications such as high-performance microprocessors, application-specific integrated circuits for internet routers and switches, motor controllers for trains, subway cars and wind turbines, and components for satellite communications. However, as the trends towards faster speeds, reduced size and increased reliability continue, and as high-density circuitry is used in a larger number of applications, we believe our products will be used in an increasing number of applications across many end markets.

### Structural Markets Overview

Structural applications perform primarily a mechanical rather than electrical function. In any mechanical assembly with moving parts the stiffness and weight of moving parts can have a significant impact on the performance and energy efficiency of the assembly. In particular, in equipment with reciprocating components increasing the stiffness and reducing the weight of reciprocating components improves the performance and energy efficiency of the equipment.

Today many mechanical components are made of steel because steel has the stiffness required for the particular application. AlSiC has approximately the same stiffness as steel, but is only one-third the weight of steel. AlSiC is, however, higher cost than steel. However, we believe there are many mechanical applications where the customer will pay the higher cost for AlSiC because of significant improvements in performance resulting from the superior stiffness-to-weight ratio of AlSiC.

Examples of structural applications for which we have developed and supplied components include robotic arms for semiconductor manufacturing equipment and components. The Company continues to identify opportunities for using advanced materials in such diverse areas as fracking in oil and gas, non-skid coatings, fire/heat barriers, consumer electronics and working with nuclear waste.

### Specific Markets and Products

#### Motor Controller Applications (Insulated Gate Bipolar Transistor ("IGBT") Applications)

The use of power modules to control electric motors of all sizes is growing. This growth is the result of several factors including emerging high-power applications which demand power controllers such as trains, subways and certain industrial equipment, and cost declines in power modules which increasingly make variable speed drives cost effective. Power semiconductors are a very significant portion of the cost of variable speed drives, and the cost of the module housing and thermal management system are also significant; declines in the costs of all these components is driving increased use of variable speed drives.

We provide baseplates and heat spreaders on which power semiconductors are mounted to produce modules for motor control. The power semiconductors are typically IGBTs and these applications are often referred to as IGBT applications. Our AlSiC baseplates have sufficient thermal conductivity to allow for removal of heat through the baseplate, and have a thermal expansion rate sufficiently similar to the other components in the assembly to ensure reliability over time as the assembly thermally cycles. We believe this market will continue to grow as the use of power modules penetrates additional motor applications, and as electric motors themselves penetrate new applications such as the hybrid electric vehicle.

Today our primary products for IGBT applications are used in electric trains, subway cars, wind-generating turbines and hybrid and electric vehicles.

Major automobile companies around the world are introducing hybrid electric vehicles (HEVs) and electric vehicle (EVs) at an increasing rate. This focus on more energy efficient vehicles is being driven by increases in energy costs and concerns about climate change. There are many varieties of HEVs and EVs, but all HEVs and EVs contain an electric motor and contain one or more motor controller modules. The Company provides baseplates on which motor controller modules are assembled; these baseplates are lighter weight and provide greater reliability than baseplates made from more conventional materials.

The Company is working with multiple tier one and tier two suppliers to the automobile industry on several new designs for future introduction. The Company believes the HEV and EV markets will be the source of significant and long-term growth for the Company.

#### Lids and Heat Spreaders for High-Performance Microprocessors, Application-Specific Integrated Circuits and Other Integrated Circuits ("Flip-chip Applications")

Increases in speed, circuit density, and the number of connections in microprocessor chips (CPUs) and application-specific integrated circuits (ASICs) are accelerating a transition in the way in which these circuits are packaged. Packages provide mechanical protection to the integrated circuit (IC), enable the IC to be connected to other circuits via pins, solder bumps or other connectors, and allow attachment of a heat sink or fan to ensure the IC does not overheat. In the past most high-performance ICs were electrically connected to the package by fine wires in a process known as wire bonding. Today, most high-performance semiconductors are connected to the package by placing metal bumps on the connection points of the die, turning the die upside down in the package, and directly connecting the bumps on the die with corresponding bumps on the package base by reflowing the bumps. This is referred to as a "flip-chip package". Flip chip packages allow for connection of a larger number of leads in a smaller space, and can provide other electrical performance advantages compared to wire bonded packages.

In many flip chip configurations a lid or heat spreader is placed over the die to protect the die from mechanical damage and to facilitate the removal of heat from the die. Often a heat sink or fan is then attached to the lid. For a high-density die the package designer must ensure that the lid has sufficient thermal conductivity to remove heat from the die and that all components of the package assembly - the die itself, the package base, and the package lid - are made from materials with sufficiently similar thermal expansion rates to ensure the assembly will not break apart over time as it thermally cycles.

Our composite material, AlSiC, has been developed to meet these two needs: it is engineered to have sufficient thermal conductivity to allow the heat generated by the die to be removed through the lid, and it is engineered to expand upon heating at a rate similar to other materials used in the package assembly in order to ensure reliability of the package over time as it thermally cycles. We produce lids made of AlSiC for high performance microprocessors and application-specific integrated circuits used in servers, internet switches and other applications.

Most participants in the semiconductor industry believe the densities of ICs will continue to increase following the well-known "Moore's Law". As IC densities increase, generally so does the IC size, and the amount of heat generated by the IC. We believe the need for thermal management will continue to grow rapidly.

### Customers

We sell primarily to major microelectronics systems houses in the United States, Europe and Asia. Our customers typically purchase prototype and evaluation quantities of our products over a one to three year period before purchasing production volumes.

In 2018, our three largest customers accounted for 36%, 17%, and 12% of revenues, respectively. In 2018, approximately 90% of our revenues were derived from commercial applications and 10% from defense-related applications.

### Availability of Raw Materials

We use a variety of raw materials from numerous domestic and foreign suppliers. These materials are primarily aluminum ingots, ceramic powders and chemicals. The raw materials we use are available from domestic and foreign sources and none is believed to be scarce or restricted for national security reasons. We use no conflict metals.

### Patents and Trade Secrets

As of December 29, 2018, the Company had 11 United States patents. In addition the Company had several international patents covering the same subject matter as the U.S. patents. Licensees of these patents have rights to use certain patents as defined in their respective license agreements.

We intend to continue to apply for domestic and foreign patent protection in appropriate cases. In other cases, we believe we are better served by reliance on trade secret protection. In all cases, we seek protection for our technological developments to preserve our competitive position.

### Backlog and Contracts

Over 90% of the Company's product sales are custom in that they are based on customers' drawings and the large majority of these sales are "designed in" and are sold over multiple years. Major customers typically give the Company a non-binding forecast of demand for a one-year period and then negotiate a pricing agreement with the Company valid for that one-year period. Each week customers then issue releases or authorizations to ship under the pricing agreements. At any point in time the contractually binding backlog represented by the releases in hand does not necessarily reflect underlying demand. Given this situation, the Company does not believe backlog data are meaningful.

### Competition

We have developed and expect to continue to develop products for a number of different end markets and we will encounter competition from different producers of metal-matrix composites and other competing materials.

We believe that the principal competitive factors in our end markets today include technical competence, product performance, quality, reliability, price, corporate reputation, and strength of sales and marketing resources. We believe our proprietary processes, reputation, and the price at which we can offer products for sale will enable us to compete successfully in the many electronics end markets. However, we do have one major direct competitor producing metal matrix composites. That company, Denka, is based in Japan and sells to our major customers in Europe and Japan.

