

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

Form 20-F

REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934

Or

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

For the fiscal year ended December 31, 2019

Or

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

Or

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

Commission File No. 333-206723

P.V. NANO CELL LTD.

(Exact name of Registrant as specified in its charter)

N/A

(Translation of the Registrant's name into English)

State of Israel

(Jurisdiction of incorporation or organization)

8 Hamasger Street, Migdal Ha'Emek, Israel 2310102

(Address of principal executive offices)

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Securities registered or to be registered pursuant to Section 12(b) of the Act: None.

Securities registered or to be registered pursuant to Section 12(g) of the Act: None.

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:
Ordinary Shares, nominal value NIS 0.01 per share

Indicate the number of outstanding ordinary shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report: 24,393,218 ordinary shares, nominal value NIS 0.01 per share, as of December 31, 2019.

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

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. 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 a 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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files). Yes No

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

Large accelerated filer

Accelerated filer

Non-accelerated filer

Emerging growth company

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, 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 which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP

International Financial Reporting Standards
as issued by the International Accounting Standards Board

Other

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the Registrant has elected to follow:
Item 17 Item 18

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

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ABOUT THIS ANNUAL REPORT

All references to “we”, “us”, “our”, “the Company”, “PV Nano”, “our company” and “our Company”, in this Annual Report on Form 20-F, or our annual report, are to P.V. Nano Cell Ltd., unless the context otherwise requires. All references to “Group” in this annual report on Form 20-F, are to the Company and its direct and indirect subsidiaries, unless the context otherwise requires. All references to “shares”, “ordinary shares” or “our ordinary shares” are to our ordinary shares, NIS 0.01 (approximately \$0.003) nominal value per share. All references to “Israel” are to the State of Israel. “U.S. GAAP” means the generally accepted accounting principles in the United States. Unless otherwise stated, all of our financial information presented in this annual report has been prepared in accordance with U.S. GAAP. Any discrepancies in any table between totals and sums of the amounts listed are due to rounding. Unless otherwise indicated, or the context otherwise requires, references in this annual report to financial and operational data for a particular year refer to the fiscal year of our company ended December 31 of that year.

Our reporting currency and financial currency is the U.S. dollar. In this annual report on Form 20-F, “NIS” means New Israeli Shekel, and “\$,” “US\$” and “U.S. dollars” mean United States dollars. Unless stated otherwise, the conversion rate between US\$ to NIS used in this annual report on Form 20-F is 3.456, the conversion rate of the Bank of Israel as of December 31, 2019.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This annual report on Form 20-F contains forward-looking statements, within the meaning of Section 27A of the Securities Act of 1933, and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), that involve risks and uncertainties. All statements other than statements of historical facts contained in this annual report on Form 20-F are forward-looking statements. In some cases, you can identify forward-looking statements by words such as “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “potential,” “predict,” “project,” “seek,” “should,” “will,” “would,” or the negative of these words or other comparable terminology. These forward-looking statements include, but are not limited to, statements about:

- the impact of the coronavirus disease of 2019 (“COVID-19”) pandemic on our business;
- the potential market opportunities for commercializing our current and planned products;
- our expectations regarding the potential market size for our current and planned products;
- estimates of our expenses, future revenue, capital requirements, and our needs for additional financing;
- our ability to develop and advance our current and planned products;
- the implementation of our business model and strategic plans for our business and products, including the integration of our acquisition and the management of growth;
- the scope of protection we are able to establish and maintain for intellectual property rights covering our current and planned products;
- our ability to maintain and establish collaborations or obtain additional funding;
- our financial performance; and
- developments and projections relating to our competitors and our industry.

Any forward-looking statements in this annual report on Form 20-F reflect our current views with respect to future events or to our future financial performance and involve known and unknown risks, uncertainties, and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance, or achievements expressed or implied by these forward-looking statements. Factors that may cause actual results to differ materially from current expectations include, among other things, those listed under “Item 3 D. — Risk Factors” and elsewhere in this annual report on Form 20-F. Given these uncertainties, you should not place undue reliance on these forward-looking statements. Except as required by law, we assume no obligation to update or revise these forward-looking statements for any reason, even if new information becomes available in the future.

This annual report on Form 20-F also contains estimates, projections, and other information concerning our industry, our business, and the markets for our products, including data regarding the estimated size of those markets. Information that is based on estimates, forecasts, projections, market research, or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances reflected in this information. Unless otherwise expressly stated, we obtained this industry, business, market, and other data from reports, research surveys, studies, and similar data prepared by market research firms and other third parties, industry and general publications, government data and similar sources.

PART I

ITEM 1. Identity of Directors, Senior Management and Advisers.

Not applicable.

ITEM 2. Offer Statistics and Expected Timetable.

Not applicable.

ITEM 3. Key Information.

A. Selected Financial Data.

SELECTED FINANCIAL DATA

The following consolidated statements of operations data for the years ended December 31, 2019, 2018 and 2017, and the consolidated balance sheet data as of December 31, 2019 and 2018, is derived from our audited consolidated financial statements included elsewhere in this annual report on Form 20-F. These audited consolidated financial statements have been prepared in accordance with U.S. GAAP. The selected consolidated statement of operations data for years ended December 31, 2016 and 2015, and the selected consolidated balance sheet data as of December 31, 2017, 2016 and 2015, is derived from our previously published audited consolidated financial statements not included in this Form 20-F. The selected consolidated financial data set forth below should be read in conjunction with and are qualified by reference to “Item 5. Operating and Financial Review and Prospects” and the consolidated financial statements and notes thereto and other financial information included elsewhere in this annual report on Form 20-F.

