

**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 31, 2020

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 000-25727

IKONICS CORPORATION

(Exact name of registrant as specified in its charter)

Minnesota
(State or other jurisdiction of
incorporation or organization)

41-0730027
(I.R.S. Employer
Identification No.)

**4832 Grand Avenue
Duluth, Minnesota**
(Address of principal executive offices)

55807
(Zip code)

Registrant's telephone number, including area code: **(218) 628-2217**

Securities registered under Section 12(b) of the Act:

Title of Each Class	Trading Symbol	Name of Each Exchange On Which Registered
Common Stock, par value \$.10 per share	IKNX	Nasdaq Capital Market LLC

Securities registered under 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 15(d) of the Exchange 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 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 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
Non-accelerated filer

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 has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

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 voting stock held by non-affiliates of the Registrant as of June 30, 2020 was \$4,598,074 based on the most recent closing price for the issuer's Common Stock on such date as reported on the Nasdaq Capital Market. For purposes of determining this number, all officers and directors of the issuer are considered to be affiliates of the issuer, as well as individual stockholders holding more than 10% of the issuer's outstanding Common Stock. This number is provided only for the purpose of this report on Form 10-K and does not represent an admission by either the issuer or any such person as to the status of such person.

State the number of shares outstanding of each of the Registrant's classes of common equity, as of the latest practical date: Common Stock, \$.10 par value — 1,977,104 issued and outstanding as of February 26, 2021.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements within the meaning of the safe harbor provisions of Section 21E of the Securities Exchange Act of 1934, as amended, relating to future events or the future financial performance of the Company. In some cases, you can identify forward-looking statements by the following words: “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “potential,” “project,” “should,” “will,” “would,” or the negative of these terms or other comparable terminology, although not all forward-looking statements contain these words. Forward-looking statements are only predictions or statements of intention subject to risks and uncertainties and actual events or results could differ materially from those projected. Forward-looking statements are based on information available at the time the statements are made and involve known and unknown risks, uncertainties and other factors that may cause our results, levels of activity, performance or achievements to be materially different from the information expressed or implied by the forward-looking statements in this Annual Report on Form 10-K. Factors that could cause actual results to differ include the risks, uncertainties and other matters set forth below under the caption “Risk Factors” and the matters set forth under the captions “Business” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” as well as those discussed elsewhere in this Annual Report on Form 10-K.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Company’s definitive proxy statement for its 2021 Annual Meeting of Shareholders are incorporated by reference in Part III.

PART I

Item 1. Business

General

IKONICS Corporation (“IKONICS” or the “Company”) was incorporated in Minnesota as Chroma-Glo, Inc. in 1952 and changed its name to The Chromaline Corporation in 1982. In December 2002, the Company changed its name to IKONICS Corporation. The Company’s two traditional businesses, Chromaline and IKONICS Imaging, have been the development, manufacture and selling of photosensitive liquids (“emulsions”) and films for the screen printing, awards and recognition industries and consumer products markets. These sales have been augmented with inkjet receptive films, ancillary chemicals and related equipment to provide a full line of products and services to its customers. These products are sold worldwide primarily through distributors. The Company further diversified itself by expanding its business to industrial markets. These efforts now include the Company’s Advanced Material Solutions (“AMS”) business unit which uses the Company’s proprietary processes and photoresist film for the abrasive etching of composite materials, industrial ceramics, silicon wafers, and glass wafers. The customer base for AMS is primarily the aerospace and electronics industries. Based on its expertise in ultraviolet curable fluids and inkjet receptive substrates, the Company has also developed a patented digital texturing technology (“DTX”) for putting patterns and textures into steel molds for the plastic injection molding industry. The original equipment manufacturer (“OEM”) for the Company’s DTX technology is primarily the automotive industry. The Company offers a suite of products to the mold making industry. Industrial inkjet printers, which are integral to the DTX system, are manufactured by a third party and sold by IKONICS. The Company’s business plan is to sell consumable fluids and transfer films. For most markets, these sales are direct to the mold maker. The DTX technology is also utilized in prototyping where the Company’s technology offers a unique combination of high definition, large format prints, and abrasion resistance.

Products

The Company has four primary technology platforms: ultraviolet (UV) chemistry, film coating and construction, technical abrasive etching, and industrial inkjet printing. The Company’s traditional products and new initiatives are based on these platforms and their combinations. The Company’s Chromaline and ImageMate branded products for the screen printing industry and IKONICS Imaging products for the both the awards and recognition and consumer product markets are based on UV chemistry and film coating and construction capabilities; the AMS offering is a combination of UV chemistry, film coating and construction and technical abrasive etching capabilities; DTX is a combination of UV chemistry, film coating and construction, and industrial inkjet printing. There is overlap and synergy in the market between the Chromaline, IKONICS Imaging, AMS and DTX product offerings, and the Company offers ancillary products, including equipment to provide customers with a total solution. The Company considers this combination of core technologies and product offerings to be unique.

Distribution and Customers

The Company currently has approximately 200 domestic and international distributors for its Chromaline and ImageMate screen printing emulsions and films. The Company’s abrasive etching products are mainly sold directly to end users in the awards and recognition market under the IKONICS Imaging brand. AMS products are sold either directly to users or the Company offers AMS as a service. DTX includes the sales of consumable inks and films to customers that have purchased specialized industrial inkjet printers from the Company’s strategic partner. DTX sales are primarily direct to end users. The Company markets and sells its products through magazine advertising, trade shows and the internet.

The Company has a diverse customer base both domestically and abroad, with international sales accounting for 29.7% of total sales in 2020 and 29.4% of sales in 2019, and does not depend on one or a few customers for a material portion of its revenues. In 2020 and 2019, no one customer accounted for more than 10% of net sales.

Quality Control in Manufacturing

In March 1994, IKONICS became the first company in northern Minnesota to receive ISO 9001 certification. ISO 9000 is a worldwide standard issued by the International Organization for Standardization that provides a framework for quality assurance. The Company has been recertified every three years beginning in 1997. IKONICS’ quality function goal is to train all employees properly in both their work and in the importance of their work. Internal records of quality, including related graphs and tables, are reviewed regularly and discussions are held among management and employees regarding how improvements might be realized. The Company has rigorous materials selection procedures and also uses testing procedures to assure its products meet quality standards.

Research and Development and Intellectual Property

The Company incurred costs totaling 5.0% of sales, or \$671,000, on research and development in 2020, and 4.9% of sales, or \$870,000, in 2019. In its research program, IKONICS has developed ultraviolet light-sensitive chemistries used in the manufacturing of screen print stencils, photoresists for abrasive etching and acid resists, stencils for consumer products, and prototyping ink jet fluids, and ink jet receptive films. The Company has a number of patents and patent applications on these chemistries and applications. There can be no assurance that any patent granted to the Company will provide adequate protection to the Company’s intellectual property. Within the Company, steps are taken to protect the Company’s trade secrets, including physical security, confidentiality and non-competition agreements with employees, non-disclosure agreements where applicable, and confidentiality agreements with vendors. Over the past few years, the Company has directed a larger portion of its research and development resources towards industrial inkjettable fluids and ink jet receptive substrates along with films for the consumer products market. The Company has also invested significant resources for personnel and equipment to develop proprietary products and techniques for the etching of composite materials, industrial ceramics and electronic wafers.

In addition to its patents, the Company has various trademarks including the “IKONICS®,” “Chromaline®,” “IKONICS Imaging®,” “Precision Abrasive Machining®,” “PhotoBrasive®,” “AccuArt®,” “image mate®,” “Alpha FlexTrace®,” “Alpha MicroCap®,” “DTX®,” “SubTHAT!®,” and “IKONART®” trademarks.

Raw Materials

The primary raw materials used by IKONICS in its production are photopolymers, polyester films, polyvinylacetates, polyvinylalcohols and water. The Company's purchasing staff leads in the identification of both domestic and foreign sources for raw materials and negotiates price and terms for all domestic and foreign markets. IKONICS' involvement in foreign markets has given it the opportunity to become a global buyer of raw materials at lower overall cost. The Company has a number of suppliers for its operations. Some suppliers provide a significant amount of key raw materials to the Company, but the Company believes alternative sources are available for most materials. For those raw materials where an alternative source is not readily available, the Company has contingency raw material replacement plans. To date, there have been no significant shortages of raw materials. The Company believes it has good supplier relations.

Competition

The Company competes in its markets based on product development capability, quality, reliability, availability, technical support and price. Though the screen printing market is much larger than the awards and recognition market, IKONICS commands significantly more market share in the latter. IKONICS has two primary domestic competitors in its screen printing film business. They are larger than IKONICS and possess greater resources than the Company in many areas. The Company has numerous competitors in the market for screen print emulsions, many of whom are larger than IKONICS and possess greater resources. The market for the Company's abrasive etching products in the awards and recognition market has one significant competitor. IKONICS considers itself to be the leader in this market. There are significant competitors, using different technologies in the new markets being entered by the Company. The primary competition for AMS is from other machining methods, most of which are well established. The primary competition for DTX comes from old, well-established technologies based on wax and screen printing and new competition from laser technologies.

Government Regulation

The Company is subject to a variety of federal, state and local industrial laws and regulations, including those relating to the discharge of material into the environment and protection of the environment. The governmental authorities primarily responsible for regulating the Company's environmental compliance are the Environmental Protection Agency, the Minnesota Pollution Control Agency and the Western Lake Superior Sanitary District. Failure to comply with the laws promulgated by these authorities may result in monetary sanctions, liability for environmental clean-up and other equitable remedies. To maintain compliance, the Company may make occasional changes in its waste generation and disposal procedures.

These laws and regulations have not had a material effect upon the capital expenditures or competitive position of the Company. The Company believes that it complies in all material respects with the various federal, state and local regulations that apply to its current operations. Failure to comply with these regulations could have a negative impact on the Company's operations and capital expenditures and such negative impact could be significant.

The Company also is subject to regulations from foreign governments covering the importation of certain chemicals. The Company believes that it complies in all material respects with these regulations that apply to its current products. Failure to comply with these regulations could have a negative impact on the Company's operations and capital expenditures and such negative impact could be significant.

Employees

As of February 28, 2021, the Company had 58 total and full-time employees, 54 of whom are located at the Company's two facilities in Duluth, Minnesota and four of whom are outside technical sales representatives in various locations in the United States. None of the Company's employees are subject to a collective bargaining agreement and the Company believes that its employee relations are good.

Item 1A. Risk Factors

Covid-19 Related Risks

A public health crisis or global outbreak of disease, including the pandemic caused by coronavirus disease 2019 ("COVID-19") has had, and we believe will continue to have, a negative effect on the Company's operations, supply chain and workforce, creating business disruptions that could have a material adverse impact on the Company's financial condition, results of operations and cash flows

The pandemic caused by COVID-19 was first reported in Wuhan, China, in December 2019 and has since spread to all geographic regions where the Company's products are produced and sold. The global, regional and local spread of COVID-19 has resulted in significant global mitigation measures, including government-directed quarantines, social distancing and shelter-in-place mandates, travel restrictions and/or bans, and restricted access to certain corporate facilities and manufacturing sites. Uncertainty with respect to the severity and duration of the pandemic has contributed to periods of volatility and disruption of financial markets. While the severity and duration of the COVID-19 pandemic remain uncertain, impacts to the Company may include, but are not limited to: fluctuations in the Company's stock price due to market volatility; a decrease in demand for the Company's products; reduced profitability; supply chain disruptions impeding the Company's ability to ship and/or receive product; potential interruptions or limitations to manufacturing operations imposed by local, state or federal governments; shortages of key raw materials; workforce absenteeism and distraction; labor shortages; customer credit concerns; cyber security and data accessibility disruptions due to remote working arrangements; reduced sources of liquidity; increased borrowing costs; and potential asset impairment charges. Business disruptions and market volatility resulting from the COVID-19 pandemic could continue to have a material adverse impact on the Company's results of operations, financial condition and cash flows.

The Company received funding and subsequently had its entire loan forgiven under the Coronavirus Aid, Relief and Economic Security (CARES) Act. There is no warranty that the Company will not become subject to future penalties or that the decision to forgive the loan in whole or part will be rescinded.

On April 18, 2020, the Company executed a promissory note in favor of BMO Harris Bank evidencing an unsecured loan in the aggregate principal amount of \$1,214,500, which was made pursuant to the Paycheck Protection Program, or the PPP. The PPP was established under the CARES Act, which was enacted on March 27, 2020, and is administered by the U.S. Small Business Administration, or the SBA. All the funds under the loan were disbursed to the Company on April 22, 2020. The Company used all proceeds from the loan to retain employees, maintain payroll and make rental and utility payments.

Under the terms of the CARES Act, loan recipients can apply for and be granted forgiveness for all or a portion of the loans granted under the PPP. In 2020, the Company submitted an application for 100% forgiveness of the PPP Loan and upon approval by the SBA and the lender, the Company received forgiveness for 100% of the \$1,214,500 loan. The Company is not aware of or anticipating any further review of its loan forgiveness, but the loan itself and the forgiveness of the loan could be subject for further examination by the SBA or the lender. If the decision to forgive the loan is reversed in part or whole, the Company will be required to repay the outstanding principal, along with accrued interest.

Strategic and Competitive Related Risks

The Company's DTX and AMS initiatives involve new technologies that might not be executed successfully and might not achieve market acceptance.