### Government Regulation

We produce non-nuclear, non-medical hazardous waste in our development and manufacturing operations. The disposal of such waste is governed by state and federal regulations. Various customers, vendors, and collaborative development agreement partners of CPS may reside abroad, thereby possibly requiring export and import of raw materials, intermediate products, and finished products, as well as potential technology transfer abroad under collaborative development agreements. These types of activities are regulated by bureaus within the Departments of Commerce, State and Treasury.

### Employees

As of December 29, 2018, we had 156 permanent full-time employees. 146 were engaged in manufacturing and engineering and 10 in sales and administration, including finance, HR and general management.

None of our employees are covered by a collective bargaining agreement. We consider our relations with our employees to be excellent.

### **Item 1A. Risk Factors.**

Smaller reporting companies are not required to provide the information required by this item.

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

Smaller reporting companies are not required to provide the information required by this item.

### **Item 2. Properties**

As of December 29, 2018, all our manufacturing, engineering, sales and administrative operations were and continue to be located in leased facilities in Norton, Massachusetts and Attleboro, Massachusetts.

In February 2018, the Company signed a lease for the Norton facilities through February 2021. The leased facilities comprise approximately 38 thousand square feet. The lease is a triple net lease wherein the Company is responsible for payment of all real estate taxes, operating costs and utilities. The Company also has an option to buy the property and a first right of refusal during the term of the lease. Annual rental payments continue at \$152 thousand.

In February 2011, the Company entered into a lease for an additional 13.8 thousand square feet in Attleboro, MA. The lease terms have been for one year and have been renewed annually. The current lease expires in February 2020 and the Company has two, one-year options at the current annual rental payments of \$83 thousand, with minor escalation for real estate tax increases.

### **Item 3. Legal Proceedings**

We are not a party to any litigation which could have a material adverse effect on us or on our business.

The Company manufactures baseplates for power module manufacturers. Most baseplates manufactured by CPS require a nickel coating be applied to the baseplate (“Ni plating”). CPS warrants its baseplates to meet the Ni plating specifications required by our customers, and flows this requirement to its Ni plating vendors.

On January 24, 2018 the Company received a “Claim and Non-Conformance Notification” from one of its European customers relating to the Ni plating on our baseplates. Upon investigation, it was determined that one employee of the Ni plating vendor used by CPS had deviated from the prescribed work instruction for Ni plating from mid-September 2017 until mid-January 2018. The Company's Ni plating vendor acknowledged this violation and worked with the customer to resolve the problem.

In the case of affected baseplates, which have not been assembled into modules, it was a straight-forward process for the Ni plating vendor to rework these baseplates and this work has been completed. The relevant issue is baseplates that have already been assembled into modules. During this four-month period approximately 15,000 baseplates from this Ni plating vendor were assembled into modules; only a small portion of these baseplates are affected.

On April 11, 2018 the Company received a “Follow-up Claim and Non-Conformance Notification” from the European customer. The customer estimated the total value of the claim to be \$1.0 million “as of today”, and reserves the right to claim additional damages in the future.

The Company has informed its insurer of this claim and the Ni plating vendor has done the same with its insurer. The Company believes that it is not possible at this time to quantify the potential financial impact, if any, to the Company. No amounts for damages have been recorded in the accompanying financial statements.

Although the Company expects this issue to be resolved amicably, there is a possibility that this could result in legal proceedings.

#### **Item 4. Mine Safety Disclosures**

Not applicable

## **Part II**

#### **Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchase of Equity Securities.**

CPS Technologies Corp. shares have traded on The Nasdaq Stock Market, LLC under the symbol “CPSH”. On December 29, 2018, we had approximately 700 shareholders. We have never paid cash dividends on our Common Stock. We currently plan to reinvest our earnings, if any, for use in the business and do not intend to pay cash dividends in the foreseeable future. Future dividend policy will depend, among other factors, upon our earnings and financial condition.

#### **Item 6. Selected Financial Data**

Smaller reporting companies are not required to provide the information required by this item.



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

This document contains forward-looking statements, based on numerous assumptions, subject to risks and uncertainties. Although we believe that the forward-looking statements are reasonable, we do not and cannot give any assurance that our beliefs and expectations will prove to be correct. Many factors could significantly affect our operations and cause our actual results to be substantially different from our expectations. Those factors include, but are not limited to: (i) general economic and business conditions; (ii) customer acceptance of our products; (iii) materials and manufacturing costs; (iv) the financial condition of customers, competitors and suppliers; (v) technological developments; (vi) increased competition; (vii) changes in capital market conditions; (viii) governmental and business conditions in countries where our products are manufactured and sold; (ix) changes in trade regulations; (x) the effect of acquisition activity; (xi) changes in our plans, strategies, objectives, expectations or intentions; and (xii) other risks and uncertainties indicated from time to time in our filings with the Securities and Exchange Commission. Actual results might differ materially from results suggested by any forward-looking statements in this report. We do not have an obligation to publicly update any forward-looking statements, whether as a result of the receipt of new information, the occurrence of future events or otherwise.

### Overview

Products we provide include baseplates for motor controllers used in high-speed electric trains, subway cars, wind turbines, and hybrid and electric vehicles. We provide baseplates and housings used in radar, satellite and avionics applications. We provide lids and heatspreaders used with high performance integrated circuits for in internet switches and routers. We provide baseplates and housings used in modules built with Wide Band Gap Semiconductors like SiC and GaN. CPS also assembles housings and packages for hybrid circuits. These housings and packages may include MMC components; they may include components made of more traditional materials such as aluminum, copper-tungsten, etc.

CPS's products are custom rather than catalog items. They are made to customers' designs and are used as components in systems built and sold by our customers. At any point in time our product mix will consist of some products with on-going production demand, and some products which are in the prototyping or evaluation stages at our customers. The Company seeks to have a portfolio of products which include products in every stage of the technology adoption lifecycle at our customers. CPS' growth is dependent upon the level of demand for those products already in production, as well as its success in achieving new "design wins" for future products.

As a manufacturer of highly technical and custom products, the Company incurs fixed costs needed to support the business, but which do not vary significantly with changes in sales volume. These costs include the fixed costs of applications engineering, tooling design and fabrication, process engineering, etc. Accordingly, particularly given our current size, changes in sales volume generally result in even greater changes in financial performance on a percentage basis as fixed costs are spread over a larger or smaller base. Sales volume is therefore a key financial metric used by management.

The Company believes the underlying demand for metal matrix composites is growing as the electronics and other industries seek higher performance, higher reliability, and reduced costs. CPS believes that the Company is well positioned to offer our solutions to current and new customers as these demands grow. In 2018 the Company's top three customers accounted for 65% of revenue and the remaining 35% of revenue was derived from 77 other customers. In 2017 the top three customers accounted for 54% of revenue and the remaining 46% of revenue was derived from approximately 72 customers.

### Application of Critical Accounting Policies

Financial statements are prepared in conformity with accounting principles generally accepted in the United States of America. As such, the Company is required to make certain estimates, judgments and assumptions that it believes are

reasonable based upon the information available. These estimates and assumptions affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the periods presented. CPS's significant accounting policies are presented within Note 2 to the financial statements; the significant accounting policies which management believes are most critical to aid in fully understanding and evaluating its reported financial results include the following:

a) The initial adoption of Accounting Standards Codification (ASC) 606.