US \$ Consolidated Statement of Operations Data:	Year ended December 31,				
	2019	2018	2017	2016	2015
Revenues	\$ 478,520	\$ 460,739	\$ 88,691	\$ 67,678	\$ 60,740
Other income	-	-	-	10,403	7,592
Total Revenues	478,520	460,739	88,691	78,081	68,332
Cost of Revenues	236,493	388,265	94,238	78,622	69,051
Amortization of intangible assets	428,431	470,773	37,694	-	-
Gross loss	186,404	398,299	43,241	541	719
Research and development, net	731,201	775,643	404,891	632,826	720,997
Sales and marketing	673,983	550,008	480,963	336,287	245,756
General and administrative	1,319,239	1,297,711	1,227,632	571,110	807,277
Goodwill impairment	-	161,381	-	-	-
Acquisition related costs	-	-	750,956	-	-
Total operating expenses	2,724,243	2,784,743	2,864,442	1,540,223	1,774,030
Operating loss	2,910,647	3,183,042	2,907,683	1,540,764	1,774,749
Financial expenses (income), net	1,042,358	(1,210,484)	(63,778)	80,636	(1,094)
Net loss	\$ 3,953,005	\$ 1,972,558	\$ 2,843,905	\$ 1,621,400	\$ 1,773,655
<i>Basic and diluted net loss per ordinary share</i>	\$ 0.16	\$ 0.09	\$ 0.19	\$ 0.12	\$ 0.14
<i>Weighted average number of ordinary shares used in computing basic and diluted net loss per ordinary share</i>	24,071,186	23,142,850	15,249,948	13,704,673	12,745,710

US \$ Consolidated Balance Sheets Data:	December 31,				
	2019	2018	2017	2016	2015
Current assets	\$ 433,746	\$ 478,753	\$ 703,211	\$ 335,798	\$ 226,717
Non-current assets	6,667,765	7,148,582	7,911,806	400,992	217,794
Total assets	7,101,511	7,627,335	8,615,017	736,790	444,511
Total liabilities	8,095,800	4,924,186	5,812,297	2,641,009	2,100,092
Total stockholders' equity (deficit)	\$ (994,289)	\$ 2,703,149	\$ 2,802,720	\$ (1,904,219)	\$ (1,655,581)

B. Capitalization and Indebtedness

Not applicable.

C. Reasons for the Offer and Use of Proceeds

Not applicable.

D. Risk Factors

Risks Related to Our Financial Position and Capital Requirements

We have a relatively limited operating history on which to assess our business, have incurred significant losses since our inception, and anticipate that we will continue to incur significant losses for the foreseeable future.

We have a limited operating history. We have incurred net losses since our inception in 2009, including a net loss of approximately \$4.0 million for the year ended on December 31, 2019 and an accumulated deficit of approximately \$21.0 million as of December 31, 2019. To date, we have financed our operations primarily through the issuance of equity instruments and convertible notes as well as through government grants. The amount of our future net losses will depend, in part, on the rate of our future expenditures and our ability to generate significant revenues via commercialization of our products or technologies. We do not know whether or when we will become profitable. Even if we do achieve profitability, we may not be able to sustain or increase profitability on an ongoing basis. Our inability to achieve and then maintain profitability would negatively affect our business, financial condition, results of operations and cash flows.

Our history of net losses has raised substantial doubt regarding our ability to continue as a going concern. If we do not continue as a going concern, investors could lose their entire investment.

We generated relatively limited revenues, which are not presently sufficient to sustain our operations. Our total revenues generated from sales were \$478,520, \$460,739 and \$88,691 for the years ended December 31, 2019, 2018, and 2017, respectively. We have incurred net losses since our inception in 2009, including a net loss of approximately \$4.0 million for the year ended December 31, 2019. As of December 31, 2019, and as of the date of this annual report on Form 20-F we had limited cash resources.

Our history of net losses has raised substantial doubt about our ability to continue as a going concern, and as a result, our independent registered public accounting firm included an explanatory paragraph in its report on our consolidated financial statements as of and for the year ended December 31, 2019 with respect to this uncertainty. We believe that we will need to raise significant additional funds before we have significant cash flow from operations. Accordingly, our ability to continue as a going concern will require us to seek alternative financing to fund our operations. The substantial doubt about our ability to continue as a going concern could materially limit our ability to raise additional funds through the issuance of new debt or equity securities or otherwise. Future reports on our consolidated financial statements may include an explanatory paragraph with respect to our ability to continue as a going concern.

We will need significant additional capital, which we may be unable to obtain.