The Company's DTX and AMS initiatives involve technologies that might never achieve market acceptance. During 2020 and 2019, the Company generated operating losses in its AMS segment while the DTX segment has realized operating income since 2015. The Company's ability for generating profits from these initiatives will depend on its products gaining market acceptance among customers, which cannot be guaranteed. The degree of market acceptance of any new products the Company develops will depend on a number of factors, including:

- the Company's ability to successfully develop its technologies and products to include the capabilities the Company intends;
- the Company's ability to accurately assess the functions and features customers desire;
- the perceived effectiveness and price of the Company's products compared to alternative products and technologies;
- the development of new products and technologies by current competitors or new competitors that might enter the Company's markets; and
- the strength of the Company's marketing and distribution functions.

If new products that the Company develops do not have the capabilities the Company expects or fail to achieve an adequate level of acceptance by customers for any reason, then the Company's AMS and DTX business units could fail to generate the revenues the Company expects and may not become profitable or sustain profitability.

If the Company's new products and technologies do not achieve market acceptance, the Company will not realize a return on its investments in its new business initiatives.

The Company has invested, and plans to continue to invest, significant resources in its research and development efforts to develop technology for its business units. The Company spent 5.0% of sales, or \$671,000, on research and development in 2019 and 4.9% of sales, or \$870,000, in 2018. A substantial portion of these investments was for new products and initiatives. The Company plans to continue to invest significant resources in research and development of new products and initiatives for the foreseeable future. The Company believes successful execution of these initiatives and new products is important for its ability to grow its revenues and profits. However, if the Company fails to generate its projected revenues from these products and initiatives, the Company's investments in these areas would not generate the profits the Company expects and its results of operations, financial condition and prospects would be materially and adversely affected.

The Company faces significant competition and expects to face increasing competition in many aspects of its businesses, which could cause operating results to suffer.

The Company operates in highly competitive industries that experience rapid technological and market developments, changes in customer needs, and frequent product introductions and improvements, particularly with respect to the AMS and DTX businesses. If the Company is unable to anticipate and respond to these developments, its products or technologies could become uncompetitive or obsolete. Most of the Company's competitors in the AMS and DTX fields are larger and better capitalized than the Company with longer operating histories. These advantages could allow the Company's competitors to invest more resources in research and development and sales and marketing than the Company, which could make the competitive products more attractive or better known to consumers than the Company's products. In addition, because there is potential for rapid technological change in fields in which the Company operates, the Company could face competition from new sources in the future that customers find more attractive.

The Company also could face increased competition in its traditional Chromaline and IKONICS Imaging units. Capital costs for machinery necessary to operate in these industries have decreased in recent years, increasing the possibility that the Company will face new competitors. An increase in the amount of competition the Company faces, or a loss of competitiveness in any of the Company's business units for any reason, could adversely affect its revenues and gross margins.

Regulatory and Legal Risks

The Company's failure to comply with environmental laws and regulations could harm its business and results of operations.

The manufacturing of the Company's products requires the use of hazardous materials that are subject to a broad array of environmental laws and regulations. The Company's failure to comply with these laws or regulations could result in:

- regulatory penalties, fines and legal liabilities;
- suspension of production;
- alteration of manufacturing processes; and
- restrictions on the Company's operations or sales.

The Company's failure to manage the use, transportation, emissions, discharge, storage, recycling or disposal of hazardous materials could lead to increased costs or future liabilities. Environmental laws and regulations also could require the Company to acquire pollution abatement or remediation equipment, modify product designs or incur other expenses.

Third parties may claim the Company infringes their intellectual property rights, which could harm the Company's business.

The Company may face claims that it infringes other parties' intellectual rights. Regardless of a claim's merit, claims that the Company's products or processes infringe the intellectual property rights of others could cause the Company to incur large costs to respond to, defend, and resolve the claims, and they may divert the efforts and attention of management and technical personnel. As a result of any intellectual property rights infringement claims, the Company could be required to:

- pay infringement claims;
- stop manufacturing, using, or selling products or technology subject to infringement claims;
- develop other products or technology not subject to infringement claims, which could be time-consuming, costly or impossible; or
- license technology from the party claiming infringement, which license may not be available on commercially reasonable terms, if at all.

These actions could harm the Company's competitive position, result in additional expenses, or require the Company to impair its assets. If the Company alters or stops production of affected items, its ability to generate revenue could be harmed.

The Company may be unable to enforce or protect its intellectual property rights, which may harm its ability to compete and may harm its business.

The Company's ability to enforce its patents, trademarks and other intellectual property rights is subject to general litigation risks, as well as uncertainty as to the enforceability of the Company's intellectual property rights in various countries. If the Company seeks to enforce its rights, it could become subject to claims that its intellectual property rights are invalid, not enforceable, or licensed to the opposing party. The Company's assertion of intellectual property rights also could result in the other party seeking to assert claims against the Company, which could harm the Company's business. The Company's inability to enforce its intellectual property rights for any reason could harm its competitive position and business.

If the Company is unable to protect the confidentiality of its proprietary information and know-how, the value of its technology could be adversely affected.

In addition to patented technology, the Company relies on unpatented proprietary technology, trade secrets, processes and know-how. The Company generally seeks to protect this information by confidentiality agreements with employees, consultants, advisors and third parties. These agreements may be breached, and the Company may not have adequate remedies for any such breach. In addition, the Company's trade secrets may otherwise become known or be independently developed by competitors. To the extent that the Company's employees, consultants or contractors use intellectual property owned by others in their work for the Company, disputes may arise as to the rights in related or resulting know-how and inventions.

General Economic and Operational Risks

Adverse changes to global economic conditions generally, and to the aerospace and automotive industries in particular, may harm the Company's business.

The prospects for economic growth in the United States and other countries remain uncertain and major economies where the Company conducts business could continue or return to recessionary conditions. Economic concerns and issues such as reduced access to capital for businesses or tariffs may cause the Company's customers to delay or reduce purchases of the Company's products. Given the continued uncertainty concerning the global economy, the Company also faces risks that may arise from financial difficulties experienced by suppliers and customers, such as an inability to collect receivables or the continued operation of suppliers. Global or local events, such as terrorist attacks, political insurgencies, electrical grid disruptions and outages, and pandemics including further spread of the coronavirus could also disrupt our operations, the operations of our suppliers and customers, or result in economic instability.

The Company's AMS segment focuses primarily on customers in the aerospace industry, and its DTX segment focuses primarily on customers in the automotive industry. The aerospace and automotive industries have experienced volatility in prior years in a manner similar to or greater than the global economy generally. If either or both these industries experiences difficulties that reduce demand for their products generally, the Company's results of operations, financial condition and prospects would suffer.

The Company conducts a global business that exposes it to additional risks.

The Company conducts business throughout the world, including in the United States, Europe, India and China. These international operations create a variety of risks and uncertainties, including:

- rapid changes in government, economic and political policies and conditions, political or civil unrest or instability, terrorism or epidemics including the coronavirus;
- fluctuations in foreign currency exchange rates;
- compliance with and changes in foreign laws and regulations, as well as U.S. laws affecting the activities of U.S. companies abroad, including the Foreign Corrupt Practices Act of 1977, as amended (the "FCPA");
- different, complex and changing laws governing intellectual property rights, sometimes affording companies lesser protection in certain areas;
- longer accounts receivable payment cycles and difficulties in collecting accounts receivable; and
- protectionist laws, tariffs and business practices that favor local producers.

The occurrence of any one of these risks could negatively affect the Company's international business and, consequently, its results of operations generally.

The Company faces risks related to sales through distributors and other third parties.

A significant portion of the Company's sales, including nearly all sales of its Chromaline products, were conducted through third parties. Using third parties for distribution exposes the Company to many risks, including competitive pressure, concentration, credit risk and compliance risks. Distributors may sell products that compete with the Company's products, and the loss of a distributor could reduce the Company's revenue. Distributors may face financial difficulties, including bankruptcy, which could harm the Company's collection of accounts receivable and financial results. Violations of the FCPA or similar laws by distributors or other third-party intermediaries could have a material impact on the Company's business. Failing to manage risks related to the Company's use of distributors may reduce sales, increase expenses, and weaken its competitive position.

Increases in prices and declines in the availability of raw materials could negatively impact the Company's financial results.

Certain raw materials needed to manufacture products are obtained from a limited number of suppliers and many of the raw materials are petroleum-based. Under normal market conditions, these raw materials are generally available on the open market from a variety of producers. While alternate supplies of most key raw materials are available, supplier production outages may lead to strained supply-demand situations for certain raw materials. The substitution of key raw materials could require the Company to identify new supply sources, or reformulate and retest products or processes. From time to time, the prices and availability of these raw materials may fluctuate, which could impair the Company's ability to procure necessary materials, or increase the cost of manufacturing products. If the prices of raw materials increase in a short period of time, the Company may be unable to pass these increases on to its customers in a timely manner or at all, which could reduce its gross margins. Like most companies in the Company's industries, the Company does not have long-term supply contracts for most of its key raw materials, which exacerbates the foregoing risks to the Company.

If any of the Company's current single or limited source suppliers become unavailable or inadequate, its customer relationships, results of operations and financial condition may be adversely affected.

The Company acquires certain of its materials that are critical to its operations from a limited number of third parties. Should any of the Company's current single or limited source suppliers become unavailable or inadequate, or impose terms unacceptable to the Company such as increased pricing terms, the Company could be required to spend a significant amount of time and expense to develop alternate sources of supply, and may not be successful in doing so on acceptable terms or at all. If the Company is unable to find a suitable supplier for a particular material, it could be required to modify its existing business processes or offerings to accommodate the situation. As a result, the loss of a single or limited source supplier could adversely affect the Company's relationship with its customers and its results of operations and financial condition.



The Company depends on one manufacturer to make and sell DTX printers. If the manufacturer ceased to make or sell DTX printers, or failed to meet quality standards, the Company's financial results and prospects would be adversely affected.

The Company relies on one company to manufacture and sell DTX printers. If the manufacturer ceased to produce or devote resources to selling DTX printers, due to a change in company strategy, to focus on alternative initiatives, or for any other reason, the Company would need to find an alternative manufacturer and seller of DTX printers. Finding an alternative manufacturer and seller of DTX printers could result in additional costs and delays in growing the Company's DTX business unit, which would adversely affect the Company's financial results and prospects.

In addition, if these manufacturers failed to produce DTX printers that satisfy the Company's quality standards, the Company's reputation with end users could be harmed and the Company could be forced to find a new manufacturer. Either of these results also would harm the Company's business and prospects.

The inability to attract and retain qualified personnel could adversely impact the Company's business.

Sustaining and growing the Company's business depends on the recruitment, development and retention of qualified employees, including management and research and development personnel. The inability to recruit and retain key personnel or the unexpected loss of key personnel may adversely affect the Company's operations.

We heavily rely on our information technology systems and are vulnerable to damage and interruption.

The Company relies on our information technology systems and infrastructure to process transactions and manage its business, including maintaining employee, client and supplier information. The Company has also engaged third parties, including cloud providers, to store, transfer and process data. The information technology systems, as well as the systems of our customers, suppliers and other partners, are vulnerable to outages and an increasing risk of deliberate intrusions to gain access to and exploit company sensitive information. Similarly, data security breaches by employees and others with or without permitted access to the Company's systems pose a risk that sensitive data may be exposed to unauthorized persons or to the public. The Company may be unable to prevent outages or security breaches in its systems that could adversely affect results of operations and cause reputational harm.

The Company's operating results and financial condition may fluctuate on a quarterly and annual basis.

The Company's operating results and financial condition may fluctuate from quarter to quarter and year to year, and could vary due to a number of factors, some of which are outside of the Company's control. In addition, the Company's actual or projected operating results may fail to match its past performance. The Company's operating results and financial condition may fluctuate due to a number of factors, including those listed below and those identified throughout this "Risk Factors" section:

- the failure of the Company's new products to meet expectations;
- changes to the costs of raw materials, especially petroleum-based materials;
- the entry of new competitors into the Company's markets whether by established companies or by new companies;
- the geographic distribution of the Company's sales;
- changes in customer preferences or needs;
- changes in the amount that the Company invests to develop or acquire new technologies;
- delays between the Company's expenditures to develop new technologies and products and the generation of sales related thereto;
- protectionist laws and tariffs implemented by foreign governments to favor local producers;
- a prolonged United States Federal or State government shutdown;
- changes in the Company's pricing policies or those of its competitors;
- changes in accounting rules and tax and other laws; and
- general economic and industry conditions that affect customer demand and product development trends.

Due to all of the foregoing factors and the other risks discussed in this "Risk Factors" section, you should not rely on quarter-to-quarter or year-to-year comparisons of the Company's operating results as an indicator of future performance.

Risks Related to Our Common Stock

An active trading market for the Company's shares of common stock may not develop.

The Company's common stock has been listed for trading on the Nasdaq Capital Market since 1999 and persistently has experienced limited trading volume. There can be no assurance that an active public market for the Company's shares will develop or be sustained. The lack of an active trading market could adversely affect the price and liquidity of the Company's common stock.

The Company's directors and officers own a large percentage of the Company's common stock, which may allow them to collectively exert significant influence over substantially all matters requiring shareholder approval.

As of December 31, 2020, the Company's directors and officers collectively beneficially owned approximately 14.2% of its common stock outstanding as of that date. As a result, the Company's directors and officers could exert significant influence over all matters requiring a shareholder vote, including the election of directors, amendments to the Company's articles of incorporation, and extraordinary transactions such as mergers or going private transactions. These ownership positions may have the effect of delaying, deterring or preventing a change in control or a change in the composition of the Company's board of directors. In addition, substantial sales of shares beneficially owned by our directors or officers could be viewed negatively by third parties and have a negative impact on the Company's stock price.

The price of the Company's common stock may fluctuate significantly.