Revenue from Contracts with Customers (ASC 606). The adoption of ASC 606 did not have a material impact on the Company's financial statements and no cumulative adjustment was required. See Note 2 to the financial statements for application of this accounting policy to the Company.

b) Allowance for doubtful accounts

The Company performs ongoing monitoring of the status of its receivables based on the payment history and the credit worthiness of our customers, as determined by a review of their current credit information. Management continuously monitors collections and payments from customers and maintains a provision for estimated credit losses based upon historical experience and any specific customer collection issues that have been identified. While such credit losses have historically been low and within expectations, there is no guarantee that we will continue to experience the same credit loss rates as in the past. Although the Company's major customers are large and have a favorable payment history, a significant change in the liquidity or financial position of one of them could have a material adverse impact on the collectability of accounts receivable and future operating results.

c) Inventory valuation

The Company has a build-to-order business model and manufactures product to ship against specific purchase orders; occasionally CPS manufactures product in advance of anticipated purchase orders to level load production or prepare for a ramp-up in demand. In addition, 100% of the Company's products are custom, meaning they are produced to a customer's design and generally cannot be used for any other purpose. Purchase orders generally have cancellation provisions which vary from customer to customer, but which can result occasionally in CPS producing product which the customer is not obligated to purchase. However, once a product has gone into production, most customer orders are recurring and order cancellations are rare. The Company's general obsolescence policy is to write off obsolete inventory when there has been no activity on a particular part for a twelve month period and there are no pending customer orders.

In some cases, customers place blanket purchase orders and request the Company to maintain inventory sufficient to respond quickly upon receiving a shipment request. The Company manufactures to specifications and the products typically have a life which extends over several years and does not deteriorate over time. Therefore, the risk of obsolescence due to the passage of time, per se, is minimal. However, in order to more efficiently schedule production or to meet agreements with customers to have inventory in the pipeline, the Company occasionally manufactures products in advance of purchase orders. In these instances, the Company bears the risk that it will be left with product manufactured to specification for which there are no customer purchase orders. The Company scrutinizes its inventory and, in the absence of pending orders or strong evidence of future sales, establishes an obsolescence reserve when there has been no activity on a particular part for a twelve month period.

In determining inventory cost, the Company uses the first-in, first-out method and states inventory at the lower of cost or net realizable value. Virtually, all of the Company's inventory is customer specific; as a result, if a customer's order is cancelled, it is unlikely that CPS would be able to sell that inventory to another customer. Likewise, if the Company chooses to manufacture product in advance of anticipated purchase orders and those orders did not materialize, it is unlikely that it would be able to sell that inventory to another customer. The value of CPS's work in process and finished goods is based on the assumption that specific customers will take delivery of specific items of inventory. The Company has not experienced losses to date as a result of customer cancellations and has not established a reserve for such cancellations.

The Company typically buys 'lots' of components for its hermetic packaging products. Often all the components in a lot are not necessary to complete the order. Annually the company reviews this unused material and establishes an obsolescence reserve for the amount it does not expect to use over the next three years.

d) Valuation of deferred tax assets

Deferred tax assets and liabilities are based on the net tax effects of tax credits, operating loss carryforwards and temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. The Company considers many factors in assessing whether or not a valuation allowance for its Deferred Tax Asset is warranted. On the positive side, the Company considered such factors as the revenue growth rate during 2018, the double digit growth projection in the high-speed train market, the potential for market growth in Japan and China, the potential for defense contracts, the increase and level of gross margin earned in the most recent quarter, the global customer base, current products and their technological life, potential price increases, the decade plus of time before the credits expire and the trend of improvement in manufacturing efficiencies. On the negative side the Company considered the magnitude of the Deferred Tax Asset, the Company's ability to absorb a period of losses, the potential for technological breakthroughs and substitution of products offering lower cost solutions, and losses incurred during the past three years. Weighing all factors the Company has concluded that it is more likely than not that a portion or all of the Deferred Tax Asset will not be used before they expire. As a result a valuation reserve has been established as of December 29, 2018.

At December 29, 2018 the Company's Deferred Tax Asset and other temporary differences will require taxable income of approximately \$15 million and reversals of existing temporary differences to fully utilize, assuming a statutory corporate tax rate of 21% based on the recently enacted Tax Cuts and Jobs Act.

e) Estimates and judgments surrounding our disclosures associated with the ABB claim as discussed in Item 3 above and Note 4 to the financial statements

Recent Issued Accounting Pronouncements (Not Yet Effective)

In February 2016 the FASB issued ASU No. 2016-02, Leases, which requires a lessee

to recognize lease liabilities for the lessee's obligation to make lease payments arising from a lease, measured on a discounted basis, and right-of-use assets, representing the lessee's right to use, or control the use of, specified assets for the lease term. The ASU became effective on December 30, 2018 (Q1 of 2019). It is expected that assets and

liabilities will increase by approximately \$350 thousand based upon the present value of remaining lease payments for leases in place at the adoption date.

Results of Operations (all \$ in millions unless noted)

Results of Operations for the year 2018 ("2018") compared with the year 2017 ("2017"):

Total revenue was \$21.6 million in 2018, a 48% increase compared with total revenue of \$14.6 million in 2017. This increase was due primarily to an increase in the sales of baseplates which was augmented by adding the plating function for a major customer. There were no significant price changes during 2018 compared with 2017.

Gross margin in 2018 totaled \$2.9 million or 13% of sales. This compares with \$1.7 million, or 11% of sales, generated during 2017. This improvement in margin was due almost entirely to the increase in revenues.

Selling, general and administrative (SG&A) expenses were \$3.8 million during 2018, an increase of 6% compared with SG&A expenses of \$3.6 million incurred during 2017. During 2017 the Company incurred approximately \$0.2 million in one-time legal and other costs associated with the annual proxy process and \$0.2 million associated with the separation of an executive officer. If it had not been for these one-time additional costs, the total SG&A spending would have been up 19% versus last year, primarily due to higher sales commissions and, to a lesser degree, additional marketing spending.

The Company incurred an operating loss of \$0.9 in 2018, compared with an operating loss of \$2.0 in 2017. This improvement was due in large part to the increase in revenues. The net loss in 2018 totaled \$3.7 versus a net loss of \$1.7 in 2017.

Significant Fourth Quarter Activity in 2018:

Revenues totaled \$6.1 million versus \$3.8 million in the last quarter of 2017, representing a 60% increase. This increase was entirely due to higher shipments of baseplates. The impact of price changes was insignificant in the quarter compared with the same period in 2017.

Gross margin increased in the Fourth Quarter of 2018 compared with the Fourth Quarter of 2017 from \$0.6 million to \$1.2 million. This increase was directly associated with the increase in sales volume.

SG&A expenses totaled \$1.0 million during the quarter—essentially flat versus the same quarter in 2017. During the last quarter of 2017 the Company incurred \$0.2 million of costs associated with the resignation of an executive officer. All other SG&A costs were up \$0.2 million due to a combination of higher sales commissions and other marketing spending.

Primarily as a result of higher sales volume, the Company's generated an operating profit of \$0.2 million compared to a loss of \$0.4 million in the Fourth Quarter of 2017.

In the last quarter of 2018 the Company established a valuation reserve against its deferred tax asset. Due in large part to this reserve, the Company recorded a net loss for the quarter of \$2.9 million. The net loss of the last quarter of 2017 was \$0.8 million as the impact of the passage of the Tax Cuts and Jobs Act in December 2017, has the effect of creating a tax provision of \$0.4 million for the quarter rather than a tax credit, despite a loss from operations.

#### Liquidity and Capital Resources (all \$ in millions unless noted)

The Company's cash and cash equivalents at December 29, 2018 totaled \$0.6 compared with cash and cash equivalents at December 30, 2017 of \$1.3. The decrease in net cash was due to the combination of losses from operations, coupled with an increase in working capital associated with the increase in receivables and inventory, less payables and accruals.