As of December 31, 2019, we had cash reserves of \$34,382. As of December 31, 2020, we had sufficient cash to fund operations for approximately two (2) months if we do not raise additional capital. We will need to raise additional capital to continue our operations beyond such period, or earlier if we change our current strategy or operating plan. There can be no assurance that additional funds will be available when needed from any source or, if available, will be available on terms that are acceptable to us. We may be required to pursue sources of additional capital through various means, including debt or equity financings. Future financings through equity investments are likely to be dilutive to existing shareholders. Furthermore, the terms of securities we may issue in future capital transactions may be more favorable for our new investors. Newly issued securities may include preferences, superior voting rights, the issuance of warrants or other derivative securities, and the issuances of incentive awards under equity employee incentive plans, which may have additional dilutive effects. Further, we may incur substantial costs in pursuing future capital and/or financing, including finder fees, investment banking fees, legal fees, accounting fees, printing and distribution expenses and other costs. We may also be required to recognize non-cash expenses in connection with certain securities we may issue, such as convertible notes and warrants, which will adversely impact our financial condition. Our ability to obtain needed financing may be impaired by such factors as the capital markets and our history of losses, which could impact the availability or cost of future financings. If the amount of capital we are able to raise from financing activities, together with our revenues from operations, is not sufficient to satisfy our capital needs, even to the extent that we reduce our operations accordingly, we may be required to cease operations.

Risks Relating to COVID-19

The global COVID-19 pandemic may continue to negatively impact the global economy in a significant manner for a further extended period of time, and may also adversely affect our operating results in a material manner.

The coronavirus pandemic has created macro-economic uncertainty and disruption in the business and financial markets. Many countries around the world, including Israel, have been taking measures designated to limit the continued spread of the coronavirus, including closing workplaces, restricting travel, prohibiting assembling, closing international borders and quarantining populated areas. These measures have impacted, and may further impact, our workforce and operations, the operations of our customers and our partners, and those of our respective vendors and suppliers (including our subcontractors and third-party contract manufacturers). Our customers worldwide, as well as the end markets that we support have also been affected and may continue to be affected by coronavirus-related implications, and may recover at different rates. In addition, as the implementation of the above-mentioned measures extends, and as additional measures may be required in the event that the measures already taken prove to be insufficient or ineffective, we may face new and/or increasing concerns that may dramatically affect our ability to conduct our business effectively, including, but not limited to, adverse effect on employees' health, a slowdown and stoppage of manufacturing, commerce, delivery, work, travel and other activities which are essential and critical for maintaining on-going business activities.

During 2020, due to COVID-19 constraints, we have had to adjust our working mode (mainly changing working hours and make sure the Company complies with the government guidelines which have included full and partial lockdowns). While our business grew in 2020, our growth has been limited (sales grew less than expected) due to slow down of our customers and partners, and also due to traveling constraints imposed by governments due to COVID-19. Two of our main customers have purchased inks and services from us much less than forecasted and expected. Our plans to upgrade our DemonJet printers, develop the inks and technologies to print passive components have been slowed down due to the reduction of activities of our partners in Europe and reduced available resources. We have placed one of our employees on unpaid leave and reduced the team by two team members. Furthermore, due to the influence of COVID-19 on the world economy, the price of silvers (our main raw material) have increased by almost 50% from January 2019 through December 2020. Given the continued uncertainty around the extent and timing of the future spread or mitigation of the coronavirus outbreak and around the imposition or relaxation of protective measures, we cannot reasonably estimate the impact to our future results of operations, cash flows or financial condition. The extent of the impact of the COVID-19 pandemic on our operational and financial performance, including our ability to execute our business strategies and initiatives in the expected time frame, will depend on future developments, including, but not limited to, the duration and continued spread of the pandemic, its severity, the actions to contain the disease or treat its impact, further related restrictions on travel, and the duration, timing and severity of the impact on customer spending, including any recession resulting from the pandemic, all of which are uncertain and cannot be predicted. An extended period of global supply chain and economic disruption as a result of the COVID-19 pandemic could have a material adverse effect on our business, results of operations, access to sources of liquidity and financial condition, though the full extent and duration is uncertain; infections may become more widespread and the limitation on our ability to work, travel and timely sell and distribute our products, as well as any closures or supply disruptions, may be extended for longer periods of time and to other locations, all of which would have a negative impact on our business, financial condition and operating results. In addition, as the scale and duration of these developments remain uncertain, they may have, or continue to have, macro and micro negative effects on the financial markets and global economy, which could result in an economic downturn that could affect demand for our products and have a material adverse effect on our operations and financial results, earnings, cash flow, financial condition and share price. These effects could be material and long-term in duration.

Since the outbreak of the coronavirus pandemic, we have been closely monitoring the developments and continually assessing the potential impact on our business. Below are some of the risks and challenges that we may face as a result of the continuation of the coronavirus pandemic for a further extended period of time:

- Economic downturn, slowdown of macro-economic development, and a significant decline of business, which could harm the strength of the worldwide electronics industry in general and the digital printed electronics, solar cells and panels, PCB and automotive industries in particular. Such downturn or slowdown could affect demand for our customers' end products and as a result may cause manufacturers in the semiconductor industry to suspend or reduce capital investments in our products for use in their manufacturing processes, and decrease our sales of products and related services to such industry;
- Material reduction in new orders and in procurement of our products, issuance of work stoppage orders or delay in the award of new orders on part of our customers;

- Disruptions or restrictions on our operations and those of our contractors and customers, including on our ability to travel or to install or provide services to our products, as well as temporary closures of our facility or the facilities of our suppliers, manufacturers or customers, and prohibitions on the export, import or release from customs of products and components;
- Lower work efficiency, productivity and service quality. COVID-19 infection could harm the health of one or more of our employees, which could in turn require us to completely shut down all, or almost all, work in our facility in order to prevent further infection and spread of the virus. Some of our team members have not been able to work for a long period due to lockups and/or been infected with COVID-19;
- Disruption, reduction or interruption in supply, disruption to our suppliers, manufacturers or customers and their other vendors, lack or delay in the supply of raw materials and goods, or in the performance of work or services by our contractors and subcontractors;
- Slowdown in production and manufacturing, and a significant increase in the price of one or more components or materials;
- Imposition of fines, penalties, damages and contract terminations (including the exercise of certain force majeure clauses), and damage to our reputation and relationship with our customers, as a result of delays in production, shipment, deliveries and services due to any of the above constraints;
- Financial difficulties and insolvencies of major customers, which could lead to slowing the payment of their obligations to us or even discharging those obligations;
- Difficulties in collection of amounts due from customers and in satisfying revenue recognition procedures; And
- Continuation of traveling constrains imposed due to COVID-19 virus.