The price of the Company's common stock has, and could continue to, fluctuate substantially in a short period of time. The price of the Company's common stock could vary for many reasons, including the following:

- future announcements concerning the Company or its competitors;

- introduction of new products by the Company or its competitors, or the failure of the Company's new products to meet expectations;
- the commencement of, or developments to, litigation involving the Company;
- quarterly variations in operating results, which the Company has experienced in the past and expects to experience in the future;
- business acquisitions or divestitures; or
- changes to the global economy in general, and the aerospace and automotive markets in particular.

In addition, stock markets in general have experienced price and volume fluctuations in recent years, fluctuations that sometimes have been unrelated to the operating performance of the affected companies. These broad market fluctuations may adversely affect the market price of the Company's common stock. The market price of the Company's common stock could decline below its current price and the market price of the Company's shares may fluctuate significantly in the future. These fluctuations may be unrelated to the Company's performance.

Item 1B. Unresolved Staff Comments

None

Item 2. Property

The Company primarily conducts its operations in Duluth, Minnesota. The administrative, sales, research and development, quality and most of the manufacturing activities are housed in a 60,000 square-foot, four-story building, including a basement level. The building is approximately eighty years old and the Company believes it has been maintained in good condition. The Company also utilizes a 5,625 square-foot warehouse adjacent to the existing plant building that was constructed in 1997. These facilities are owned by the Company with no existing liens or leases. The Company also owns an approximately 11-acre property with a 62,300 square-foot manufacturing and warehouse facility. The 62,300 square-foot facility is comprised of a 35,000 square-foot warehousing and manufacturing facility constructed in 2008 and a 27,300 square-foot expansion completed in 2016 to accommodate the Company's AMS business. The entire facility on the 11-acre property is collateral on the Company's \$3.4 million loan.

Item 3. Legal Proceedings

None.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

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

The Company's Common Stock is traded on the Nasdaq Capital Market under the symbol "IKNX."

As of February 26, 2021, the Company had 54 holders of record. The Company has not declared cash dividends in the past two years and does not currently have plans to pay any cash dividends in the future. Any future declaration and payment of dividends is within the sole discretion of the Company's board of directors.

Recent Sales of Unregistered Equity Securities

None.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

None.

Item 6. Selected Financial Data

Not applicable

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

The following management discussion and analysis focuses on those factors that had a material effect on the Company's financial results of operations and financial condition during 2020 and 2019 and should be read in conjunction with the Company's audited financial statements and notes thereto for the years ended December 31, 2020 and 2019, included herein.

Impact of the COVID –19 Pandemic

The Company is closely monitoring the novel strain of coronavirus (COVID-19) pandemic and the impact on its business. The outbreak and continuing spread of COVID-19 has resulted in a substantial curtailment of business activities worldwide and is causing weakened economic conditions, both nationally and globally. As part of efforts to contain the spread of COVID-19, federal, state, local and foreign governments have imposed various restrictions on the conduct of business and travel. Government restrictions, such as stay-at-home orders and quarantines and company remote work policies have led to a significant number of business closures and slowdowns. These business closures and slowdowns have already adversely impacted and will likely continue to adversely impact the Company directly, as well as cause its customers and suppliers to slow or stop production, which will likely significantly disrupt the Company's sales, production and supply chain. For example, as a result of the COVID-19 pandemic, the Company began to experience decreased demand for its products and services during the twelve months ended December 31, 2020. The Company anticipates a decrease in global demand for its products and services will continue in 2021 and beyond. This significant decrease in demand will likely have a material adverse impact on the Company's business, operating results and financial condition. The Company's facilities continue to operate and are doing so safely, having implemented social distancing and enhanced health, safety and sanitization measures. The Company's leadership continues to address the situation and is adjusting as necessary. The Company has also implemented necessary procedures to enable a significant portion of its employee base to work remotely. As the situation continues to evolve into a more prolonged pandemic, the Company expects the COVID-19 pandemic to have a significant adverse effect on economies and financial markets globally, potentially leading to a significant worldwide economic downturn, which could have a significant adverse effect on the Company's business, operating results and financial condition. However, the duration of these trends and the magnitude of such impacts cannot be precisely estimated at this time, as they are affected by a number of factors (some of which are outside management's control), including those presented in Part II, Item 1A. "Risk Factors" above. To partially mitigate the negative impact of the COVID-19 pandemic, the Company implemented cost reduction efforts including reducing the Company's workforce by approximately 30%, temporary reductions in board and officer compensation, temporary suspension of the Company's contribution to its 401(k) retirement plan and the elimination of all non-essential expenditures.

Critical Accounting Policies and Estimates

The Company prepares its financial statements in conformity with generally accepted accounting principles in the United States of America. Therefore, the Company is required to make certain estimates, judgments and assumptions that the Company 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. The accounting policies and estimates which IKONICS believes are the most critical to aid in fully understanding and evaluating its reported financial results include the following:

Revenue recognition. Revenue is measured based on consideration specified in the contract with a customer, adjusted for any applicable estimates of variable consideration and other factors affecting the transaction price, including noncash consideration, consideration paid or payable to customers and significant financing components. While most of the Company's revenue is contracted with customers through one-time purchase orders and short-term contracts, the Company does have long-term arrangements with certain customers. Revenue from all customers is recognized when a performance obligation is satisfied by transferring control of a distinct good or service to a customer.

Individually promised goods and services in a contract are considered a distinct performance obligation and accounted for separately if the customer can benefit from the individual good or service on its own or with other resources that are readily available to the customer and the good or service is separately identifiable from other promises in the arrangement. When an arrangement includes multiple performance obligations, the consideration is allocated between the performance obligations in proportion to their estimated standalone selling price. Costs related to products delivered are recognized in the period incurred, unless criteria for capitalization of costs are met. Costs of revenues consist primarily of direct labor, manufacturing overhead, materials and components. The Company does not incur significant upfront costs to obtain a contract. If costs to obtain a contract were to become material, the costs would be recorded as an asset and amortized to expense in a manner consistent with the related recognition of revenue.

The Company excludes governmental assessed and imposed taxes on revenue transactions that are invoiced to customers from revenue. The Company includes freight billed to customers in revenue. Shipping and handling costs associated with outbound freight after control over a product has transferred to a customer are accounted for as a fulfillment cost and are included in cost of goods sold.

The timing of revenue recognition, billings and cash collections results in accounts receivable on the balance sheet.

Performance obligations. A performance obligation is a promise in a contract to transfer a distinct good or service to the customer. A contract's transaction price is allocated to each distinct performance obligation in proportion to its standalone selling price and recognized as revenue when, or as, the performance obligation is satisfied. The Company's various performance obligations and the timing or method of revenue recognition are discussed below:

The Company sells its products to both distributors and end-users. Each unit of product delivered under a customer order represents a distinct and separate performance obligation as the customer can benefit from each unit on its own or with other resources that are readily available to the customer and each unit of product is separately identifiable from other products in the arrangement.

The transaction price for the Company's products is the invoiced amount. The Company does not have variable consideration in the form of refunds, credits, rebates, price concessions, pricing incentives or other items impacting transaction price. The purchase order pricing in arrangements with customers is deemed to approximate standalone selling price; therefore, the Company does not need to allocate proceeds on a relative standalone selling price allocation between performance obligations. The Company does not disclose information about remaining performance obligations that have original expected durations of one year or less. There are no material obligations that extend beyond one year.

Revenue is recognized when transfer of control occurs as defined by the terms in the customer agreement. The Company immediately recognizes incidental items that are immaterial in the context of the contract. The Company does not have any significant financing components in its customer arrangements as payment is received at or shortly after the point of sale, generally thirty to ninety days.

The Company estimates returns based on an analysis of historical experience if the right to return products is granted to its customers. The Company does not record a return asset as non-conforming products are generally not returned. The Company's return policy does not vary by geography. The customer has no rotation or price protection rights.

Trade receivables. Trade receivables include amounts invoiced and currently due from customers. The amounts due are stated at their net estimated realizable value. The Company records an allowance for doubtful accounts to provide for the estimated amount of receivables that will not be collected. The allowance is based on a review of all outstanding amounts on an on-going basis. Management determines the allowance for doubtful accounts by regularly evaluating individual customer receivables and considers a customer's financial condition, credit history, and current economic conditions. Trade receivables are written off when deemed uncollectible. Recoveries of trade receivables previously written off are recorded when received. Accounts are considered past due if payment is not received according to agreed-upon terms.

Sales commissions. Sales commissions paid to sales representatives are eligible for capitalization as they are incremental costs that would not have been incurred without entering into a specific sales arrangement and are recoverable through the expected margin on the transaction. The Company has elected to apply the practical expedient provided by ASC 340-40-25-4 and recognize the incremental costs of obtaining contracts as an expense when incurred, as the amortization period of the assets that would have otherwise been recognized is one year or less. The Company records these costs in selling, general, and administrative expense.

Product warranties. The Company offers warranties on various products and services. These warranties are assurance type warranties that are not sold on a standalone basis; therefore, they are not considered distinct performance obligations. The Company estimates the costs that may be incurred under its warranties and records a liability in the amount of such costs at the time the revenue is recognized for the product sale.

International revenue. The Company markets its products to numerous countries in North America, Europe, Latin America, Asia and other parts of the world. Foreign sales were approximately 29.7% of total sales in 2020 and 29.4% of total sales in 2019.

Inventories. Inventories are valued at the lower of cost or net realizable value using the last in, first out (LIFO) method. The Company monitors its inventory for obsolescence and records reductions from cost when required.

Income Taxes. Deferred taxes are provided on a liability method whereby deferred tax assets are recognized for deductible temporary differences and operating loss and tax credit carryforwards and deferred tax liabilities are recognized for taxable temporary differences. Temporary differences are the differences between the reported amounts of assets and liabilities and their tax basis. Deferred tax assets are reduced by a valuation allowance when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will not be realized.

Deferred tax assets and liabilities are adjusted for the effects of changes in tax laws and rates on the date of enactment.

Results of Operations

Year Ended December 31, 2020 Compared to Year Ended December 31, 2019

Sales. Sales decreased 23.8% in 2020 to \$13.4 million from \$17.6 million in 2019 due to the slowdown in economic activity related to the COVID-19 pandemic. Chromaline 2020 sales of \$8.5 million decreased by 26.1% from the 2019 sales of \$11.5 million. IKONICS Imaging 2020 sales of \$3.7 million were \$482,000, or 11.5%, lower than 2019 sales. AMS sales decreased from \$1.6 million in 2019 to \$952,000 in 2020, a 39.0% decrease. DTX sales also decreased in 2020 from \$394,000 in 2019 to \$295,000 in 2020. IKONICS anticipates that the COVID-19 outbreak will continue to adversely impact sales in all of its divisions for most of 2021 due to decreasing demand for its products and services.

Gross Profit. Gross profit was \$3.9 million, or 29.1% of sales, in 2020 compared to \$5.4 million, or 30.6%, of sales in 2019. Lower sales and production volume, resulted in the Chromaline gross margin decreasing from 26.9% in 2019 to 26.6% in 2020. A decrease in sales volumes also resulted in the AMS gross margin decreasing to a negative 25.1% in 2020 from 10.3% in 2019. A large portion of the AMS cost structure is fixed, causing sales volumes to have a significant impact on its gross margin. The IKONICS Imaging 2020 gross margin improved from 45.8% in 2019 to 46.8% in 2020 as a more favorable sales mix offset the negative impact of lower sales and production volumes while the DTX gross margin decreased from 60.0% in 2019 to 52.2% in 2020. IKONICS anticipates that the COVID-19 outbreak will continue to adversely impact gross margins for most of 2021 due to lower sales volumes and production output.

Selling, General and Administrative Expenses. Selling, general and administrative expenses were \$5.0 million, or 37.4% of sales, in 2020 compared to \$5.5 million, or 31.1% of sales, in 2019. Selling, general and administrative expenses in 2020 decreased primarily from the Company's cost reduction initiative resulting in fewer personnel, travel, trade show, and promotional expenses. These cost savings were partially offset by the one-time expense incurred in 2020 of \$365,000 related to the Chief Executive Officer transition. The transition costs include severance payments to the former CEO, a signing bonus, relocation expenses and executive search consulting expenses.

Research and Development Expenses. Research and development expenses for 2020 were \$671,000, or 5.0% of sales, versus \$870,000, or 4.9%, of sales in 2019. Research and development expenses in 2019 were unfavorably impacted by a \$93,000 write off of patent application costs that were previously recorded as an asset as the Company determined that it would no longer continue to pursue those patent applications. Research and Development expenses in 2020 were also lower due to staffing reductions or other cost reduction efforts

Interest Expense. Interest expense for 2020 and 2019 was \$87,000 and \$90,000, respectively.

Other Income. Other Income for 2020 was \$1.2 million due to forgiveness of its Paycheck Protection, or PPP, loan under the CARES Act compared to \$61,000 in 2019. On April 18, 2020, the Company executed a promissory note in favor of BMO Harris Bank evidencing an unsecured loan in the aggregate principal amount of \$1,214,500, which was made pursuant to the PPP. The PPP was established under the CARES Act, which was enacted on March 27, 2020, and is administered by the U.S. Small Business Administration, or the SBA. All the funds under the loan were disbursed to the Company on April 22, 2020. The Company used all proceeds from the loan to retain employees, maintain payroll and make utility payments. Under the initial terms of the CARES Act, loan recipients could apply for and be granted forgiveness for all or a portion of the loans granted under the PPP. During the fourth quarter of 2020, the Company submitted an application for 100% forgiveness of the PPP Loan and upon approval by the SBA and the Lender, the Company received forgiveness for 100% of the \$1,214,500 loan.

Income Taxes. For 2020, the effective tax rate was a benefit of 32.3%, compared to a benefit of 17.5% for 2019. The primary driver of the change in the Company's effective tax rate is attributable to a tax benefit in the current period to recognize a net operating loss carryback claim. The Company recorded an income tax benefit of \$210,000 and \$172,000 for 2020 and 2019, respectively.