Accounts receivable at December 29, 2018 totaled \$3.1 compared with \$2.9 at December 30, 2017. Days Sales Outstanding (DSO) decreased from 70 days at the end of 2017 to 45 days at the end of Q4 2018. This improvement was due in large part to the fact that sales were more front-end loaded in the quarter in 2018 and, as a result, a higher percentage of sales were collected during the quarter than during the same quarter in 2017. The accounts receivable balances at December 30, 2017, and December 29, 2018 were both net of an allowance for doubtful accounts of \$10.

Inventories totaled \$3.2 at December 29, 2018 compared with inventory totaling \$2.1 at December 30, 2017. This increase was due primarily to the decision to assume responsibility for the plating process in the finished product sold to a major customer, coupled with an increase in customer demand. As a result of this change, the inventory at the platers is now owned by the company rather than by the customer. The inventory turnover in the most recent four quarters ending was 6.0 times, down from 6.7 times averaged during the four quarters of 2017 (each based on a 5 point average).

All consigned inventory is shipped under existing purchase orders and per customers' requests. At December 29, 2018 and December 30, 2017 inventory of, \$1.5 and \$0.7, respectively, was located at customer and vendor locations pursuant to consigned inventory agreements. This increase was due primarily to the Company's decision to assume responsibility for the plating process of a major European customer.

The Company financed its losses from operations and an increase in working capital during 2018 from a combination of its cash at the beginning of the year and bank borrowings during the year. The Company expects it will continue to be able to fund its operations during 2019 from existing cash balances and bank borrowings.

The Company continues to sell to a limited number of customers and the loss of any one of these customers or vendors could cause the Company to require additional external financing. Failure to generate sufficient revenues, raise additional capital or reduce certain discretionary spending could have a material adverse effect on the Company's ability to achieve its business objectives.

### Contractual Obligations

In November 2018, the Company renewed its revolving line of credit line with Santander Bank for \$1.5 million. The agreement matures at the end of June 2019. The LOC is secured by the accounts receivable and other assets of the Company and has an interest rate of prime plus 100 basis points. Under the terms of the agreement, the Company is required to maintain its operating accounts with Santander Bank. At December 29, 2018 the Company's borrowing base formula would have permitted the full \$1.5 of its LOC to have been borrowed. The Company is also subject to certain financial covenants.

The financial covenant requirements at the end of 2018 are shown below, together with the actual ratios achieved:

Covenant	Requirement	Actual
Current Ratio	Minimum of 2.0X	2.6X
Liabilities to Tangible Net Worth	Maximum of 0.5X	0.5X
Debt Service Coverage Ratio	Minimum of 1.25	22
Borrowings under the line of credit	Maximum of \$1.5 million	zero
Net Loss in Q4 2018	Maximum of \$50 thousand	Waived by Santander 3/8/2019

As of December 29, 2018 the Company had \$34 thousand of construction in progress and no outstanding commitments to purchase production equipment.

Our leasing arrangements consist of the Norton, MA and Attleboro, MA facility leases. The Norton facility lease expires in February 2021 and is a triple net lease wherein the Company is responsible for payment of all real estate taxes, operating costs and utilities. The Company also has an option to buy the property and a first right of refusal during the term of the lease. Annual rental payments continue at \$152 thousand. The Attleboro facility lease renews annually in February of each year. The current Attleboro facility lease expires in February 2020 and the Company has two, one-year options at the current annual rental payments of \$83 thousand, with minor escalation for real estate tax increases.

### Off-Balance Sheet Arrangements

We have no off-balance sheet arrangements.

### Inflation

Inflation had no material effect on the results of operations or financial condition during the last few years. There can be no assurance however, that inflation will not affect our operations or business in the future.

### **Item 7A. Quantitative and Qualitative Disclosure about Market Risk**

Smaller reporting companies are not required to provide the information required by this item.

### **Item 8. Financial Statements and Supplementary Data**

See Index to the Company's Financial Statements and the accompanying notes which are filed as part of this Annual Report on Form 10-K.

### **Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure**

None.

### **Item 9A. Controls and Procedures**

#### *Evaluation of Disclosure Controls and Procedures*

The Company maintains disclosure controls and procedures that are designed to ensure that information required to be disclosed in Securities and Exchange Commission reports is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms, and that such information is accumulated and communicated to the Company's management, including the Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

Under the direction of our Chief Executive Officer and Chief Financial Officer, management has carried out an evaluation of the effectiveness of the Company's disclosure controls and procedures as such item is defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Based on that evaluation, the Chief Executive Officer and Chief Financial Officer have concluded that these disclosure controls and procedures were effective as of December 29, 2018.

#### *Changes in Internal Control over Financial Reporting*

There were no material changes in the Company's internal control over financial reporting during fiscal 2018.

#### *Management's Report on Internal Control over Financial Reporting*

Management is responsible for establishing and maintaining adequate internal control over financial reporting for the Company, as such term is defined in Rule 13a-15(f) of the Exchange Act. 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 accounting principles generally accepted in the United States and 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 Company's assets; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with

accounting principles generally accepted in the United States, and that receipts and expenditures of the Company are being made only in accordance with authorizations of the Company's management and directors; 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.

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.

Under the direction of our Chief Executive Officer and Chief Financial Officer, management has assessed the effectiveness of the Company's internal control over financial reporting as of December 29, 2018. In making this assessment, management used the criteria set forth in the "Internal Control Integrated Framework" issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) (2013). Based on this assessment, management concluded that the Company's internal control over financial reporting was effective as of December 29, 2018.

This annual report does not include an attestation report of the Company's registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by the Company's registered public accounting firm pursuant to rules of the Securities and Exchange Commission that permit the Company to provide only management's report in this annual report.

#### **Item 9B. Other Information**

The Company had no information required to be disclosed in a report on Form 8-K during the fourth quarter of the year covered by this Form 10-K that has not been so reported.

### **Part III**

#### **Item 10. Directors, Executive Officer and Corporate Governance**

The information required by this Item 10 is incorporated herein by reference to our Definitive Proxy Statement, under the captions "Members of the Board of Directors, Nominees and Executive Officers," "Certain Relationships and Related Person Transactions; Legal Proceedings," "Section 16(a) Beneficial Ownership Reporting Compliance," "Code of Conduct" and "Corporate Governance" and with respect to our 2019 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission not later than 120 days after the end of the Company's 2018 fiscal year.

The Company has adopted the CPS Code of Conduct, which applies to all directors, officers (including the principal executive officer, principal financial officer and treasurer) and employees. A copy of this code can be found on the Company's website at [www.alsic.com/investor-relations](http://www.alsic.com/investor-relations).

#### **Item 11.**

#### **Executive Compensation**

The information required by this Item 11 is incorporated herein by reference to our Definitive Proxy Statement, under the captions "Compensation" and "Compensation Discussion and Analysis" with respect to our 2019 Annual Meeting of



Stockholders to be filed with the Securities and Exchange Commission not later than 120 days after the end of the Company's 2018 fiscal year.

## **Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters**

The information required by this Item 12 is incorporated herein by reference to our Definitive Proxy Statement, under the caption "Equity Compensation Plan Information" and "Security Ownership of Certain Beneficial Owners and Management" with respect to our 2019 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission not later than 120 days after the end of the Company's 2018 fiscal year.

## **Item 13. Certain Relationships and Related Transactions, and Director Independence**

The information required by this Item 13 is incorporated herein by reference to our Definitive Proxy Statement, under the captions "Certain Relationships and Related Person Transactions; Legal Proceedings" and "Corporate Governance" with respect to our 2019 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission not later than 120 days after the end of the Company's 2018 fiscal year.