Risks Related to Our Business

We have generated only minimal revenue from product sales and may never be profitable.

We have generated only minimal revenue in the past, from limited sales of our Sicrys™ inks. The contribution of our subsidiary Digiflex Ltd. or Digiflex, to our revenues for the year ended December 31, 2019 was limited to the sale of inks, foils and maintenance of the 45 printers sold since inception (two (2) printers were sold in the following year). Our ability to generate revenue and achieve profitability depends on our ability to successfully commercialize our Sicrys™ inks, Digiflex printers for the conductive and printed passive components market and future products and technologies. Our ability to generate revenues will also depend on (i) our ability to modify and bring to market Digiflex printers so we will be able to serve the electronics market and to use our Sicrys™ inks; and (ii) our ability to adapt Digiflex's inks and/or develop additional inks to allow for the printing of full printed circuit boards, embedded passive components or PCBs. There is no assurance that we will be successful in any of these endeavors.

Our ability to generate future revenue from product sales depends heavily on our success in many areas, including but not limited to:

- obtaining market acceptance of our products and technologies;
- implementing our Complete Solution Approach or End-to-End Approach;
- expanding our distribution channels, including our ability to enter into cooperation arrangements with printer manufacturers to be able to supply printers to our potential customers;
- ramping up our production capabilities if and when our sales volume increases;
- maintaining, protecting, and expanding our portfolio of intellectual property rights, including patents, trade secrets, and know-how;
- identifying, assessing, acquiring and/or developing new products and technologies;

- addressing any competing technological and market developments; and
- attracting, hiring, and retaining qualified personnel.

If our conductive inks and Digiflex printers fail to achieve and sustain sufficient market acceptance or if market penetration occurs more slowly than expected, our future revenues will be adversely affected.

Our success depends, in large part, on our ability to gain additional market acceptance of our Sicrys™ inks and Digiflex printers as a reliable and cost-saving alternative to existing production technologies. Compared to some competing technologies, our nano-metric conductive ink technology is relatively new, and most potential customers have limited knowledge of, or experience with, our conductive inks, may have substantial investments and know-how related to their existing printing technologies, and may perceive risks relating to the reliability, quality, usefulness and profitability of adopting our conductive inks when compared to other production technologies available in the market. Our potential customers may also need to devote significant time and effort to testing and validating our technology prior to its adoption. Any failure of our technology to meet our potential customer benchmarks could result in customers choosing to retain their existing technology or to purchase technologies other than ours. If we fail to achieve market acceptance of our conductive inks or if market penetration is slower than expected, then our opportunities to grow our revenues and reach profitability will be severely limited. In addition, our success depends on our ability to implement our Complete Solution Approach or End-to-End Approach (providing customers with the whole system of printers, process and inks), and gain market acceptance of Digiflex printers. There is no assurance that we will succeed in any of the foregoing.

Our ink products may not be compatible with all commercially available printers and printer heads.

Printer heads generally require compatible inks. An ink may be incompatible for use with a particular printer head for a number of reasons, including, without limitations, because the chemicals used in the ink are not compatible with the materials used in the manufacture of the printer head or because the physical properties of the ink (e.g., viscosity, surface tension, etc.) are not compatible with the printer head. As a result, there can be no assurance that our inks will be compatible with additional sufficient number of printer heads, to support wide scale sales of our inks for digital inkjet printing. Although we have successfully certified our ink with several manufacturers of commercially available printers and printer heads and we are in the process of certifying our ink products with additional manufacturers, if we are unable to certify our ink products with a sufficient number of such manufacturers our ability to widely market our ink products and to gain market penetration will be impaired and we may be unable to generate additional revenues.

Given our limited resources, there is no assurance that we will be able to enter into additional contracts or comply with our existing contracts.

We have several customers which have started to purchase recurring growing amounts of inks, including Dip Tech Ltd (with which we had an exclusive agreement which was terminated by us in 2020). There is no assurance that these customers will continue to purchase inks from us and that we will successfully enter into additional contracts. In addition, there is no assurance that we will be able to produce and supply all the ink required to satisfy all orders under our current or future supply contracts.

We currently have minimal marketing and sales capabilities. If we are unable to establish significant sales and marketing capabilities or enter into agreements with third parties to market and sell our products, we may be unable to generate significant revenue.

We have limited experience and capabilities in selling and marketing our conductive inks and our marketing and sales efforts are currently being led primarily by our chief executive officer and chief business development officer. In order to successfully commercialize our Sicrys™ inks or any other products, we will need to either further develop these capabilities on our own or by collaboration with third party distributors and sales agents with established sales and marketing operations and industry experience. We have entered into distribution and sales agreements with respect to the United States, Italy and Japan. However, there can be no assurance that we will be able to enter into other agreements with such third-party distribution and sales agents agreements on terms acceptable to us, or at all, or that such distributors or sales agents will be successful in marketing our inks. If we are not successful entering into such agreement our results of operation may be adversely affected.