Liquidity and Capital Resources

Outside of the 2016 building expansion, for which \$3.4 million in financing was obtained, and the PPP loan, the Company has financed its operations principally with funds generated from operations. These funds have been sufficient to cover the Company's normal operating expenditures, annual capital requirements, and research and development expenditures.

Cash and cash equivalents were \$3.7 million and \$964,000 as of December 31, 2020 and 2019, respectively. In addition to its cash, the Company held \$2.2 million of short-term investments as of December 31, 2019. There were no short-term investments as of December 31, 2020. The Company used \$399,000 in cash from operating activities during 2020, compared to using \$477,000 of cash from operating activities in 2019. Cash provided by operating activities is primarily the result of the net loss adjusted for non-cash depreciation and amortization, deferred taxes, loan forgiveness and certain changes in working capital components discussed in the following paragraph.

During 2020, trade receivables decreased by \$316,000. This decrease was due primarily to a slowdown in sales of products and services in 2020 as a result of the aforementioned COVID-19 pandemic. The Company believes that the quality of its receivables is high and that strong internal controls are in place to maintain proper collections. Inventories decreased by \$536,000 as the Company tightened inventory levels in response to the decrease in demand for its products. Prepaid expenses and other assets decreased by \$781,000 reflecting a decrease in a receivable related to the reimbursement of 2019 medical insurance costs the Company received from its stop-loss insurance carrier. Accrued expenses decreased by \$592,000, reflecting a decrease in the accrual for health insurance costs. Accounts payable decreased by \$302,000 due to the Company's cost reduction efforts and a reduction in raw material purchases in anticipation of lower sales volume. Income taxes receivable increased by \$218,000 as the Company recognized an income tax benefit attributable to a net operating loss carryback claim.

During 2019, an increase in sales during the fourth quarter of 2019 resulted in a \$220,000 trade receivables increase. Inventories increased by \$134,000 mainly due to higher levels of IKONICS Imaging equipment inventory compared to 2018. Accounts payable increased from 2018 to 2019 by \$114,000 due to the timing of payments to and purchases from vendors. Prepaid expenses and other assets increased \$532,000 from 2018 to 2019. The increase is mainly due to a receivable related to the reimbursement of 2019 medical insurance costs that the Company will receive from its stop-loss insurance carrier. Compared to 2018, accrued expenses increased \$513,000 reflecting an increase in accrued medical insurance costs. Income taxes receivables decreased \$1,000 due to the timing of estimated 2019 tax payments compared to the calculated 2019 tax liability.

During 2020, cash provided by investing activities was \$2.1 million. Nine certificates of deposits totaling \$2.2 million matured during the year. The Company's purchases of equipment of \$150,000 were mainly for improvements to production and process capabilities and to replace a vehicle. The Company received \$18,000 in proceeds from the sale of vehicle. Also, during 2020, the Company incurred \$15,000 in patent application costs that the Company records as an asset and amortizes upon successful completion of the application process.

During 2019, cash provided by investing activities was \$8,000. The Company purchased seventeen certificates of deposits totaling \$5.6 million. Twenty two certificates of deposits totaling \$6.1 million matured during 2019. The Company's purchases of property and equipment of \$478,000 in 2019 were mainly for improvements to production and process capabilities and to replace two vehicles. The Company received \$16,000 in proceeds from the sale of two vehicles and equipment. Also, during 2019, the Company incurred \$20,000 in patent application costs that the Company records as an asset and amortizes upon successful completion of the application process.

For 2020, net cash provided by investing activities was \$1.1 million compared to \$190,000 of cash used in financing activities during 2019. The \$1.2 million proceeds from debt in 2020 reflects the receipt of the PPP loan discussed below. Related to the Company's financing agreement, the Company made principal payments of \$144,000 and \$140,000 during 2020 and 2019, respectively. During 2019, the Company purchased 7,199 shares of its own stock for \$50,000.

On April 18, 2020, the Company entered into a loan pursuant to the Paycheck Protection Program under the CARES Act, as administered by the U.S. Small Business Administration (the “SBA”). The loan, in the principal amount of \$1,214,500 (the “PPP Loan”), was disbursed by BMO Harris Bank National Association (“Lender”) on April 22, 2020, pursuant to a Paycheck Protection Program Promissory Note and Agreement (the “Note and Agreement”).

Under the initial terms of the PPP Loan, the loan would have matured on the two-year anniversary of the funding date, with interest at a fixed rate of 1.00% per annum. Monthly principal and interest payments, less the amount of any potential forgiveness (discussed below), would commence after the six-month anniversary of the funding date. The Company did not provide any collateral or guarantees in connection with the PPP Loan, nor did the Company pay any facility charge to obtain the PPP Loan. The Note and Agreement provided for customary events of default, including those relating to failure to make payment, bankruptcy, breaches of representations and material adverse effects. The Company could have prepaid the principal of the PPP Loan at any time without incurring any prepayment charges. All or a portion of the PPP Loan was eligible to be forgiven by the SBA and the Lender upon application by the Company. During the fourth quarter of 2020, the Company submitted an application for 100% forgiveness of the PPP Loan. Prior to end of 2020, both the Lender and the SBA forgave 100% of the Company's PPP loan.

On April 1, 2016, the Company entered into a financing agreement (the “Financing Agreement”) under which the Duluth Economic Development Authority (the “Issuer”) agreed to sell \$3,415,000 of its Tax Exempt Industrial Revenue Bonds, Series 2016 (IKONICS Project) (the “Bonds”) to Wells Fargo Bank, National Association (the “Bank”), and the Bank agreed to lend to the Company the proceeds received from the sale of the Bonds (the “Loan”). Related to the Company's Loan, the Company made principal payments of \$144,000 and \$140,000 during 2020 and 2019, respectively.

The Company is subject to certain customary covenants set forth in the Loan, including a requirement that the Company maintain a debt service coverage ratio of not less than 1.25 to 1.00. As of December 31, 2020 the Company was in compliance with the debt service coverage ratio loan covenant, however, as of December 31, 2019 the Company was out of compliance with the debt service coverage ratio but obtained a waiver for the covenant violation. There is no certainty that a waiver can be obtained in the future if similar violations occur. The Company amended the covenant terms in February of 2020 to change the debt service coverage ratio calculation from a rolling quarterly calculation to an annual calculation beginning December 31, 2020. If the Company has future violations of its covenants, and is unable to obtain appropriate waivers, it could have a significant adverse effect on the Company's liquidity. Subsequent to December 31, 2020, the Company was notified by the bank that per the loan agreement the bank will recall the loan on April 1, 2021. The Company believes that any adverse effect of the loan recall is mitigated by its strong working capital including cash and cash equivalents of \$3.7 million along with the Company's \$2.0 million available line of credit as of December 31, 2020. However, the Company cannot reasonably estimate the future financial impact on its operations or working capital position given the recent downturn in business due to the coronavirus (COVID-19) pandemic.

A bank line of credit providing for borrowings of up to \$2,050,000 expires August 30, 2021. The line of credit is collateralized by the Company's assets and bears interest at 1.8 percentage points over the 30-day LIBOR rate. The Company did not utilize this line of credit during 2020 or 2019, and there were no borrowings outstanding as of December 31, 2020 or December 31, 2019. There are no financial covenants related to the line of credit, and the Company expects that it will secure a similar line of credit when the current line of credit expires.

The Company believes that current financial resources, its line of credit, and cash generated from operations, along with the Company's capacity for additional debt and/or equity financing will be sufficient to fund current and anticipated business operations. However, the full extent of the effect of the COVID-19 pandemic on the Company's customers, supply chain and business cannot be reasonably assessed at this time and the Company expects its full year 2021 results of operations to be adversely affected. The Company has developed a plan to mitigate the impact of COVID-19 which includes permanent reductions to the Company's workforce, temporary reductions in board and officer compensation, temporary suspension of the Company's contribution to its 401(k) retirement plan and the elimination of all non-essential expenditures. The impact of COVID-19 on the Company's operating results will depend on future developments, which are highly uncertain and cannot be predicted, including governmental and business reactions to the pandemic.

Capital Expenditures

In 2020, the Company incurred \$150,000 of capital expenditures mainly for improvements to production and process capabilities and to replace a vehicle. In 2019, the Company incurred \$478,000 of capital expenditures which were mainly for improvements to production and process capabilities and to replace two vehicles.

The Company expects capital expenditures in 2021 of approximately \$220,000. The planned expenditures primarily will be to upgrade some of the Company's production and research equipment. These commitments are expected to be funded with cash generated from operating activities or cash on hand.

International Activity

The Company markets its products in numerous countries in various regions of the world, including North America, Europe, Latin America, and Asia. The Company's 2020 foreign sales of \$4.0 million were approximately 29.7% of total sales, compared to the 2019 foreign sales of \$5.2 million, which were 29.4% of total sales.

The Company's foreign transactions are primarily negotiated, invoiced and paid in U.S. dollars, though a portion is transacted in Euros. IKONICS has not implemented an economic hedging strategy to reduce the risk of foreign currency translation exposures, which management does not believe to be significant based on the scope and geographic diversity of the Company's foreign operations. Furthermore, the impact of foreign exchange on the Company's balance sheet and operating results was not material in either 2020 or 2019.

Future Outlook

See the discussion under the heading “Impact of the COVID-19 Pandemic” above for the Company's discussion of the COVID-19 pandemic.

IKONICS has spent an average of approximately 5% of annual sales in research and development and has made capital expenditures related to new products and programs. The Company plans to maintain its efforts in these areas to expedite internal product development as well as to form technological alliances with outside entities to commercialize new product opportunities.

The Company is also continuing to pursue DTX-related business initiatives. In addition to making efforts towards growing the inkjet technology business, the Company offers a range of products for creating texture surfaces and has introduced a fluid for use in prototyping. The Company is currently working on production improvements as part of its joint development agreement with AKK, a German manufacturer of high quality printers, to enhance its customer offerings. The Company has been awarded European, Japanese, and United States patents on its DTX technologies. The Company has also modified its DTX technology to facilitate entry into the market for prototyping.

The Company continues to make progress on its AMS business. The Company has three long-term sales agreements in place for its technology with major aerospace companies. However, based on customer communications, the Company anticipates reduced order volume for 2021 due to the COVID-19 pandemic.

Both the Chromaline and IKONICS Imaging units operate in mature markets. Although these business units require aggressive strategies to grow market share, both are developing new products and business relationships that the Company believes will contribute to growth. Early in 2019, the Company introduced its new IKONART® product to positive reviews and is generating sales. IKONART® provides a new way to make custom reusable stencils for the creative arts markets. In addition to its traditional emphasis on domestic markets, the Company will continue efforts to grow its business internationally by attempting to develop new markets and expanding market share where it has already established a presence. However, the strong U.S. dollar has made international growth challenging.

Other future activities undertaken to expand the Company's business may include strategic partnerships, acquisitions, building improvements, equipment additions, new product development and marketing opportunities.

Off-Balance Sheet Arrangements

The Company has no off-balance sheet arrangements.

Recent Accounting Pronouncements

In June 2016, the FASB issued ASU No. 2016-13, Measurement of Credit Losses on Financial Instruments, which revises guidance for the accounting for credit losses on financial instruments within its scope, and in November 2018, issued ASU No. 2018-19 and in April 2019, issued ASU No. 2019-04 and in May 2019, issued ASU No. 2019-05, and in November 2019, issued ASU No. 2019-11, which amended the standard. The new standard introduces an approach, based on expected losses, to estimate credit losses on certain types of financial instruments and modifies the impairment model for available-for-sale debt securities. The new approach to estimating credit losses (referred to as the current expected credit losses model) applies to most financial assets measured at amortized cost and certain other instruments, including trade and other receivables, loans, held-to-maturity debt securities, net investments in leases and off-balance-sheet credit exposures. This ASU is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years, with early adoption permitted. Entities are required to apply the standard's provisions as a cumulative-effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is adopted. The Company is still evaluating the impact of this ASU.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Not applicable

Item 8. Financial Statements

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of IKONICS Corporation

Opinion on the Financial Statements

We have audited the accompanying balance sheets of IKONICS Corporation (the Company) as of December 31, 2020 and 2019, the related statements of operations, stockholders' equity and cash flows for the years then ended, and the related notes to the financial statements (collectively, the financial statements). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2020 and 2019, 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 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.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which they relate.

Liquidity

As discussed in Note 1 to the financial statements, the Company experienced a significant decrease in sales activity due to the COVID-19 pandemic, and the future financial impact and duration is difficult to estimate at this time. As a result of the decrease in sales activity, the Company executed a plan to mitigate the impact of COVID-19, which included permanent reductions to the Company's workforce, reductions in board and officer compensation, and elimination of all non-essential expenditures. The impact of COVID-19 on the Company's operating results will depend on future developments, which are highly uncertain and are difficult to predict, including governmental and business reactions to the pandemic. Managements' liquidity analysis involves an assessment of future operating results, which involves subjective assumptions related to sales levels, margins, and expenses. Managements' liquidity analysis also involves an assessment of the ability to fund cash flow needs from financing activities.

We identified the Company's liquidity disclosure as a critical audit matter due to certain significant assumptions management makes in the estimate, including future sales, margin and payroll expense projections. Auditing management's assumptions of future sales, margin, and payroll expense projections, involved a high degree of auditor judgement and increased audit effort to evaluate management's conclusion that it is probable the Company's operations will provide adequate cash flow to fund the Company's obligations.