## **Item 14. Principal Accountant Fees and Services**

The information required by this Item 14 is incorporated herein by reference to our Definitive Proxy Statement, under the caption "Accounting Matters" with respect to our 2019 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission not later than 120 days after the end of the Company's 2018 fiscal year.

## Part IV

### Item 15.

### Exhibits, Financial Statement Schedules.

(a) Documents filed as part of this Form 10-K.

#### 1. Financial Statements

The financial statements filed as part of this Form 10-K are listed on the Index to Financial Statements of this Form 10-K.

#### 2. Exhibits

The exhibits to this Form 10-K are listed on the Exhibit Index of this Form 10-K.

### SIGNATURES

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

CPS TECHNOLOGIES CORPORATION

/s/ Grant C. Bennett

By: President and Chief Executive Officer

March 14, 2019

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

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Grant C. Bennett</u> Grant C. Bennett	President and Chief Executive Officer	March 14, 2019
<u>/s/ Ralph M. Norwood</u> Ralph M. Norwood	Chief Financial Officer	March 14, 2019
<u>/s/ Francis J. Hughes, Jr.</u> Francis J. Hughes	Director	March 14, 2019
<u>/s/ Daniel C. Snow</u> Daniel C. Snow	Director	March 14, 2019
<u>/s/ Thomas M. Culligan</u> Thomas M. Culligan	Director	March 14, 2019

CPS TECHNOLOGIES CORPORATION  
EXHIBIT INDEX

Exhibit No.	Description
3.1*	Restated Certificate of Incorporation of the Company, as amended, is incorporated herein by reference to Exhibit 3 to the Company's Registration Statement on Form 8-A (File No. 0-16088)
3.2*	By-laws of the Company, as amended, are incorporated herein by reference to Exhibit 3.2 to the Company's Registration Statement on Form S-1 (File No. 33-14616)(the '1987 S-1Registration Statement')
4.1*	Specimen certificate for shares of Common Stock of the Company is incorporated herein by reference to Exhibit 4 to the 1987 S-1 Registration Statement
4.2*	Description of Capital Stock contained in the Restated Certificate of Incorporation of the Company, as amended, filed as Exhibit 3.1
10.5*(1)	Retirement Savings Plan, effective September 1, 1987 is incorporated by reference to Exhibit 10.35 to the Company's 1989 S-1 Registration Statement
10.21*	1999 Stock Incentive Plan adopted by the Company's Board of Directors on January 22, 1999
10.22*	2009 Stock Incentive Plan ("2009 Plan") on December 10, 2009.
23.1	Consent of Wolf & Company, P.C.
31.1	Certification Pursuant to Exchange Act Rule 13a-14(a), as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
* Incorporated herein by reference.	

(1) Management Contract or compensatory plan or arrangement filed as an exhibit to this Form pursuant to Items 14(a) and 14(c) of Form 10-K.

INDEX TO FINANCIAL STATEMENTS  
OF  
CPS TECHNOLOGIES CORPORATION

Report of Independent Registered Public Accounting Firm

Balance Sheets as of December 29, 2018 and December 30, 2017

Statements of Operations for the years ended December 29, 2018 and December 30, 2017

Statements of Stockholders' Equity for the years ended December 29, 2018 and December 30, 2017

Statements of Cash Flows for the years ended December 29, 2018 and December 30, 2017

Notes to Financial Statements

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of CPS Technologies Corporation

Opinion on the Financial Statements

We have audited the accompanying balance sheets of CPS Technologies Corporation (the “Company”) as of December 28, 2018 and December 30, 2017, the related statements of operations, stockholders’ equity and cash flows for the years then ended, and the related notes (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 28, 2018 and December 30, 2017, and the results of its operations and its cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

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

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

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

/s/ Wolf & Company, P.C.

We have served as the Company’s auditor since 2005.

Boston, Massachusetts  
March 14, 2019

CPS TECHNOLOGIES CORPORATION  
BALANCE SHEETS

	December 29, 2018	December 30, 2017
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$628,804	\$1,339,572
Accounts receivable-trade, net	3,053,091	2,943,373
Inventories, net	3,192,933	2,109,513
Prepaid expenses and other current assets	156,338	101,086
Total current assets	7,031,166	6,493,544
Property and equipment:		
Production equipment	9,550,043	9,299,515
Furniture and office equipment	519,779	499,679
Leasehold improvements	891,817	891,817
Total cost	10,961,639	10,691,011
Accumulated depreciation and amortization	(9,722,767)	(9,287,006)
Construction in progress	34,314	86,493
Net property and equipment	1,273,186	1,490,498
Deferred taxes, net	186,747	3,038,666
Total assets	\$8,491,099	\$11,022,708

(continued)

See accompanying notes to financial statements.

CPS TECHNOLOGIES CORPORATION  
BALANCE SHEETS

	December 29, 2018	December 30, 2017
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$1,680,263	\$946,385
Accrued expenses	975,315	655,489
Deferred revenue	—	100,000
Total current liabilities	2,655,578	1,701,874
Commitments & Contingencies (note 4)		
Stockholders' Equity:		
Common stock, \$0.01 par value, authorized 20,000,000 shares; issued 13,425,992 and 13,423,492 shares; outstanding 13,205,936 and 13,203,436; at December 29, 2018 and December 30, 2017, respectively	134,260	134,235
Additional paid-in capital	35,960,545	35,739,916
Accumulated deficit	(29,742,231)	(26,036,264)
Less cost of 220,056 common shares repurchased at December 29, 2018 and December 30, 2017	(517,053)	(517,053)
Total stockholders' equity	5,835,521	9,320,834
Total liabilities and stockholders' equity	\$8,491,099	\$11,022,708

See accompanying notes to financial statements.

CPS TECHNOLOGIES CORPORATION  
STATEMENTS OF OPERATIONS  
FOR THE YEARS ENDED DECEMBER 29, 2018 AND DECEMBER 30, 2017

	2018	2017
Product sales	\$21,580,904	\$14,577,183
Cost of product sales	18,668,052	12,919,065
Gross margin	2,912,852	1,658,118
Selling, general, and		

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Administrative expenses	3,813,415	3,609,328
Income (loss) from operations	(900,563)	(1,951,210)
Other income (expense)	(20,985)	11,476
Income (loss) before income tax	(921,548)	(1,939,734)
Income tax provision (benefit)	2,784,419	(222,032)
Net income (loss)	\$(3,705,967)	\$(1,717,702)
Net income (loss) per basic common share	\$(0.28)	\$(0.13)
Weighted average number of basic common shares outstanding	13,205,936	13,203,436
Net income (loss) per diluted common share	\$(0.28)	\$(0.13)
Weighted average number of diluted common shares outstanding	13,205,936	13,203,436
See accompanying notes to financial statements.		



CPS TECHNOLOGIES CORPORATION  
 STATEMENTS OF STOCKHOLDERS' EQUITY  
 FOR THE YEARS ENDED DECEMBER 29, 2018 AND DECEMBER 30, 2017

	Common stock		Additional	Accumulated	Stock	Stock-
	Number of	Par	Paid-in	deficit	repurchased	holders'
	shares issued	Value	capital			equity
Balance at December 31, 2016	13,423,492	\$ 134,235	\$ 35,452,685	\$(24,318,562)	\$(517,053)	\$ 10,751,305
Share-based compensation expense	—	—	287,231	—	—	287,231
Net (loss)	—	—	—	(1,717,702)	—	(1,717,702)
Balance at December 30, 2017	13,423,492	\$ 134,235	\$ 35,739,916	\$(26,036,264)	\$(517,053)	\$ 9,320,834
Share-based compensation expense	—	—	217,430	—	—	217,430
Issuance of common stock	2,500	25	3,200	—	—	3,224
Net (loss)	—	—	—	(3,705,967)	—	(3,705,967)
Balance at December 29, 2018	13,425,992	\$ 134,260	35,960,546	\$(29,742,231)	\$(517,053)	\$ 5,835,521
See accompanying notes to financial statements.						