Our ability to grow our business successfully depends, among other things, on our ability to develop and implement our production and operating infrastructure in a way that would effectively support our growth in our target markets.

We manufacture our inks at our Migdal Ha'Emek facilities. We currently have capacity to produce an estimated two (2) tons of ink per year (three shifts work) and intend to upgrade our facilities (capital cost estimated at \$500,000) to increase production capacity to 20 tons per year, if and when demand for our inks is projected to surpass our production capabilities.

Our future success requires among others that we have adequate capacity in our manufacturing facilities to manufacture the quantities of products to support our current sales level and the anticipated increased levels that may result from our growth. There can be no assurance as to the timing or our ability to achieve planned, needed, or desired manufacturing capacity levels. We believe that the capacity of our current manufacturing facilities is sufficient to meet anticipated demand for our products through the end of 2021. If the demand for our conductive inks does not increase, we may have significant excess manufacturing capacity and under-absorption of our fixed costs, which could in turn adversely affect our gross margins. In the event that demand for our inks outgrows our internal manufacturing capacity, we intend to engage third-party manufacturers to produce additional inks. There can be no assurance that we will be able to enter into agreements with such manufacturers on terms acceptable to us, or at all, or that, once contracted, such manufacturers will perform as expected. If we are not successful entering into such agreement our results of operation may be adversely affected.

We are subject to a multitude of manufacturing risks, any of which could substantially increase our costs and limit supply of our products and technologies.

We currently only have one operating manufacturing line. The process of manufacturing our products and technologies is complex and subject to several risks and uncertainties, including but not limited to availability and prices of the raw materials (including silver in particular) necessary for production of our inks, and any major malfunctions in our manufacturing line. Any adverse developments affecting manufacturing operations for our products and technologies may result in shipment delays, inventory shortages, lot failures, withdrawals or recalls, or other interruptions in the supply of our products and technologies. We may also have to take inventory write-offs and incur other charges and expenses for products and technologies that fail to meet specifications, undertake costly remediation efforts, or seek more costly manufacturing alternatives.

We are subject to risks resulting from fluctuations in the price of silver.

The manufacturing process for our silver-based inks utilizes a silver salt, the price of which is linked to the price of silver. The price of silver is affected by numerous factors beyond our control, including inflation, fluctuation of the United States dollar and foreign currencies, global and regional demand, speculative activities by commodities traders and others and the political and economic conditions of major silver producing countries throughout the world, and recently affected by the COVID-19 influence on the world economic environment. The volatility of mineral prices represents a substantial risk which no amount of planning or technical expertise can fully eliminate. In the event silver prices increase and remain high for prolonged periods of time, we may not be able to produce silver-based inks at a price which is cost effective for manufacturers of printed electronics. Furthermore, if the price of silver decreases substantially and remains low for prolonged periods of time, the value proposition that we believe is offered by our copper-based nano-metric ink may be substantially decreased, since a low price of the silver used in their manufacturing processes reduces the incentive for manufacturers of electronic devices to replace silver with another metal, such as copper. Any of the foregoing would have a material adverse effect on our business, financial condition, results of operations, and cash flows.

We are subject to risks resulting from fluctuations in the price of some raw materials.

The manufacturing process for our silver-based inks utilizes a range of raw materials, the prices of which are affected by numerous factors beyond our control, including inflation, fluctuation of the United States dollar and foreign currencies, global and regional demand, and recently affected by the COVID-19 influence on the world economic environment. In the event raw materials prices increase and remain high for prolonged periods of time, we may not be able to produce silver-based inks at a price which is cost effective for manufacturers of printed electronics.

We face competition in the markets in which we operate and the possibility that our competitors may develop products that are similar to, more advanced than, or more effective than ours, which may adversely affect our financial condition and our ability to successfully commercialize our products and technologies.

We are currently aware of various existing products in the market and in development that may compete with our products and technologies, directly and indirectly. To our knowledge, other companies are currently developing and selling silver-based inkjet inks for printed electronics, or PE, digital electronic inkjet printing applications. To our knowledge and feedbacks received from customers most of these products in the market are not suitable and compatible for mass production applications as our inks. There can be no assurance that this knowledge is complete and/or if complete that it will continue to be like this in the future.

We are aware of several companies seeking to develop copper-based inks for printing, however, to our knowledge, none of our competitors has copper-based low viscosity inks in mass production and at a commercially viable price and quantity to be used in digital printing, and some are using copper oxide as a precursor in their inks instead of copper. Copper precursors are less effective for thick patterns and high throughput. To our knowledge, we are the only company offering as much as a 50% copper inkjet low viscosity ink, although we are not yet in mass production. As, to our knowledge, no one has proven our strategy to be effective, there is no assurance that we will be successful and the utilization of 50% copper inkjet ink may not prevail.