Our audit procedures related to the auditor's evaluation of the Company's liquidity included the following, among others:

- We evaluated the reasonableness of management's assessment of the sufficiency of the Company's current cash position in comparison to management's estimate of expected future cash flows and other operating and investing needs.
- We evaluated the reasonableness of significant assumptions related to management's future projections including revenue projections, margins, and expenses by comparing forecasts to historical results, review of recent trends, review of interim financial information, and discussions with management personnel.
- We evaluated the sufficiency of the Company's plans to mitigate the impact of COVID-19 including management's estimate of costs reductions by review of recent trends, review of interim financial information, and discussions with management personnel.

/s/ RSM US LLP

We have served as the Company's auditor since 2002.

Minneapolis, Minnesota
March 3, 2021

IKONICS CORPORATION

**BALANCE SHEETS
DECEMBER 31, 2020 AND 2019**

	December 31, 2020	December 31, 2019
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	\$ 3,693,845	\$ 963,649
Short-term investments	—	2,205,000
Trade receivables, less allowance of \$55,000 in 2020 and \$58,000 in 2019	2,119,213	2,434,718
Inventories, net	1,644,975	2,180,536
Prepaid expenses and other assets	125,969	906,916
Income taxes receivable	219,451	1,369
Total current assets	<u>7,803,453</u>	<u>8,692,188</u>
PROPERTY, PLANT, AND EQUIPMENT, at cost:		
Land and building	9,556,586	9,556,984
Machinery and equipment	5,263,586	5,198,784
Office equipment	1,417,219	1,402,369
Vehicles	245,674	245,674
	16,483,065	16,403,811
Less accumulated depreciation	(9,094,702)	(8,487,827)
Total property, plant and equipment at cost, net	<u>7,388,363</u>	<u>7,915,984</u>
PATENTS, less accumulated amortization of \$207,399 in 2020 and \$181,609 in 2019	243,583	271,369
Total assets	<u>\$ 15,435,399</u>	<u>\$ 16,879,541</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Current portion of long-term debt	\$ 2,688,396	\$ 133,287
Accounts payable	459,836	761,641
Accrued compensation	279,755	382,303
Other accrued liabilities	168,066	657,255
Total current liabilities	<u>3,596,053</u>	<u>1,934,486</u>
LONG-TERM LIABILITIES		
Long-term debt, less current portion	—	2,688,357
Total liabilities	<u>3,596,053</u>	<u>4,622,843</u>
COMMITMENTS AND CONTINGENCIES		
STOCKHOLDERS' EQUITY		
Preferred stock, par value \$.10 per share; authorized 250,000 shares; issued none	—	—
Common stock, par value \$.10 per share; authorized 4,750,000 shares; issued and outstanding 1,976,354 shares in 2020 and 2019	197,635	197,635
Additional paid-in-capital	2,743,930	2,721,962
Retained earnings	8,897,781	9,337,101
Total stockholders' equity	<u>11,839,346</u>	<u>12,256,698</u>
Total liabilities and stockholders' equity	<u>\$ 15,435,399</u>	<u>\$ 16,879,541</u>

See notes to financial statements.

IKONICS CORPORATION

**STATEMENTS OF OPERATIONS
YEARS ENDED DECEMBER 31, 2020 AND 2019**

	Year Ended December 31,	
	2020	2019
NET SALES	\$ 13,432,220	\$ 17,618,559
COST OF GOODS SOLD	<u>9,527,143</u>	<u>12,221,370</u>
GROSS PROFIT	3,905,077	5,397,189
SELLING, GENERAL AND ADMINISTRATIVE EXPENSES	5,019,604	5,483,586
RESEARCH AND DEVELOPMENT EXPENSES	<u>671,493</u>	<u>870,279</u>
LOSS FROM OPERATIONS	(1,786,020)	(956,676)
INTEREST EXPENSE	(86,561)	(90,058)
OTHER INCOME	<u>1,223,261</u>	<u>61,176</u>
LOSS BEFORE INCOME TAXES	(649,320)	(985,558)
INCOME TAX BENEFIT	<u>(210,000)</u>	<u>(172,000)</u>
NET LOSS	<u>\$ (439,320)</u>	<u>\$ (813,558)</u>
LOSS PER COMMON SHARE		
Basic	<u>\$ (0.22)</u>	<u>\$ (0.41)</u>
Diluted	<u>\$ (0.22)</u>	<u>\$ (0.41)</u>
WEIGHTED AVERAGE COMMON SHARES OUTSTANDING		
Basic	<u>1,976,354</u>	<u>1,980,253</u>
Diluted	<u>1,976,354</u>	<u>1,980,253</u>

See notes to financial statements.

IKONICS CORPORATION

**STATEMENTS OF STOCKHOLDERS' EQUITY
YEARS ENDED DECEMBER 31, 2020 AND 2019**

	Common Stock		Additional Paid-in Capital	Retained Earnings	Total Stock- holders' Equity
	Shares	Amount			
BALANCE AT DECEMBER 31, 2018	1,983,553	\$ 198,355	\$ 2,723,024	\$ 10,189,651	\$ 13,111,030
Net loss	—	—	—	(813,558)	(813,558)
Common stock repurchased	(7,199)	(720)	(9,883)	(38,992)	(49,595)
Stock based compensation	—	—	8,821	—	8,821
BALANCE AT DECEMBER 31, 2019	1,976,354	197,635	2,721,962	9,337,101	12,256,698
Net loss	—	—	—	(439,320)	(439,320)
Stock based compensation	—	—	21,968	—	21,968
BALANCE AT DECEMBER 31, 2020	<u>1,976,354</u>	<u>\$ 197,635</u>	<u>\$ 2,743,930</u>	<u>\$ 8,897,781</u>	<u>\$ 11,839,346</u>

See notes to financial statements.

IKONICS CORPORATION

**STATEMENTS OF CASH FLOWS
YEARS ENDED DECEMBER 31, 2020 AND 2019**

	Year Ended December 31,	
	2020	2019
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	\$ (439,320)	\$ (813,558)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	661,565	639,997
Amortization	36,489	43,014
Stock based compensation	21,968	8,821
Forgiveness on paycheck protection loan	(1,214,500)	—
Net gain on sale and disposal of equipment	(2,325)	(8,482)
Deferred income taxes	—	(183,000)
Abandonment of patents	16,906	92,833
Changes in operating assets and liabilities:		
Trade receivables	315,505	(219,503)
Inventories	535,561	(133,948)
Prepaid expenses and other assets	780,947	(531,554)
Income tax receivable	(218,082)	1,399
Accounts payable	(301,805)	114,113
Accrued expenses	(591,737)	512,837
Net cash used in operating activities	<u>(398,828)</u>	<u>(477,031)</u>
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchases of property and equipment	(149,916)	(478,353)
Proceeds from sales of equipment	18,297	15,596
Purchases of patents	(14,910)	(19,665)
Purchases of short-term investments	—	(5,635,000)
Proceeds on sale of short-term investments	2,205,000	6,125,000
Net cash provided by investing activities	<u>2,058,471</u>	<u>7,578</u>
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from paycheck protection program loan	1,214,500	—
Principal payments on long-term debt	(143,947)	(140,440)
Repurchase of common stock	—	(49,595)
Net cash provided by (used in) financing activities	<u>1,070,553</u>	<u>(190,035)</u>
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	2,730,196	(659,488)
CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR	963,649	1,623,137
CASH AND CASH EQUIVALENTS AT END OF YEAR	<u>\$ 3,693,845</u>	<u>\$ 963,649</u>
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION		
Cash paid for interest	<u>\$ 75,227</u>	<u>\$ 79,008</u>
Cash paid for income taxes, net	<u>\$ 8,082</u>	<u>\$ 9,457</u>

See notes to financial statements.

IKONICS CORPORATION

**NOTES TO FINANCIAL STATEMENTS
YEARS ENDED DECEMBER 31, 2020 AND 2019**

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Description of Business and Foreign Export Sales- IKONICS Corporation's (the Company or IKONICS) traditional business has been the development and manufacturing of high-quality photochemical imaging systems for sale primarily to a wide range of printers and decorators of surfaces. Customers' applications are primarily screen printing and abrasive etching. These sales have been augmented with inkjet receptive films, ancillary chemicals and related equipment to provide a full line of products and services to its customers. Leveraging these technologies the Company is also diversifying and expanding its business to industrial markets. These efforts also include the Company's Advanced Material Solutions (AMS) business unit which uses the Company's proprietary process and photoresist film for the abrasive etching of composite materials, industrial ceramics, silicon wafers, and glass wafers. The customer base for AMS is primarily the aerospace and electronics industries. Based on its expertise in ultraviolet curable fluids and inkjet receptive substrates, the Company has also developed a patented digital texturing technology (DTX) for putting patterns and textures into steel molds for the plastic injection molding industry. The original equipment manufacturer ("OEM") for the Company's DTX technology is primarily the automotive industry. Industrial inkjet printers, which are integral to the DTX system, are manufactured and sold by a strategic partner. The Company's business plan is to sell a suite of products including consumable fluids and transfer films. For most markets these sales are direct to the mold maker. The DTX technology is being expanded to prototyping where the Company's technology offers a unique combination of high definition and large format prints. The Company's principal markets include the United States, Europe, Latin America, Asia, and other parts of the world. The Company extends credit to its customers, all on an unsecured basis, on terms that it establishes for individual customers.

The full extent of the effect of the COVID-19 pandemic on the Company's customers, supply chain and business is difficult to assess at this time although the Company's 2020 results of operations were adversely affected. The Company has developed a plan to mitigate the impact of COVID-19 which includes the implementation of a series of specific and identified cost reductions, in addition to actions already taken, including further reducing its direct and indirect operating costs. The impact of COVID-19 on the Company's operating results will depend on future developments, which are highly uncertain and difficult to predict, including governmental and business reactions to the pandemic.

Based on the Company's current cash position, and expected future cash flows, the Company believes it will have sufficient cash to repay its entire \$2.7 million loan and continue to fund its operations beyond twelve months from the date of the issuance of the financial statements

The Company has evaluated subsequent events occurring after the date of the financial statements for events requiring recording or disclosure in the financial statements. As a result of the novel strain of COVID-19 pandemic effect on the Company's business as well as the businesses of its customers and suppliers, a significant decline in the Company's business has occurred and that decline is expected to continue. Although the Company continues to operate, the Company has experienced a significant decrease in sales activity, and the future financial impact and duration is difficult to reasonably estimate at this time.

Foreign sales approximated 29.7% and 29.4% of net sales in 2020 and 2019, respectively. Foreign receivables are comprised primarily of open credit arrangements with terms ranging from 30 to 90 days. No single customer or foreign country represented greater than 10% of net sales in 2020 or in 2019.

The Company considers events or transactions that occur after the balance sheet date but before the financial statements are issued to provide additional evidence relative to certain estimates or to identify matters that require additional disclosure.

A summary of the Company's significant accounting policies follows:

Cash Equivalents — The Company considers all highly liquid debt instruments purchased with a maturity of three months or less to be cash equivalents. Cash equivalents consist of money market funds in which the carrying value approximates fair value because of the short maturity of these instruments. The money market fund invests in United States dollar denominated securities that present minimal credit risk and consist of investments in debt securities issued or guaranteed by the United States government or by United States government agencies or instrumentalities, repurchase agreements fully collateralized by the United States Treasury, and United States government securities. The Company maintains its cash balances primarily in two financial institutions. As of December 31, 2020, the balance at both institutions exceeded the Federal Deposit Insurance Corporation coverage.

Short-Term Investments — Short-term investments consist of fully insured certificates of deposit with original maturities ranging from three to six months as of December 31, 2019. There were no short-term investments at December 31, 2020.

Inventories — Inventories are stated at the lower of cost or net realizable value using the last-in, first-out (LIFO) method. If the first-in, first-out (FIFO) cost method had been used, inventories would have been approximately \$1,173,000 and \$1,356,000 higher than reported at December 31, 2020 and 2019, respectively. Inventory quantities were reduced during 2020, resulting in a liquidation of LIFO inventory layers (a "LIFO decrement"). A LIFO decrement results in the erosion of layers created in earlier years, and, therefore, a LIFO layer is not created for years that have decrements. The Company had a decrement of its LIFO inventory layers of approximately \$116,000 in 2020. There was no LIFO decrement in 2019. The inventory reserve for obsolescence was \$13,000 and \$12,000 at December 31, 2020 and 2020, respectively. The major components of inventories, net of inventory reserve, are as follows:

	<u>Dec 31, 2020</u>	<u>Dec 31, 2019</u>
Raw materials	\$ 1,323,655	\$ 1,667,154
Work-in-progress	428,753	419,906
Finished goods	1,065,458	1,449,854
Reduction to LIFO cost	<u>(1,172,891)</u>	<u>(1,356,378)</u>
Total Inventories	<u>\$ 1,644,975</u>	<u>\$ 2,180,536</u>

Property, Plant and Equipment — Major expenditures extending the life of the property, plant and equipment are capitalized. Repair and maintenance costs are expensed in the period in which they are incurred. Depreciation of property, plant and equipment is computed using the straight-line method over the following estimated useful lives:

	<u>Years</u>
Buildings	15-40
Machinery and equipment	5-10
Office equipment	3-10
Vehicles	3



Patents — Patents are amortized on a straight-line basis over their estimated useful lives or agreement terms. As of December 31, 2020, the Company's patents had a remaining estimated weighted average useful life of 8.5 years.

Impairment of Long-lived Assets — The Company reviews its long-lived assets, including property, plant and equipment and patents, for impairment when indicators of impairment are present and the undiscounted cash flows estimated to be generated by those assets are less than the assets' carrying amount. Any impairment loss recorded is measured as the amount by which the carrying value of the assets exceeds the fair value of the assets. To date, the Company has determined that no loss on impairment of long-lived assets exists.