## CPS TECHNOLOGIES CORPORATION

## STATEMENTS OF CASH FLOWS

FOR THE YEARS ENDED DECEMBER 29, 2018 AND DECEMBER 30, 2017

	2018	2017
Cash flows from operating activities:		
Net income (loss)	\$(3,705,967)	\$(1,717,702)
Adjustments to reconcile net income (loss) to cash provided (used) by operating activities:		
Share-based compensation	220,654	287,231
Depreciation and amortization	568,164	566,787
Deferred taxes	2,851,919	(211,317)
Gain on sale of property and equipment	(13,645)	—
Changes in operating assets and liabilities:		
Accounts receivable – trade, net	(109,718)	(983,767)
Inventories	(1,083,420)	(138,552)
Prepaid expenses and other current assets	(55,252)	(12,643)
Accounts payable	733,878	283,903
Accrued expenses	319,826	31,530
Deferred revenue	(100,000)	100,000
Net cash provided (used) by operating activities	(373,561)	(1,794,530)
Cash flows from investing activities:		
Purchases of property and equipment	(350,852)	(273,658)
Proceeds from sale of property and equipment	13,645	—
Net cash used by investing activities	(337,207)	(273,658)
Cash flows from financing activities:		
Borrowings on line of credit	900,000	—
Repayment of borrowings on line of credit	(900,000)	—
Net cash provided by financing activities	—	—
Net increase (decrease) in cash and cash equivalents	(710,768)	(2,068,188)
Cash and cash equivalents at beginning of year	1,339,572	3,407,760
Cash and cash equivalents at end of year	\$628,804	\$1,339,572
Supplemental cash flow information:		
Income taxes paid, net of refund	\$436	\$436
Interest paid	\$34,791	\$--

See accompanying notes to financial statements.



CPS Technologies Corporation  
Years Ended December 29, 2018 and December 30, 2017  
Notes to Financial Statements

(1) Nature of Business

CPS Technologies Corporation (the 'Company' or 'CPS') provides advanced material solutions to the transportation, automotive, energy, computing/internet, telecommunications, aerospace, defense and oil and gas end markets.

Our primary material solution is metal matrix composites. We design, manufacture and sell custom metal matrix composite components which improve the performance and reliability of systems in these end markets.

(2) Summary of Significant Accounting Policies

(2)(a) Cash and Cash Equivalents

The Company considers all highly liquid investments with a maturity of three months or less at the date of purchase to be cash equivalents.

(2)(b) Accounts Receivable

The Company reports its accounts receivable at the invoiced amount less an allowance for doubtful accounts. The Company's management provides appropriate provisions for uncollectible accounts based upon factors surrounding the credit risk and activity of specific customers, historical trends, economic conditions and other information. Adjustments to the allowance are charged to operations in the period in which information becomes available that may affect the allowance.

(2)(c) Inventories

Inventories are stated at the lower of cost, as determined under the first-in, first-out method (FIFO), or net realizable value. A reserve for obsolete inventories is based on factors regarding the sales and usage of such inventories, including inventories manufactured for specific customers. The Company's general obsolescence policy is to write off obsolete inventory when there has been no activity on a particular part for a twelve month period and there are no pending customer orders.

(2)(d) Property and Equipment

Property and equipment are stated at cost. Depreciation of equipment is calculated on a straight-line basis over the estimated useful life, generally five years for production equipment and three to five years for furniture and office equipment. Leasehold improvements are depreciated over the shorter of the lease term or their useful life. Maintenance and repairs are charged to expense as incurred. Upon retirement or sale, the cost and related accumulated depreciation or amortization are removed from their respective accounts. Any gains or losses on the disposition of property and equipment are included in the results of operations in the period in which they occur.

(2)(e) Impairment of Long-Lived Assets

The Company reviews long-lived assets for impairment whenever circumstances and situations change such that there is an indication that the carrying amounts may not be recovered. Recoverability is assessed based on estimated undiscounted future cash flows. As of December 29, 2018 and December 30, 2017, the Company believes that there has been no impairment of its long-lived assets.

(2)(f) Revenue Recognition

Revenue Recognition - Change in Accounting Policy

The Company adopted Accounting Standards Codification (ASC) 606, “Revenue from Contracts with Customers” in fiscal 2018. The core principle of ASC 606 is to recognize revenue in a manner that depicts the transfer of 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. The framework in support of this core principle includes: (1) identifying the contract with the customer; (2) identifying the performance obligations in the contract; (3) determining the transaction price; (4) allocating the transaction price to the performance obligations; and (5) recognizing revenue when (or as) the performance obligations are satisfied.

The adoption of FASB ASC Topic 606 did not have a material impact on the Company’s financial statements and no cumulative adjustment was required.

***Identifying the Contract with the Customer***

The Company identifies contracts with customers as agreements that create enforceable rights and obligations. In the case of a few large customers the Company has executed long-term Master Sales Agreements (“MSA”). These are umbrella agreements which typically define the terms and conditions under which a customer can order goods from CPS. These in themselves do not constitute a contract as no products are committed to be transferred and the customer has no obligation to make payments.

The Company contract is only enforceable once both parties have approved it, and is usually in the form of a written purchase order from a customer combined with acknowledgement from the Company.

In cases without an MSA, the customer submits a blueprint for a product, the Company provides a quote and the customer responds with a purchase order. In these cases the Company’s acceptance of the purchase order constitutes an enforceable contract.

***Identifying the Performance Obligations in the Contract***

For each contract, the Company considers the promise to transfer products, each of which are distinct, to be the identified performance obligations.

Shipping and handling activities for which the Company is responsible are not a separate promised service but instead are activities to fulfill the entity’s promise to transfer goods. Shipping and handling fees will be recognized at the same time as the related performance obligations are satisfied.

The Company provides an assurance-type warranty. This guarantees that the product functions as promised and meets specifications. Under its terms and conditions the Company offers a 30 day warranty and replaces defective or non-conforming products. The expense of replacement is recorded at the time the Company agrees to replace a defective or non-conforming product. This assurance type warranty is not considered to be a distinct performance obligation.

### ***Determining the Transaction Price***

The Company determines the transaction price as the amount of consideration specified in the contract that it expects to receive in exchange for transferring promised goods to the customer. Amounts collected from customers for sales value added and other taxes are excluded from the transaction prices. Product sales are recorded net of trade discounts and sales returns.

If a contract includes a variable amount, such as a rebate, then the Company estimates the transaction price using either the expected value or the most likely amount of consideration to be received, depending upon the specific facts and circumstances. The Company includes estimated variable consideration in the transaction price only to the extent it is probable that a significant reversal of revenue will not occur when the uncertainty is resolved. The Company updates its estimate of variable consideration at the end of each reporting period to reflect changes in facts and circumstances. As of December 29, 2018 there are no contracts with variable consideration.

When credit is granted to customers, payment is typically due 30 to 90 days from billing and accordingly our contracts with customers do not include a significant financing component.

### ***Allocating the Transaction Price to the Performance Obligations***

In virtually all cases the transaction price is tied to a specific product in the contract obviating the need for any allocation.