Many of our competitors have substantially greater financial, technical, and other resources, such as larger research and development staff and experienced marketing and manufacturing organizations. Mergers and acquisitions in the conductive ink industry may result in even more resources being concentrated in our competitors. As a result, these companies may be more effective in selling and marketing their products. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large, established companies. Competition may increase further as a result of advances in the commercial applicability of technologies and greater availability of capital for investment in this industry. Our competitors may succeed in developing, acquiring, or licensing on an exclusive basis, products that are more effective or less costly than our current or future products or technologies, or achieve earlier patent protection, product commercialization, and market penetration than we do. Additionally, technologies developed by our competitors may render our potential products and technologies uneconomical or obsolete, and we may not be successful in marketing our products and technologies against competitors.

We may not be successful in our efforts to identify, license, or discover additional products and technologies.

Although we intend to focus a substantial amount of our research and development efforts on the continued development and commercialization of our existing products and technologies, the success of our business also depends upon our ability to identify, license, or discover additional products and technologies. Given our limited resources it would be difficult to license or otherwise begin development of additional products. Our research programs or licensing efforts may fail to yield additional products and technologies for development for a number of reasons, including but not limited to the following:

- our research or business development methodology or search criteria and process may be unsuccessful in identifying potential products and technologies;
- we may not be able or willing to assemble sufficient resources to acquire or discover additional products and technologies;
- products and technologies we develop may be covered by third parties' patents or other exclusive rights;
- our products and technologies may not succeed in testing;
- our potential products and technologies may have characteristics that make them unmarketable;
- competitors may develop alternatives that render our products and technologies obsolete or less attractive;
- the market for a product may change during our program so that such a product becomes unreasonable to continue to develop;
- a product may not be capable of being produced in commercial quantities at an acceptable cost, or at all; and
- our products and technologies may not succeed in testing.

If any of these events occurs, we may be forced to abandon our development efforts for a program or programs, or we may not be able to identify, license, or discover additional products and technologies, which would have a material adverse effect on our business. Research programs to identify new products and technologies require substantial technical, financial, and human resources. We may focus our efforts and resources on potential programs or products and technologies that ultimately prove to be unsuccessful.

International expansion of our business exposes us to business, regulatory, political, operational, financial, and economic risks associated with doing business outside of Israel.

Our headquarters are located in Israel and we have an active subsidiary in the United States. Nevertheless, our business strategy incorporates potentially significant international expansion. Doing business internationally involves a number of risks, including but not limited to:

- multiple, conflicting, and changing laws and regulations such as privacy regulations, tax laws, export and import restrictions, employment laws, regulatory requirements, and other governmental approvals, permits, and licenses;
- complexities and difficulties in obtaining protection for and enforcing our intellectual property rights;
- difficulties in staffing and managing foreign operations;
- limitations in our ability to penetrate international markets;
- financial risks, such as longer payment cycles, difficulty collecting accounts receivable, the impact of local and regional financial crises on demand and payment for our products, and exposure to foreign currency exchange rate fluctuations;
- changes in foreign regulations and customs;
- changes in currency exchange rates and currency controls;
- changes in a specific country's or region's political or economic environment;
- natural disasters, wars, terrorism, outbreak of disease, boycotts, curtailment of trade, and other business restrictions;
- certain expenses including, among others, expenses for travel, translation, and insurance; and
- certain countries' regulations (e.g. China) make it difficult for us to import our inks into such countries.

Any of these factors could significantly harm our future international expansion and operations and, consequently, our results of operations.

The health effects of nanotechnology are unknown.

There is no scientific agreement on the health effects of nanomaterials, but some scientists believe that, in some cases, nanomaterials may be hazardous to an individual's health or the environment. The science of nanotechnology is based on arranging atoms in such a way as to modify or build materials. Depending on the nanomaterials used, the resulting material may not be found in nature; therefore, the effects are unknown. Our technologies are based on nanometals that are, at most times, dispersed in a liquid minimizing the exposures risks. Moreover, once the metal particles have been printed and sintered they are no longer nanometals, therefore lowering exposure risks. Although, we take appropriate precautions for employees working with our materials and believe that any health risks related to the nanometals used in potential products can be minimized, we cannot assure that such precautions will be effective. Future research in the field of nanomaterials, in general, on health and environmental issues may have an adverse effect on products using our technology.

Public perceptions of ethical and social issues may discourage the use of nanotechnology.

Nanotechnology has received both positive and negative publicity and is the subject of public discussion and debate. Governments and regulatory bodies may, for social or health purposes, prohibit or regulate the use of nanotechnology. This may restrict our ability to license our technology, or the ability of our future licensees (if any) to sell products.

Our future success depends in part on our ability to retain our Chief Executive Officer and to attract, retain, and motivate other qualified personnel.

We are highly dependent on Dr. Fernando de la Vega, our co-founder and chief executive officer, and the loss of his services without proper replacements would adversely impact the achievement of our objectives. Under the terms of his services agreement with us, Dr. de la Vega may cease providing services to us at any time by providing three (3) months' prior written notice. Recruiting and retaining another chief executive officer and other qualified employees, consultants, and advisors for our business, including scientific and technical personnel, will also be critical to our success. We may not be able to attract and retain personnel on acceptable terms given the competition among numerous high-tech companies for individuals with similar skill sets. The inability to recruit and retain qualified personnel, or the loss of the services of Dr. de la Vega without proper replacement, may impede the progress of our research, development, and commercialization objectives.

If we fail to comply with environmental, health and safety laws and regulations, we could become subject to fines or penalties or incur costs that could have a material adverse effect on the success of our business.