Fair Value of Financial Instruments — The carrying amounts of financial instruments, including cash and cash equivalents, short-term investments, trade receivables, accounts payable, and accrued liabilities approximate fair value due to the short maturities of these instruments. The fair value of long-term debt approximates its carrying value and has been estimated based on interest rates being offered for similar debt having the same or similar remaining maturities and collateral requirements.

Revenue recognition. Revenue is measured based on consideration specified in the contract with a customer, adjusted for any applicable estimates of variable consideration and other factors affecting the transaction price, including noncash consideration, consideration paid or payable to customers and significant financing components. While most of the Company's revenue is contracted with customers through one-time purchase orders and short-term contracts, the Company does have long-term arrangements with certain customers. Revenue from all customers is recognized when a performance obligation is satisfied by transferring control of a distinct good or service to a customer.

Individually promised goods and services in a contract are considered a distinct performance obligation and accounted for separately if the customer can benefit from the individual good or service on its own or with other resources that are readily available to the customer and the good or service is separately identifiable from other promises in the arrangement. When an arrangement includes multiple performance obligations, the consideration is allocated between the performance obligations in proportion to their estimated standalone selling price. Costs related to products delivered are recognized in the period incurred, unless criteria for capitalization of costs are met. Costs of revenues consist primarily of direct labor, manufacturing overhead, materials and components. The Company does not incur significant upfront costs to obtain a contract. If costs to obtain a contract were to become material, the costs would be recorded as an asset and amortized to expense in a manner consistent with the related recognition of revenue.

The Company excludes from revenue governmental assessed and imposed taxes on revenue transactions that are invoiced to customers. The Company includes freight billed to customers in revenue. Shipping and handling costs associated with outbound freight after control over a product has transferred to a customer are accounted for as a fulfillment cost and are included in cost of goods sold.

The timing of revenue recognition, billings and cash collections results in accounts receivable on the balance sheet.

Performance obligations. A performance obligation is a promise in a contract to transfer a distinct good or service to the customer. A contract's transaction price is allocated to each distinct performance obligation in proportion to its standalone selling price and recognized as revenue when, or as, the performance obligation is satisfied. The Company's various performance obligations and the timing or method of revenue recognition are discussed below:

The Company sells its products to both distributors and end-users. Each unit of product delivered under a customer order represents a distinct and separate performance obligation as the customer can benefit from each unit on its own or with other resources that are readily available to the customer and each unit of product is separately identifiable from other products in the arrangement.

The transaction price for the Company's products is the invoiced amount. The Company does not have variable consideration in the form of refunds, credits, rebates, price concessions, pricing incentives or other items impacting transaction price. The purchase order pricing in arrangements with customers is deemed to approximate standalone selling price; therefore, the Company does not need to allocate proceeds on a relative standalone selling price allocation between performance obligations. The Company does not disclose information about remaining performance obligations that have original expected durations of one year or less. There are no material obligations that extend beyond one year.

Revenue is recognized when transfer of control occurs as defined by the terms in the customer agreement. The Company immediately recognizes incidental items that are immaterial in the context of the contract. The Company does not have any significant financing components in its customer arrangements as payment is received at or shortly after the point of sale, generally thirty to ninety days.

The Company estimates returns based on an analysis of historical experience if the right to return products is granted to its customers. The Company does not record a return asset as non-conforming products are generally not returned. The Company's return policy does not vary by geography. The customer has no rotation or price protection rights.

Trade receivables. Trade receivables include amounts invoiced and currently due from customers and are financial instruments that also expose the Company to concentration of credit risk. The large number of customers comprising the Company's customer base and their dispersion across different geographic areas limits such exposure. The amounts due are stated at their net estimated realizable value. The Company records an allowance for doubtful accounts to provide for the estimated amount of receivables that will not be collected and adequately provide for credit losses. The allowance is based on a review of all outstanding amounts on an on-going basis. Management determines the allowance for doubtful accounts by regularly evaluating individual customer receivables and considers a customer's financial condition, credit history, and current economic conditions. Trade receivables are written off when deemed uncollectible. Recoveries of trade receivables previously written off are recorded when received. Accounts are considered past due if payment is not received according to agreed-upon terms. A small percentage of the trade receivables balance is denominated in a foreign currency with no concentration in any given country. At the end of each reporting period, the Company analyzes the receivable balance for customers paying in a foreign currency. These balances are adjusted to each quarter or year-end spot rate. Foreign currency transactions and translation adjustments did not have a significant effect on the Balance Sheets, the Statements of Operations, Stockholders' Equity or Cash Flows for 2020 and 2019.

Sales commissions. Sales commissions paid to sales representatives are eligible for capitalization as they are incremental costs that would not have been incurred without entering into a specific sales arrangement and are recoverable through the expected margin on the transaction. The Company recognizes the incremental costs of obtaining contracts as an expense when incurred, as the amortization period of the assets that would have otherwise been recognized is one year or less. The Company records these costs in selling, general, and administrative expense.

Product warranties. The Company offers warranties on various products and services. These warranties are assurance type warranties that are not sold on a standalone basis; therefore, they are not considered distinct performance obligations. The Company estimates the costs that may be incurred under its warranties and records a liability in the amount of such costs at the time the revenue is recognized for the product sale.

International revenue. The Company markets its products to numerous countries in North America, Europe, Latin America, Asia and other parts of the world. Foreign sales were approximately 29.7% and 29.4% of total sales in 2020 and 2019, respectively.

Deferred Taxes — Deferred taxes are provided on a liability method whereby deferred tax assets are recognized for deductible temporary differences and operating loss and tax credit carryforwards and deferred tax liabilities are recognized for taxable temporary differences. Temporary differences are the differences between the reported amounts of assets and liabilities and their tax basis. Deferred tax assets are reduced by a valuation allowance when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will not be realized. The Company classifies deferred tax assets and liabilities as noncurrent. Deferred tax assets and liabilities are adjusted for the effects of changes in tax laws and rates on the date of enactment.

The Company follows the accounting standard on accounting for uncertainty in income taxes, which addresses the determination of whether tax benefits claimed or expected to be claimed on a tax return should be recorded in the financial statements. Under this guidance, the Company may recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than 50 percent likelihood of being realized upon ultimate settlement. The guidance on accounting for uncertainty in income taxes also addresses derecognition, classification, interest and penalties on income taxes, and accounting in interim periods.

Earnings Per Share (EPS) — Basic EPS is calculated using net income (loss) divided by the weighted average of common shares outstanding. Diluted EPS is similar to Basic EPS except that the weighted average number of common shares outstanding is increased to include the number of additional common shares, when dilutive, that would have been outstanding if the potential dilutive common shares, such as those shares subject to options, had been issued.

Shares used in the calculation of diluted EPS are summarized below:

	<u>Dec 31, 2020</u>	<u>Dec 31, 2019</u>
Weighted average common shares outstanding	1,976,354	1,980,253
Dilutive effect of stock options and restricted stock units	—	—
Weighted average common and common equivalent shares outstanding	<u>1,976,354</u>	<u>1,980,253</u>

If the Company was in a net income position at December 31, 2020, all 17,500 options outstanding with a weighted average exercise price of \$6.97 would have remained excluded from the computation of weighted average common and common equivalent shares outstanding as the options were anti-dilutive.

Restricted stock units of approximately 54,300 shares for the year-end December 31, 2020 would have remained excluded from the computation of weighted average common and common equivalent shares outstanding as they were anti-dilutive due to the amount of weighted-average unrecognized compensation related to these grants.

At December 31, 2019, options to purchase 19,250 shares of common stock with a weighted average exercise price of \$11.32 were outstanding, but were excluded from the computation of common share equivalents because they were anti-dilutive.

Employee Stock Plan - The Company accounts for employee stock options under the provision of ASC 718, Compensation — Stock Compensation.

Recent Accounting Pronouncements - In June 2016, the FASB issued ASU No. 2016-13, Measurement of Credit Losses on Financial Instruments, which revises guidance for the accounting for credit losses on financial instruments within its scope, and in November 2018, issued ASU No. 2018-19 and in April 2019, issued ASU No. 2019-04 and in May 2019, issued ASU No. 2019-05, and in November 2019, issued ASU No. 2019-11, which amended the standard. The new standard introduces an approach, based on expected losses, to estimate credit losses on certain types of financial instruments and modifies the impairment model for available-for-sale debt securities. The new approach to estimating credit losses (referred to as the current expected credit losses model) applies to most financial assets measured at amortized cost and certain other instruments, including trade and other receivables, loans, held-to-maturity debt securities, net investments in leases and off-balance-sheet credit exposures. This ASU is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years, with early adoption permitted. Entities are required to apply the standard's provisions as a cumulative-effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is adopted. The Company is still evaluating the impact of this ASU.

Use of Estimates — The preparation of the 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 reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. Significant estimates include the allowance for doubtful trade receivables, the reserve for inventory obsolescence, undiscounted cash flows generated from long-live assets and the valuation allowance for deferred tax assets.

2. INCOME TAXES

Income tax benefit for the years ended December 31, 2020 and 2019 consists of the following:

	<u>2020</u>	<u>2019</u>
Current:		
Federal	\$ (216,000)	\$ —
State	6,000	11,000
	<u>(210,000)</u>	<u>11,000</u>
Deferred - Federal	—	(183,000)
	<u>\$ (210,000)</u>	<u>\$ (172,000)</u>

The expected (benefit) provision for income taxes, computed by applying the U.S. federal income tax rate of 21% to income (loss) before taxes, is reconciled to income benefit as follows:

	<u>2020</u>	<u>2019</u>
Expected provision for federal income taxes	\$ (136,000)	\$ (207,000)
State income taxes, net of federal benefit	(24,000)	(7,000)
Permanent items	(249,000)	11,000
Research and development credit	(23,000)	(29,000)
Change in valuation allowance	440,000	51,000
Change in tax law allowing NOL carryback claim	(217,000)	—
Prior year true-ups and other	(1,000)	9,000
	<u>\$ (210,000)</u>	<u>\$ (172,000)</u>

Net deferred tax liabilities consist of the following as of December 31, 2020 and 2019:

	<u>2020</u>	<u>2019</u>
Deferred tax liabilities:		
Accrued vacation	\$ 33,000	\$ 21,000
Inventories reserve	17,000	42,000
Allowance for doubtful accounts	2,000	3,000
Allowance for sales returns	10,000	10,000
Research and development credit carryforward	285,000	245,000
Accrued self-insured medical	—	3,000
Property and equipment	(257,000)	(295,000)
Patents	(50,000)	(53,000)
Net operating loss	411,000	230,000
Other	17,000	8,000
Valuation allowance	(468,000)	(214,000)
Net deferred tax liabilities	<u>\$ —</u>	<u>\$ —</u>

As of December 31, 2020, the Company has federal net operating loss carry-forwards and research and development credit carryovers of \$1,847,000 and \$104,000, respectively, and begin expiring in 2037. The Company's state net operating loss carryforwards and research and development credit carryovers at December 31, 2020 total \$468,000 and \$214,000, respectively, and begin expiring in 2026.

The Company is subject to federal and state taxation. As of December 31, 2020, with few exceptions, the Company is no longer subject to examination prior to tax year 2017.

In accounting for uncertainty in income taxes, we recognize the financial statement benefit of a tax position only after determining that the relevant tax authority would more likely than not sustain the position following an audit. For tax positions meeting the more likely than not threshold, the amount recognized in the financial statements is the largest benefit that has a greater than 50 percent likelihood of being realized upon ultimate settlement with the relevant tax authority. As of December 31, 2020, the Company does not have any unrecognized tax benefits. The Company recognizes interest and penalties accrued on any unrecognized tax benefits as a component of income tax expense. We do not expect any material changes in our unrecognized tax benefits over the next 12 months.

The Company establishes a valuation allowance to reduce the deferred tax assets when it is more likely than not that a deferred tax asset will not be realizable. On the basis of this evaluation, as of December 31, 2020 and 2019, a full valuation allowance has been recorded to reserve for deferred tax assets, which are not expected to be realized.

3. INTANGIBLE ASSETS

Intangible assets consist of patents, and patent applications. Capitalized patent application costs are included with patents. Intangible assets are amortized on a straight-line basis over their estimated useful lives or terms of their agreement, whichever is shorter. The Company wrote off costs related to abandoned patent applications of \$17,000 in 2020 and \$93,000 in 2019.

Intangible assets at December 31, 2020 and 2019 consist of the following:

	December 31, 2020		December 31, 2019	
	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Amortized intangible assets:				
Patents	\$ 450,982	\$ (207,399)	\$ 452,978	\$ (181,609)
			2020	2019
Aggregate amortization expense:				
For the years ended December 31		\$ 25,790	\$ 31,869	

Estimated amortization expense for the years ending December 31:

2021	\$ 25,000
2022	25,000
2023	25,000
2024	24,000
2025	24,000
Thereafter	67,000

In connection with a license agreement, the Company has agreed to pay royalties ranging from 3% to 5% on the sales of products subject to the agreement. The Company incurred \$8,000 and \$10,000 of expense under these agreements during 2020 and 2019, respectively, which are included in selling, general and administrative expenses in the Statements of Operations.

4. RETIREMENT PLAN

The Company has established a salary deferral plan under Section 401(k) of the Internal Revenue Code. Such deferrals accumulate on a tax-deferred basis until the employee withdraws the funds. Historically, the Company has contributed up to 5% of each eligible employee's compensation. As part of cost reduction efforts in 2020 the Company temporarily suspended its 5% contribution in 2020. Total retirement expense for the years ended December 31, 2020 and 2019 was approximately \$120,000 and \$241,000, respectively. The Company anticipates it will resume at least a portion of its 5% 401(k) contribution in 2021 as business conditions allow.