### ***Recognizing Revenue When (or as) the Performance Obligations are Satisfied***

The Company recognizes revenue at the point in time when it transfers control of the promised goods or services to the customer, which typically occurs once the product has shipped or has been delivered to the customer. Occasionally, for the purpose of insuring a steady flow of product, the Company ships products on consignment. In these instances, delivery is deemed to have occurred when the customer pulls inventory out of the warehouse for use in their production, or upon a specified period of time as agreed upon by both parties.

The Company generally expenses sales commissions when incurred because the amortization period would have been one year or less. The costs are recorded within, selling, general and administrative expenses.

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

#### (2)(g) Income Taxes

The Company uses the liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are recorded for the expected future tax consequences of temporary differences between the financial reporting and income tax bases of assets and liabilities and are measured using the enacted tax rates and laws that are expected to be in affect when the differences reverse. A valuation allowance is established to reduce net deferred tax assets to the amount expected to be realized.

The Company's policy is to recognize interest and penalties related to income tax matters in income tax expense. As of December 29, 2018 and December 30, 2017, the Company has no accruals for interest or penalties related to income tax matters. The Company does not have any uncertain tax positions at December 29, 2018 or December 30, 2017 which required accrual or disclosure.

#### (2)(h) Net Income (Loss) Per Common Share

Basic net income (loss) per common share is calculated by dividing net income (loss) by the weighted average number of common shares outstanding during the period. Diluted net income (loss) per common share is calculated by dividing net income (loss) by the sum of the weighted average number of common shares plus additional common shares that would have been outstanding if potential dilutive common shares had been issued for granted stock option and stock purchase rights. Common stock equivalents are excluded from the diluted calculations when a net loss is incurred as they would be anti-dilutive.

#### (2)(i) Reclassification

Certain amounts in prior year's financial statements have been reclassified to conform to the current year's presentation.

#### (2)(j) Recent Accounting Pronouncements

In the normal course of business, management evaluates all the new accounting pronouncements issued by the Financial Accounting Standard Board ("FASB"). Based upon this review, except as noted below, management does not expect any of the recently issued accounting pronouncements, which have not already been adopted, to have a material impact on the Company's consolidated financial statements.

In February 2016 the FASB issued ASU No. 2016-02, Leases, which requires a lessee

to recognize lease liabilities for the lessee's obligation to make lease payments arising from a lease, measured on a discounted basis, and right-of-use assets, representing the lessee's right to use, or control the use of, specified assets for the lease term. The ASU became effective on December 30, 2018 (Q1 of 2019). It is expected that assets and liabilities will increase by approximately \$350 thousand based upon the present value of remaining lease payments for

leases in place at the adoption date.

## (2)(k) Use of Estimates in the Preparation of Financial Statements

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the amounts of revenues and expenses recorded during the reporting period. Such estimates are adjusted by management periodically as a result of existing or anticipated economic changes which effect, or may effect, the Company's financial statements. Actual results could differ from these estimates.

## (2)(l) Fiscal Year-End

The Company's fiscal year end is the last Saturday in December which could result in a 52 or 53 week year. Fiscal years 2018 and 2017 each consisted of 52 weeks.

## (2)(m) Share-Based Payments

The Company measures the cost of employee services received in exchange for an award of equity instruments based on the grant date fair value of the award. That cost is recognized over the period during which an employee is required to provide services in exchange for the award, the requisite service period (usually the vesting period). The Company provides an estimate of forfeitures at initial grant date, and this estimated forfeiture rate is adjusted periodically based on actual forfeiture experience. The Company uses the Black-Scholes option pricing model to determine the fair value of stock options granted.

## (2)(n) Segment Reporting

The Company views its operations and manages its business as one segment. The Company produces and sells advanced material solutions, primarily metal matrix composites, to assemblers of high density electronics and other specialty components and subassemblies. The Company also assembles housings and packages for hybrid circuits, selling to the same customers mentioned above. These customers represent a single market or segment with similar stringent and well-defined requirements. The Company's customers, in turn, sell the components and subassemblies which incorporate the products into many different end markets, however, these end markets are two to three levels removed from the Company. The Company makes operating decisions and assesses financial performance only for the Company as a whole and does not make operating decisions or assess financial performance by the end markets which ultimately use the products.

## (3) Inventories

As of December 29, 2018 and December 30, 2017 inventories consisted of the following:

	2018	2017
Raw materials	\$706,982	\$478,567
Work in process	2,248,370	1,003,285
Finished goods	693,943	1,014,023
Gross Inventory	3,649,295	2,495,875
Reserve for obsolescence	(456,362)	(386,362)
Total	\$3,192,933	\$2,109,513



#### (4) Commitments & Contingencies

##### Operating Lease Obligations

In February 2018, the Company signed a lease for the Norton facilities through February 2021. The leased facilities comprise approximately 38 thousand square feet. The lease is a triple net lease wherein the Company is responsible for payment of all real estate taxes, operating costs and utilities. The Company also has an option to buy the property and a first right of refusal during the term of the lease. Annual rental payments are \$152 thousand through maturity.

In February 2011, the Company entered into a lease for an additional 13.8 thousand square feet in Attleboro, MA. The lease terms have been for one year and have been renewed annually. The current lease expires in February 2020 and the Company has two, one-year options at the current annual rental payments of \$83 thousand, with minor escalation for real estate tax increases.

Future minimum rental payments over the terms of the lease agreements, excluding any renewals, are approximately as follows:

Fiscal year:

2019	\$ 235,200
2020	166,200
2021	25,400
	\$426,800

##### Loss contingency

The Company manufactures baseplates for power module manufacturers. Most baseplates manufactured by CPS require a nickel coating be applied to the baseplate (“Ni plating”). CPS warrants its baseplates meet the Ni plating specifications required by our customers, and we flow this requirement to our Ni plating vendors.

On January 24, 2018 the Company received a “Claim and Non-Conformance Notification” from one of its European customers relating to the Ni plating on our baseplates. Upon investigation, it was determined that one employee of the Ni plating vendor used by CPS had deviated from the prescribed work instruction for Ni plating from mid-September 2017 until mid-January 2018. The Company's Ni plating vendor has acknowledged this violation and is committed to correcting the problem.

In the case of affected baseplates, which have not been assembled into modules, it is a straight-forward process for the Ni plating vendor to rework these baseplates. The larger issue is baseplates that have already been assembled into modules. During this four-month period approximately 15,000 baseplates from this Ni plating vendor were assembled into modules; only a small portion of these baseplates are affected.

On April 11, 2018 the Company received a “Follow-up Claim and Non-Conformance Notification” from the European customer. The customer estimated the total value of the claim to be \$1.0 million “as of today”, and reserves the right to claim additional damages in the future.

The Company has informed its insurer of this claim and the Ni plating vendor has done the same with its insurer. The Company believes that it is not possible at this time to quantify the potential financial impact, if any, to the Company.

No amounts for damages have been recorded in the accompanying financial statements.

Although the Company expects this issue to be resolved amicably, there is a possibility that this could result in legal proceedings.

#### (5) Share-Based Compensation Plans

The Company adopted the 2009 Stock Incentive Plan ("2009 Plan") on December 10, 2009. Under the terms of the 2009 Plan all of the Company's employees, officers, directors, consultants and advisors are eligible to be granted options, restricted stock awards, or other stock-based awards. Some outstanding options are nonstatutory stock options; some are incentive stock options. All options granted are exercisable at the fair market value of the stock on the date of grant, and expire ten years from the date of grant. The options granted to employees generally vest in equal annual installments over a five-year period. The options granted to directors generally vest immediately on date of grant.

Under the 2009 Plan a total of 2,849,600 shares of common stock are available for issuance, of which 1,095,995 shares remain available for grant as of December 29, 2018.