We are subject to numerous environmental, health and safety laws, regulations and permitting requirements mainly in Israel, including those governing the emission and discharge of hazardous materials into ground, air or water; the generation, storage, use, management and disposal of hazardous waste; the registration of chemicals and in the future also import and export of chemicals; the clean-up of contaminated sites; and the health and safety of our employees. We expect to be subject to similar regulations in any other jurisdictions in which we may establish manufacturing operations in the future. Some of these laws and regulations require us to obtain licenses or permits to conduct our operations. Environmental laws and regulations are complex, change frequently and have tended to become more stringent over time. If we violate or fail to comply with these laws, regulations, licenses or permits, we could be fined or otherwise sanctioned by regulators. We cannot predict the impact on our business of new or amended laws or regulations or any changes in the way existing and future laws and regulations are interpreted or enforced, nor can we ensure we will be able to obtain or maintain any required licenses or permits.

We are dependent on a license for the additives necessary for the metallization of solar cells.

In order for our inks to be suitable for use in silicon nitride based solar cell metallization processes, we use certain additives in our inks. These additives are not readily commercially available, and we have an exclusive license for these additives from the Fraunhofer Institute, IKTS, or IKTS, in Germany, which developed them especially for our inks. Pursuant to the license, IKTS has agreed to manufacture a limited quantity of such additives for us each year. If we require greater quantities, IKTS has agreed to transfer the production file and knowhow to our chosen manufacturer. If IKTS is not able to supply these additives in sufficient quantities or at an acceptable quality, we will need to seek other sources for such additives. However, we are not aware of any other party capable of manufacturing such additives without an orderly transfer by IKTS, as they were specially designed by IKTS for use with our inks. Furthermore, even if we obtain the production file and knowhow for such additives, we may have difficulty in finding other manufacturers with the ability or technical knowledge to utilize such information to produce such additives in our desired quantities and quality, or at all. Any of these events could materially impair our ability to manufacture inks suitable for use in solar cell metallization processes in sufficient quantities or at all, which would have a material adverse effect on our business, financial condition, results of operations, and cash flows.

Risks Related to Our Intellectual Property

If we are unable to obtain and maintain effective patent rights for our products and technologies or any future products and technologies, we may not be able to compete effectively in our markets.

We rely upon a combination of patents, trade secret protection, and confidentiality agreements to protect the intellectual property related to our products and technologies. Our success depends in large part on our and our licensors' ability to obtain and maintain patent and other intellectual property protection in the United States and in other countries with respect to our proprietary technology and products.

We have sought to protect our proprietary position by filing patent applications in the United States and in other countries, as well as related to our novel technologies and products that are important to our business. The silver ink-related patent applications have been granted in the United States, China, Japan, Europe, Israel, India, Korea, Brazil and Russia and are pending in a number of additional countries. The applications for copper ink-related patents have been granted in the United States and Russia and are pending in a number of countries. This process is expensive and time consuming, and we may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection.

The patent position of technology companies generally is highly uncertain and involves complex legal and factual questions for which legal principles remain unsolved. The patents or patent applications that we own or in-license may fail to result in issued patents with claims that cover our products and technologies in the United States or in other foreign countries. There is no assurance that all potentially relevant prior art relating to our patents and patent applications has been found. The discovery of relevant prior art can invalidate a patent or prevent a patent from issuing from a pending patent application. Even if patents do successfully issue, and even if such patents cover our products and technologies, third parties may challenge their validity, enforceability, or scope, which may result in such patents being narrowed, found unenforceable or invalidated. Furthermore, even if they are unchallenged, our patents and patent applications may not adequately protect our intellectual property, provide exclusivity for our products and technologies, or prevent others from designing around our claims. Any of these outcomes could impair our ability to prevent competition from third parties, which may have an adverse impact on our business.

We, independently or together with our licensors, have filed several patent applications covering various aspects of our products and technologies. Even though some have already been granted, we cannot provide any assurances about which, if any, additional patents will issue, the breadth of any such patent or whether any issued patents will be found invalid and unenforceable or will be threatened by third parties. Any successful opposition to these patents or any other patents owned by or licensed to us after patent issuance could deprive us of rights necessary for the successful commercialization of any products and technologies that we may develop. Further, if we encounter delays in regulatory approvals, the period of time during which we could market a product under patent protection could be reduced.

If we cannot obtain and maintain effective patent rights for our products and technologies, we may not be able to compete effectively and our business and results of operations would be harmed.

If we are unable to maintain effective proprietary rights for our products and technologies or any future products and technologies, we may not be able to compete effectively in our markets.

In addition to the protection afforded by patents, we rely on trade secret protection and confidentiality agreements to protect proprietary knowhow that is not patentable or that we elect not to patent, processes for which patents are difficult to enforce and any other elements of our product candidate discovery and development processes that involve proprietary knowhow, information or technology that is not covered by patents. However, trade secrets can be difficult to protect. We seek to protect our proprietary technology and processes, in part, by entering into confidentiality agreements with our employees, consultants, scientific advisors, and contractors. We also seek to preserve the integrity and confidentiality of our data and trade secrets by maintaining physical security of our premises and physical security of our information technology systems. While we have confidence in these individuals, organizations and systems, agreements or security measures may be breached, and we may not have adequate remedies for any breach. In addition, our trade secrets may otherwise become known or be independently discovered by competitors.