5. SEGMENT INFORMATION

The Company's reportable segments are strategic business units that offer different products and have varied customer bases. There are four reportable segments: Chromaline, IKONICS Imaging, Digital Texturing (DTX) and Advanced Material Solutions (AMS). Chromaline sells screen printing film, emulsions, and inkjet receptive film primarily to distributors and some end users. IKONICS Imaging sells photo resistant film, art supplies, glass, and related abrasive etching equipment to both end users and distributors. AMS provides sound deadening and weight reduction technology to the aerospace industry along with products and services for etched composites, ceramics, glass and silicon wafers. DTX includes products and customers related to patented and proprietary inkjet technology used for mold texturing and prototyping. The accounting policies of the segments are the same as those described in the summary of significant accounting policies included in Note 1.

Management evaluates the performance of each segment based on the components of divisional income, and does not allocate assets and liabilities to segments except for trade receivables. Financial information with respect to the reportable segments follows:

For the year ended December 31, 2020:

	Chromaline	IKONICS Imaging	DTX	AMS	Unalloc.	Total
Net sales	\$ 8,475,743	\$ 3,709,318	\$ 294,929	\$ 952,230	\$ —	\$ 13,432,220
Cost of goods sold	6,222,902	1,972,076	140,866	1,191,299	—	9,527,143
Gross profit (loss)	2,252,841	1,737,242	154,063	(239,069)	—	3,905,077
Selling, general, and administrative*	1,297,045	880,404	125,752	275,147	2,441,256	5,019,604
Research and development*	—	—	—	—	671,493	671,493
Income (loss) from operations	\$ 955,796	\$ 856,838	\$ 28,311	\$ (514,216)	\$ (3,112,749)	\$ (1,786,020)

For the year ended December 31, 2019:

	Chromaline	IKONICS Imaging	DTX	AMS	Unalloc.	Total
Net sales	\$ 11,472,111	\$ 4,191,175	\$ 393,804	\$ 1,561,469	\$ —	\$ 17,618,559
Cost of goods sold	8,389,404	2,273,641	157,650	1,400,675	—	12,221,370
Gross profit	3,082,707	1,917,534	236,154	160,794	—	5,397,189
Selling, general, and administrative*	1,832,473	1,081,847	149,924	361,342	2,058,000	5,483,586
Research and development*	—	—	—	—	870,279	870,279
Income (loss) from operations	\$ 1,250,234	\$ 835,687	\$ 86,230	\$ (200,548)	\$ (2,928,279)	\$ (956,676)

*The Company does not allocate all general and administrative expenses or any research and development expenses to its operating segments for internal reporting.

Trade receivables by segment as of December 31 were as follows:

	Dec 31, 2020	Dec 31, 2019
Chromaline	\$ 1,676,592	\$ 1,916,066
IKONICS Imaging	396,116	304,791
DTX	35,983	13,919
AMS	57,676	252,363
Unallocated	(47,154)	(52,421)
Total	\$ 2,119,213	\$ 2,434,718

6. STOCKHOLDERS' EQUITY

The Company maintains the 2019 Equity Incentive Plan (the "2019 Plan"). The 2019 Plan replaced the 1995 Incentive Stock Option Plan (the "1995 Plan") upon its ratification by shareholders in April 2019. The 1995 plan authorized the issuance of up to 442,750 shares of common stock through grants of restricted stock units and options. Of those shares, 5,000 were subject to outstanding options as of December 31, 2020. Awards granted under the 1995 Plan will remain in effect until they are exercised or expire according to their terms. At the time the 2019 Plan was approved, there were 102,157 shares reserved for future grants under the 1995 Plan which will no longer be available for future grants.

Under the terms of the 2019 Plan, the number of shares of common stock that may be the subject of awards and issued under the 2019 Plan was initially set at 102,157. Subsequent to the approval of the 2019 Plan, 11,750 outstanding options granted under the 1995 Plan were forfeited. Under the terms of the 2019 Plan, those forfeited options are added back to the 2019 Plan reserve pool. As of December 31, 2020, 54,300 restricted stock units (RSUs) and 13,250 options have been granted under the 2019 Plan, of which 750 stock options have been forfeited, bringing the number of shares of common stock available for future awards under the 2019 Plan to 47,107.

The Company charged compensation expense of \$22,000 and \$9,000 against the loss in 2020 and 2019, respectively.

As of December 31, 2020, there was approximately \$348,000 of unrecognized compensation expense related to unvested share-based compensation awards granted which is expected to be recognized over the next three years.

No stock options were exercised in 2020 or 2019

The fair value of options granted was estimated using the Black-Scholes option pricing model with the following assumptions:

	2020	2019
Dividend yield	0	0
Expected volatility	40.3%	37.5%
Expected life of option (years)	10	5
Risk-free interest rate	1.4%	1.7%
Fair value of each option on grant date	\$2.90	\$2.53

There were 10,000 and 3,250 options granted during 2020 and 2019, respectively.

A summary of the status of the Company's stock option plan as of December 31, 2020 and changes during the year then ended is presented below:

	Shares	Weighted Average Exercise Price
Outstanding at January 1, 2020	19,250	\$ 11.32
Granted	10,000	5.67
Exercised	—	—
Expired and forfeited	(11,750)	12.99
Outstanding at December 31, 2020	17,500	\$ 6.97
Exercisable at December 31, 2020	5,332	\$ 9.19

There were 54,300 RSUs granted in 2020. The shares underlying the awards were assigned a weighted average value of \$6.11 per share, which was the closing price of the Company's common stock on the date of grants. These awards are scheduled to vest over three years. No RSUs were granted in 2019 to employees.

RSU activity during the year ended December 31, 2020 is summarized as follows:

	Number of Shares	Weighted Average Grant Date Fair Value
Unvested shares at January 1, 2020	—	—
Granted	54,300	\$ 6.11
Vested	—	—
Forfeited or surrendered	—	—
Unvested shares at December 31, 2020	54,300	6.11

In 2017, the Company's board of directors had authorized the repurchase of 100,000 shares of common stock. A total of 33,500 shares have been repurchased under this program in prior years. On April 29, 2019 the Company's board of directors approved an additional repurchase authorization of 33,500 shares of the Company's common stock bringing the total repurchase authorization to 100,000 shares of common stock. A total of 40,699 shares have been repurchased under this program including the 7,199 shares repurchased during 2019. As of December 31, 2020, 92,801 shares were authorized to be repurchased under the plan. The share repurchase authorizations do not have an expiration date and there were no repurchases of common stock in 2020.

7. LONG-TERM DEBT

Duluth Economic Development Authority Loan

On April 1, 2016, the Company entered into a financing agreement (the "Financing Agreement") under which the Duluth Economic Development Authority (the "Issuer") agreed to sell \$3,415,000 of its Tax Exempt Industrial Revenue Bonds, Series 2016 (IKONICS Project) (the "Bonds") to Wells Fargo Bank, National Association (the "Bank"), and the Bank agreed to lend to the Company the proceeds received from the sale of the Bonds (the "Loan"). The closing of the sale of the Bonds occurred on April 29, 2016. The proceeds from the Loan were used to finance the construction of a 27,300-square foot building as well as related equipment for use in the Company's manufacture of sound deadening technology used in the aerospace industry and products consisting of etched composites, ceramics, glass and silicon wafers, to be located in Duluth, Minnesota (the "Project"). The Loan requires monthly payments of approximately \$18,000, including interest. The Loan bears interest at a rate of 2.60% per year, subject to change based upon changes to the maximum federal corporate tax rate. Including debt costs of approximately \$139,000, the Loan's effective interest rate was 3.23% at December 31, 2020.

The Company is subject to certain customary covenants set forth in the associated covenant agreement, including a requirement that the Company maintain a debt service coverage ratio of not less than 1.25 to 1.00.

The Loan is subject to mandatory purchase provisions, under which any owners of the Bonds (the "Owners") may tender the Bonds to the Issuer on April 1, 2021, which would result in the Company repaying the outstanding loan principal and any outstanding accrued and unpaid interest to the Issuer at that time. If in the event the Bonds are not repurchased on April 1, 2021, the Bonds shall be subject to the interest rate and redemption provisions set forth in the associated covenant agreement. Subsequent to December 31, 2020 the Company was informed that the bank will recall the loan and require the Company to repay the outstanding principal and any outstanding accrued and unpaid interest on April 1, 2021. As of December 31, 2020, the Company reclassified the entire Loan from long-term debt to current liability.

The remaining principal payments required under the agreement for years ended December 31, and the current and long-term portion of the principal, are as follows:

2021	2,773,000
Less: Unamortized debt issuance costs	85,000
Less: Current portion	2,688,000
Long-term portion	\$ —

In connection with the agreement, the Company incurred debt issuance costs of approximately \$139,000 during 2016, which were deferred and are being amortized over the term of the Financing Agreement. Amortization of debt issuance costs was approximately \$11,000 for 2020 and 2019 and is included in interest expense. Debt issuance costs of \$85,000 are netted against long-term debt and current portion of long-term debt, respectively as of December 31, 2020 and 2019. The entire \$85,000 of unamortized debt costs will be expensed when the loan is repaid in 2021.

Paycheck Protection Program Loan

On April 18, 2020, Company entered into a loan pursuant to the Paycheck Protection Program under the CARES Act, as administered by the U.S. Small Business Administration (the "SBA"). The loan, in the principal amount of \$1,214,500 (the "PPP Loan"), was disbursed by BMO Harris Bank National Association ("Lender") on April 22, 2020, pursuant to a Paycheck Protection Program Promissory Note and Agreement (the "Note and Agreement").

Under the CARES Act, loan forgiveness is available for the sum of documented payroll costs, covered rent payments, and covered utilities during an eight or twenty four-week period beginning on the approval date of the PPP Loan. For purposes of the CARES Act, payroll costs exclude compensation of an individual employee earning more than \$100,000, prorated annually. Not more than 40% of the forgiven amount may be for non-payroll costs. Forgiveness is reduced if full-time headcount declines, or if salaries and wages for employees with salaries of \$100,000 or less annually are reduced by more than 25%. During the fourth quarter of 2020, the Company submitted an application for 100% forgiveness of the PPP Loan. Prior to end of 2020, both the lender and the SBA forgave 100% of the Company's PPP loan.

The Company accounts for the PPP Loan as debt in accordance with Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 470, Debt and accrues interest in accordance with the interest method under FASB ASC 835-30. When the loan was forgiven, the Company reduced the liability by the amount forgiven and recorded a gain on extinguishment in the statement of operations.

Line of Credit

The Company also has a bank line of credit providing for borrowings of up to \$2,050,000 which expires on August 30, 2021 and bears interest at 1.8 percentage points over the 30-day LIBOR rate. The Company did not utilize this line of credit during 2020 or 2019 and there were no borrowings outstanding as of December 31, 2020 or 2019. There are no financial covenants related to the line of credit, and the Company expects that it will secure a similar line of credit when the current line of credit expires.

Both the Duluth Development Authority Loan and the line of credit are collateralized by substantially all assets of the Company.

8. CHIEF EXECUTIVE OFFICER TRANSITION

On January 7, 2020, Mr. Ulland formally announced his retirement as President and Chief Executive Officer of the Company, effective February 10, 2020. Mr. Ulland will continue to serve as Chairman of the Board. On January 7, 2020, the Company also announced that Glenn Sandgren has been appointed to the position of Chief Executive Officer effective February 10, 2020. Mr. Sandgren has also been appointed to the Board of Directors of the Company, also effective February 10, 2020. The Company incurred one-time costs of approximately \$365,000 in 2020 related to the Chief Executive officer transition including severance payments, signing bonus, relocation expenses and executive search consulting expenses.

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

None.

Item 9A. Controls and Procedures

Disclosure Controls and Procedures. As of December 31, 2020, an evaluation was carried out under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934 (the “Exchange Act”). Based upon that evaluation, the Chief Executive Officer and the Chief Financial Officer concluded that the design and operation of these disclosure controls and procedures were effective to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in applicable rules and forms.

Management’s Annual Report on Internal Control Over Financial Reporting. Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Our internal control system is designed to provide reasonable assurance to our management and board of directors regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Our internal control over financial reporting includes those policies and procedures that:

- Pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company;
- 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
- 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.

Management assessed the effectiveness of our internal control over financial reporting as of December 31, 2020. In making this assessment, management used the 2013 criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control — Integrated Framework*. Based on management’s assessment and those criteria, management believes that, as of December 31, 2020, the Company maintained effective internal control over financial reporting.

This annual report does not include an attestation report of the Company’s registered public accounting firm regarding internal control over financial reporting. Our management’s report of the effectiveness on the design and operation of our internal control over financial reporting 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.

Changes in Internal Control Over Financial Reporting. As of the end of the period covered by this report, the Company conducted an evaluation, under the supervision and with the participation of the principal executive officer and principal financial officer, of the Company’s disclosure control and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934 (the “Exchange Act”). Based on this evaluation, the principal executive officer and principal financial officer concluded that the Company’s disclosure controls and procedures are effective to ensure that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is (i) recorded, processed, summarized and reported within the time periods specified in SEC rules and forms and (ii) accumulated and communicated to the Company’s management, including its principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure.

There was no change in the Company’s internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) and Rule 15d-15(d) of the Exchange Act that occurred during the period covered by this report and that has materially affected, or is reasonably likely to materially affect, the Company’s internal control over financial reporting.

Item 9B. Other Information

None.