A summary of stock option activity as of December 29, 2018 and changes during the year then ended is presented below:

	Shares	Weighted Average Exercise Price	Weighted Remaining Contractual Life (years)	Aggregate Intrinsic Value
Outstanding at beginning of year	1,666,905	\$ 1.77		
Granted	163,000	\$ 1.54		
Exercised	—	—		
Forfeited	(68,300)	\$ 1.74		
Expired	(8,000)	\$ 1.70		
Outstanding at end of year	1,753,605	\$ 1.75	4.8	\$ 10,550
Options exercisable at year-end	1,356,505	\$ 1.74	3.9	\$ 10,550

No options were exercised during fiscal 2018 or 2017.

The fair value of each option grant is estimated on the date of grant using the Black-Scholes option-pricing model. The following table presents the annualized weighted average values of the significant assumptions used to estimate the fair values of the options granted during 2018 and 2017:

2018	2017
------	------

Risk-free interest rate	2.73-2.89%	2.08-2.23%
Expected life in years	6.1	6.1
Expected volatility	54%	54%
Expected dividend yield	0	0
Weighted average fair value of grants	\$.84	\$.84

All options are granted with an exercise price equal to the fair market value of the underlying common stock on the date of grant.

The Company recognized \$220,654 and \$287,231 as stock based compensation expense in 2018 and 2017, respectively including \$217,430 related to stock options outstanding and \$3,224 related to the issue of common stock in 2018. As of December 29, 2018, there was \$235,679 of total unrecognized compensation cost related to nonvested share-based compensation arrangements granted under the plan; that cost is expected to be recognized over a weighted average period of 2.2 years.

#### (6) Accrued Expenses

Accrued expenses at December 29, 2018 and December 30, 2017 consist of the following:

	2018	2017
Accrued legal and accounting	\$67,000	\$78,925
Accrued payroll and related	594,641	455,518
Accrued other	313,674	121,046
	\$975,315	\$655,489

#### (7) Revolving Line of Credit

In early November 2018, the Company renewed its \$1.5 million revolving line of credit line with Santander Bank. The agreement will mature on June 30, 2019. The LOC is secured by the accounts receivable and other assets of the Company and has an interest rate of prime plus 100 basis points. Under the terms of the agreement, the Company is required to maintain its operating accounts with Santander Bank. The Company is also subject to certain financial covenants. As of December 29, 2018 the Company had no borrowings under this LOC and its borrowing base at the time would have permitted an additional \$1.5 million to have been borrowed.

#### (8) Income Taxes

Components of income tax expense (benefit) for each year are as follows:

	2018	2017
Current		
Federal	\$(67,956)	\$(6,529)
State	456	(4,186)
Current income tax provision (benefit):	(67,500)	(10,715)
Deferred:		
United States:		
Federal	2,285,758	(246,458)
State	566,161	35,141
Deferred income tax provision (benefit), net	2,851,919	(211,317)
Total	\$2,784,419	\$(222,032)

Deferred tax assets as of December 29, 2018 and December 30, 2017 are as follows:

	December 39, 2018	December 30, 2017
Deferred Tax Assets:		
Net operating loss carryforwards	\$ 738,213	\$ 634,000
Stock compensation	524,893	478,000
Credit carryforwards	1,365,068	1,494,000
Inventory	281,192	235,000
Accrued liabilities	21,615	20,000
Depreciation	215,936	175,000
Other	3,238	3,000
Gross deferred tax assets	3,150,155	3,039,000
Valuation allowance	2,963,155	—
Net deferred tax assets	\$ 187,000	\$ 3,039,000

At December 29, 2018 and December 30, 2017 the Company had net operating loss carryforwards of approximately \$2,742,700 and \$2,367,000, respectively, available to offset future income for U.S. Federal income tax purposes.

On December 22, 2017, the President of the United States signed into law the Tax Cuts and Jobs Act (“the Act”). The Act makes significant changes to the U.S. tax code including the following:

- Reduction of the corporate federal income tax rate from 35% to 21%;
- Repeal of the domestic manufacturing deduction;
- Repeal of the corporate alternative minimum tax;
- Acceleration of business asset expensing.

Due to the Act, U.S. deferred tax assets and liabilities were re-measured from 35% to 21% resulting in an expense of \$680,000 in the fourth quarter of 2017.

Despite the Company’s strong performance in the fourth quarter and favorable outlook for the future, the Company established a valuation reserve as it is judged more likely than not that all or a portion of the tax credits will not be used before they expire. This decision was reached after giving greater weight to its losses over the last three years compared with its forecast of the future.

A summary of the change in the deferred tax asset is as follows:

	2018	2017
Balance at beginning of year	\$ 3,038,666	\$ 2,827,349
Deferred tax benefit (provision)	111,236	211,317
Valuation allowance	(2,963,155)	—
Balance at end of year	\$ 186,747	\$ 3,038,666

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Income tax expense is different from the amounts computed by applying the U.S. federal statutory income tax rate of 21 percent to pretax income as a result of the following:

	2018	2017
Tax at statutory rate	\$(193,000)	\$(660,000)
State tax, net of federal benefit	450	450
Net operating loss and credit carryforwards	(68,857)	(282,450)
Valuation allowance	2,962,902	—
Effect of tax cuts and jobs act	—	628,000
Other	82,924	92,000
Total	\$2,784,419	\$(222,000)

The Company's income tax filings are subject to review and examination by federal and state taxing authorities. The

Company is currently open to audit under the applicable statutes of limitations for the years 2015 through 2018.

### (9) Retirement Savings Plan

The Company sponsors a Retirement Savings Plan (the 'Plan') under the provisions of Section 401 of the Internal Revenue Code. Employees, as defined in the Plan, are eligible to participate in the Plan after 30 days of employment. Under the terms of the Plan, the Company may match employee contributions under such method as described in the Plan and as determined each year by the Board of Directors. During 2018 and 2017 the Company did not offer a 401k match.

### (10) Concentrations of Credit Risk, Significant Customers and Geographic Information

Financial instruments which subject the Company to concentrations of credit risk consist principally of cash, cash equivalents and trade accounts receivable. The Company maintains such cash deposits in a high credit quality financial institution.

The Company extends credit to customers who consist principally of microelectronics systems companies in the United States, Europe and Asia. The Company generally does not require collateral or other security as a condition of sale rather relying on credit approval, balance limitation and monitoring procedures to control credit risk of trade accounts receivable. Management conducts on-going credit evaluations of its customers, and historically the Company has not experienced any significant credit-related losses with respect to its trade accounts receivable.

Revenues from significant customers as a percentage of total revenues in 2018 and 2017 were as follows:

	Percent of Total Revenues	
Significant Customer	2018	2017
A	36 %	28 %
B	17 %	14 %

C	12 %	9 %
D	<10 %	<10 %

As of December 29, 2018, the Company had trade accounts receivable due from these four customers that accounted for 61% of total trade accounts receivable as of that date. No other customer balances constitute 10% or more of accounts receivable at December 29, 2018. Management believes that any credit risks have been properly provided for in the accompanying financial statements.

The Company's revenue was derived from the following countries in 2018 and 2017:

Country	Percent of Total Revenues	
	2018	2017
United States of America	33 %	30 %
Germany	53 %	42 %
Other	14 %	28 %

Many of the Company's customers based in the United States conduct design, purchasing and payable functions in the United States, but manufacture overseas. Revenue generated from shipments made to customers' locations outside the United States accounted for 67% and 70% of total revenue in 2018 and 2017, respectively.

All of the Company's long-lived assets and operations are located in the United States.