PART III

Item 10. Directors and Executive Officers of the Registrant

The information to be included in the Company's definitive proxy statement for the 2021 Annual Meeting of Shareholders under the captions "Election of Directors," "Executive Officers" and "Delinquent Section 16(a) Reports" is incorporated by reference. The following information completes the Company's response to this Item 10.

The Company has adopted a code of ethics that applies to the Company's Chief Executive Officer, Chief Financial Officer, and other employees performing similar functions. A copy of this code of ethics is available on the Company's website at www.ikonics.com under the "Investor Relations" caption. The Company intends to satisfy the disclosure requirement under Item 5.05 of Form 8-K regarding an amendment to, or a waiver from, this code of ethics by posting such information on its web site which is located at www.ikonics.com.

Item 11. Executive Compensation

The information to be included in the Company's definitive proxy statement for the 2021 Annual Meeting of Shareholders under the captions "Election of Directors—Director Compensation," "Summary Compensation Table," "Outstanding Equity Awards at Fiscal Year-End" and "Employment Contracts; Termination of Employment and Change-In-Control Arrangements" is incorporated by reference.

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

The information to be included in the Company's definitive proxy statement for the 2021 Annual Meeting of Shareholders under the captions "Security Ownership of Principal Shareholders and Management" and "Equity Compensation Plan Information" is incorporated by reference.

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

The information to be included in the Company's definitive proxy statement for the 2021 Annual Meeting of Shareholders under the caption "Election of Directors" is incorporated by reference. The Company has not engaged in any transaction since the beginning of its last fiscal year and does not currently propose to engage in any transaction required to be disclosed pursuant to Item 404 of Regulation S-K.

Item 14. Principal Accountant Fees and Services

The information to be included in the Company's definitive proxy statement for the 2021 Annual Meeting of Shareholders under the caption "Principal Accounting Firm Fees" is incorporated by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a)(1) The following financial statements of the Company are filed as part of this Annual Report on Form 10-K;

- (i) Report of RSM US LLP, independent registered public accounting firm
- (ii) Balance Sheets as of December 31, 2020 and 2019
- (iii) Statements of Operations for the years ended December 31, 2020 and 2019
- (iv) Statements of Stockholders' Equity for the years ended December 31, 2020 and 2019
- (v) Statements of Cash Flows for the years ended December 31, 2020 and 2019
- (vi) Notes to the Financial Statements

(b) The following exhibits are filed as part of this Annual Report on Form 10-K for the fiscal year ended December 31, 2020:

Exhibit	Description
3.1	Restated Articles of Incorporation of Company, as amended. (Incorporated by reference to the like numbered Exhibit to the Company's Registration Statement on Form 10-SB filed with the Commission on April 7, 1999 (Registration No. 000-25727)).
3.2	Amended and Restated By-Laws of the Company, as amended. (Incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on April 30, 2018 (File No. 000-25757)).
4.1	Specimen of Common Stock Certificate. (Incorporated by reference to the like numbered Exhibit to Amendment No. 1 to the Company's Registration Statement on Form 10-SB filed with the Commission on May 26, 1999 (Registration No. 000-25727)).
4.2	Description of Capital Stock
10.1*	IKONICS Corporation 1995 Stock Incentive Plan, as amended. (Incorporated by reference to the like numbered Exhibit to the Company's Annual Report on Form 10-K filed with the Commission on March 3, 2011 (File No. 000-25727)).
10.2	Confidentiality Agreement, dated March 11, 2013, between the Company and Joseph R. Nerges. (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the Commission on March 13, 2013 (File No. 000-25727)).
10.3*	IKONICS Corporation 2019 Equity Incentive Plan (Incorporated by reference to Exhibit 99 to the Company's Registration Statement on Form S-8 filed with the Commission on May 13, 2019 (Registration No. 333-231426)).
10.4	Form of Non-Qualified Stock Option Agreement (for grants under the IKONICS Corporation 2019 Equity Incentive Plan) (Incorporated by reference to Exhibit 10.4 to the Company's Annual Report on Form 10-K filed with the Commission on March 3, 2020).
10.5*	Transition Agreement, dated January 7, 2020, between the Company and William C. Ulland (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the Commission on January 9, 2020)
10.6*	Employment Agreement, dated January 7, 2020, between the Company and Glenn Sandgren (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed with the Commission on January 9, 2020).
10.7	Promissory Note dated April 18, 2020, issued by the Company, as Borrower, payable to BMO Harris Bank National Association, as Lender (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on April 22, 2020 (File No. 000-25757)).
10.8	Form of Restricted Stock Unit Award Agreement under the IKONICS Corporation 2019 Equity Incentive Plan (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on December 14, 2020)
23	Consent of Independent Registered Public Accounting Firm.
24	Powers of Attorney.
31.1	Rule 13a-14(a)/15d-14(a) Certifications of CEO.
31.2	Rule 13a-14(a)/15d-14(a) Certifications of CFO.
32	Section 1350 Certifications.
101	Interactive data files pursuant to Rule 405 of Regulation S-T.**

* Management contract or compensatory plan, contract or arrangement required to be filed as an exhibit to this Annual Report on Form 10-K.

** In accordance with Rule 406T of Regulation S-T, the XBRL related information in Exhibit 101 to this Annual Report on Form 10-K is deemed not filed or part of a registration statement or prospectus for purposes of Section 11 or 12 of the Securities Act of 1933, as amended, is deemed not filed for purposes of Section 18 of the Securities and Exchange Act of 1934, as amended, and otherwise is not subject to liability under those sections.

DESCRIPTION OF CAPITAL STOCK

The summary of the general terms and provisions of the capital stock of IKONICS Corporation (the “Company”) set forth below does not purport to be complete and is subject to and qualified by reference to the Company’s Restated Articles of Incorporation, as amended (the “Articles”) and Amended and Restated By-Laws (“By-Laws,” and together with the Articles, the “Charter Documents”), each of which is incorporated herein by reference and attached as an exhibit to the Company’s most recent Annual Report on Form 10-K filed with the Securities and Exchange Commission. For additional information, please read the Company’s Charter Documents and the applicable provisions of the Minnesota Business Corporation Act (the “MBCA”).

Capital Stock

The Company is authorized to issue up to 5,000,000 shares, consisting of 4,750,000 shares of common stock, par value of \$0.10 per share (the “Common Stock”), and 250,000 shares of preferred stock, par value of \$0.10 per share (the “Preferred Stock”). The Preferred Stock may be allotted as and when the Company’s Board of Directors (the “Board”) shall determine, and, under and pursuant to the laws of the State of Minnesota, the Board has the power to fix or alter, from time to time, in respect to shares then unallotted, any or all of the following: the dividend rate; the redemption price; the liquidation price; the conversion rights and the sinking or purchase fund rights of shares of any class, or of any series of any class.

Voting Rights

Each shareholder of record shares of Common Stock is entitled to one vote for each share of Common Stock held on all matters submitted to a vote of shareholders, including the election of directors. The Articles do not permit cumulative voting in the election of directors or for any purpose whatsoever. Significant corporate transactions, such as amendments to the Articles, mergers, sales of assets and dissolution or liquidation, require approval by the affirmative vote of the majority of the outstanding Common Stock. Other matters to be voted upon by the holders of Common Stock normally require the affirmative vote of a majority of the shares present at the particular shareholders meeting.

Dividends and Other Distributions

Holders of the Common Stock are entitled to receive dividends in the form of cash, property or shares of capital stock of the Company, when and as declared by the Board, provided there are sufficient earnings or surplus legally available for that purpose. All of the issued and outstanding Common Stock are nonassessable.

Liquidation Rights

Upon any liquidation or dissolution of the Company, the holders of shares of Common Stock share ratably, in proportion to the number of shares held, in the assets available for distribution after payment of all prior claims, including all prior claims of any Preferred Stock then outstanding.

No Preemptive Rights

Shareholders of the Company shall have no preemptive rights to acquire securities or rights to purchase securities of the Company.

Anti-Takeover Provisions

The Charter Documents and the MBCA contain certain provisions that may discourage an unsolicited takeover of the Company or make an unsolicited takeover of the Company more difficult. The following are some of the more significant anti-takeover provisions that are applicable to the Company:

Special Meetings of Shareholders; Shareholder Action by Unanimous Written Consent; and Advance Notice of Shareholder Business Proposals and Nominations

The By-Laws provide that special meetings of the shareholders shall be called by the Secretary at any time upon request of the Chairman, President, a Vice President, a majority of the Board of Directors, or upon request by shareholders holding ten percent (10%) or more of the capital stock entitled to vote. Section 302A.441 of the MBCA also provides that action may be taken by shareholders without a meeting only by unanimous written consent. The By-Laws provide an advance written notice procedure with respect to shareholder proposals of business. Shareholders at an annual meeting are able to consider only the proposals specified in the notice of meeting or otherwise brought before the meeting by or at the direction of the Board or by a shareholder that has delivered timely written notice in proper form to the Company's Secretary of the business to be brought before the meeting.

Control Share Provision

Section 302A.671 of the MBCA applies, with certain exceptions, to any acquisition of the Company's voting stock (from a person other than the Company and other than in connection with certain mergers and exchanges to which the Company is a party) resulting in the acquiring person owning 20% or more of its voting stock then outstanding. Section 302A.671 requires approval of any such acquisitions by a majority vote of the Company's shareholders prior to consummation. In general, shares acquired in the absence of such approval are denied voting rights and are redeemable at their then fair market value by the Company within thirty days after the acquiring person has failed to give a timely information statement to the Company or the date the shareholders voted not to grant voting rights to the acquiring person's shares.

Business Combination Provision

Section 302A.673 of the MBCA generally prohibits the Company or any of its subsidiaries from entering into any transaction with a shareholder under which the shareholder purchases 10% or more of the Company's voting shares (an "interested shareholder") within four years following the date the person became an interested shareholder, unless the transaction is approved by a committee of all of the disinterested members of the Board serving before the interested shareholder acquires the shares.

Takeover Offer; Fair Price

Under Section 302A.675 of the MBCA, an offeror may not acquire shares of a publicly held corporation within two years following the last purchase of shares pursuant to a takeover offer with respect to that class, including acquisitions made by purchase, exchange, merger, consolidation, partial or complete liquidation, redemption, reverse stock split, recapitalization, reorganization, or any other similar transaction, unless (i) the acquisition is approved by a committee of the Board's disinterested directors before the purchase of any shares by the offeror pursuant to the earlier takeover offer, or (ii) shareholders are afforded, at the time of the proposed acquisition, a reasonable opportunity to dispose of the shares to the offeror upon substantially equivalent terms as those provided in the earlier takeover offer.

Greenmail Restrictions

Under Section 302A.553 of the MBCA, a corporation is prohibited from buying shares at an above-market price from a greater than 5% shareholder who has held the shares for less than two years unless (i) the purchase is approved by holders of a majority of the outstanding shares entitled to vote or (ii) the corporation makes an equal or better offer to all shareholders for all other shares of that class or series and any other class or series into which they may be converted.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement Nos. 333-231426, 333-92893, 333-129220 and 333-161351, on Forms S-8 of IKONICS Corporation, of our report dated March 3, 2021, relating to the financial statements, appearing in this Annual Report on Form 10-K of IKONICS Corporation for the year ended December 31, 2020.

/s/ RSM US LLP

Minneapolis, Minnesota
March 3, 2021

IKONICS CORPORATION

Powers of Attorney

The undersigned directors of IKONICS Corporation, a Minnesota corporation, do hereby make, constitute and appoint Glenn Sandgren and Jon R. Gerlach, and either of them, the undersigned's true and lawful attorneys-in-fact, with power of substitution, for the undersigned and in the undersigned's name, place and stead, to sign and affix the undersigned's name as such director of said Corporation to an Annual Report on Form 10-K or other applicable form, and all amendments thereto, to be filed by said Corporation with the Securities and Exchange Commission, Washington, D.C., under the Securities Act of 1934, as amended, with all exhibits thereto and other supporting documents, with said Commission, granting unto said attorneys-in-fact, and either of them, full power and authority to do and perform any and all acts necessary or incidental to the performance and execution of the powers herein expressly granted.

IN WITNESS WHEREOF, each of the undersigned have hereunto set their hands as of March 3, 2021.

/s/ William C. Ulland

William C. Ulland

/s/ Jeffrey D. Engbrecht

Jeffrey D. Engrecht

/s/ Gregory W. Jackson

Gregory W. Jackson

/s/ Marianne Bohren

Marianne Bohren

/s/ Ernest M. Harper Jr.

Ernest M. Harper Jr.

/s/ Lockwood Carlson

Lockwood Carlson

/s/ Darrell B. Lee

Darrell B. Lee

/s/ Glenn Sandgren

Glenn Sandgren

RULE 13a-14(a)/15d-14(a) CERTIFICATIONS OF CEO

I, Glenn Sandgren, certify that:

1. I have reviewed this annual report on Form 10-K of IKONICS Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and we have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation;
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 3, 2021

/s/ Glenn Sandgren

Glenn Sandgren
Chief Executive Officer

RULE 13a-14(a)/15d-14(a)/CERTIFICATIONS OF CFO

I, Jon Gerlach, certify that:

1. I have reviewed this annual report on Form 10-K of IKONICS Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and we have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation;
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 3, 2021

/s/ Jon Gerlach
Jon Gerlach
Chief Financial Officer
and Vice President of Finance

SECTION 1350 CERTIFICATIONS

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, each of the undersigned certifies that this periodic report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in this periodic report fairly presents, in all material respects, the financial condition and results of operations of IKONICS Corporation.

Date: March 3, 2021

/s/ Glenn Sandgren
Glenn Sandgren
Chief Executive Officer

Date: March 3, 2021

/s/ Jon Gerlach
Jon Gerlach
Chief Financial Officer
and Vice President of Finance