Although we expect all of our employees and consultants to assign their inventions to us, and all of our employees, consultants, advisors, and any third parties who have access to our proprietary knowhow, information, or technology to enter into confidentiality agreements, we cannot provide any assurances that all such agreements have been duly executed or that our trade secrets and other confidential proprietary information will not be disclosed or that competitors will not otherwise gain access to our trade secrets or independently develop substantially equivalent information and techniques. Misappropriation or unauthorized disclosure of our trade secrets could impair our competitive position and may have a material adverse effect on our business. Additionally, if the steps taken to maintain our trade secrets are deemed inadequate, we may have insufficient recourse against third parties for misappropriating the trade secret.

Third-party claims of intellectual property infringement may prevent or delay our development and commercialization efforts.

There have been many lawsuits and other proceedings involving patent and other intellectual property rights in the high-technology industries, including patent infringement lawsuits, interferences, oppositions, and reexamination proceedings before the USPTO and corresponding foreign patent offices. Numerous U.S. and foreign issued patents and pending patent applications, which are owned by third parties, exist in the fields in which we are developing products and technologies. As the conductive ink industry expands and more patents are issued, the risk increases that our products and technologies may be subject to claims of infringement of the patent rights of third parties. We have never conducted a freedom to operate study.

Third parties may assert that we are employing their proprietary technology without authorization. There may be third-party patents or patent applications with claims to materials, formulations, or methods of manufacture related to the use or manufacture of our products and technologies. Because patent applications can take many years to issue, there may be currently pending patent applications that may later result in issued patents that our products and technologies may infringe. In addition, third parties may obtain patents in the future and claim that use of our technologies infringes upon these patents. If any third-party patents were held by a court of competent jurisdiction to cover the manufacturing process of any of our products and technologies, the holders of any such patents may be able to block our ability to commercialize such product or technology unless we obtained a license under the applicable patents, or until such patents expire or are finally determined to be invalid or unenforceable.

Similarly, if any third-party patents were held by a court of competent jurisdiction to cover aspects of our formulations, processes for manufacture, or methods of use, the holders of any such patents may be able to block our ability to develop and commercialize the applicable product or technology unless we obtained a license or until such patent expires or is finally determined to be invalid or unenforceable. In either case, such a license may not be available on commercially reasonable terms or at all.

Parties making claims against us may obtain injunctive or other equitable relief, which could effectively block our ability to further develop and commercialize one or more of our products and technologies. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business. In the event of a successful claim of infringement against us, we may have to pay substantial damages (including treble damages and attorneys' fees for willful infringement), pay royalties, redesign our infringing products or obtain one or more licenses from third parties, which may be impossible or require substantial time and monetary expenditure.

We may become subject to claims of intellectual property infringement by third parties or may be required to indemnify our distributors or other third parties against such claims, which, regardless of their merit, could result in litigation, distract our management and materially adversely affect our business, results of operations or financial condition.

We have in the past and may in the future become subject to third-party claims that assert that our solutions, services and intellectual property infringe, misappropriate or otherwise violate third-party intellectual property or other proprietary rights.

Intellectual property disputes can be costly and disruptive to our business operations by diverting the attention and energies of management and key technical personnel, and by increasing our costs of doing business. Even if a claim is not directly against us, our agreements with distributors generally require us to indemnify them against losses from claims that our products infringe third-party intellectual property rights and entitle us to assume the defense of any claim as part of the indemnification undertaking. Our assumption of the defense of such a claim may result in similar costs, disruption and diversion of management attention to that of a claim that is asserted directly against us. We may not prevail in any such dispute or litigation, and an adverse decision in any legal action involving intellectual property rights could harm our intellectual property rights and the value of any related technology or limit our ability to execute our business.

Adverse outcomes in intellectual property disputes could:

- require us to redesign our technology or force us to enter into costly settlement or license agreements on terms that are unfavourable to us;
- prevent us from manufacturing, importing, using, or selling some or all of our solutions;
- disrupt our operations or the markets in which we compete;
- impose costly damage awards;
- require us to indemnify our distributors and customers; and
- require us to pay royalties.

We may become subject to claims for remuneration or royalties for assigned service invention rights by our employees, which could result in litigation and adversely affect our business.

All of our intellectual property has been developed by our employees in the course of their employment for us. Under the Israeli Patent Law, 5727-1967, or the Patent Law, inventions conceived by an employee in the course and as a result of or arising from his or her employment with a company are regarded as “service inventions,” which belong to the employer, absent a specific agreement between the employee and employer giving the employee proprietary rights. The Patent Law also provides under Section 134 that if there is no agreement between an employer and an employee as to whether the employee is entitled to consideration for service inventions, and to what extent and under which conditions, the Israeli Compensation and Royalties Committee, or the Committee, a body constituted under the Patent Law, shall determine these issues. Section 135 of the Patent law provides criteria for assisting the Committee in making its decisions. According to case law handed down by the Committee, an employee’s right to receive consideration for service inventions is a personal right and is entirely separate from the proprietary rights in such invention. Therefore, this right must be explicitly waived by the employee. A decision handed down in May 2014 by the Committee clarifies that the right to receive consideration under Section 134 can be waived and that such waiver can be made orally, in writing or by behavior like any other contract. The Committee will examine, on a case by case basis, the general contractual framework between the parties, using interpretation rules of the general Israeli contract laws. Further, the Committee has not yet determined one specific formula for calculating this remuneration, nor the criteria or circumstances under which an employee’s waiver of his right to remuneration will be disregarded. Similarly, it remains unclear whether waivers by employees in their employment agreements of the alleged right to receive consideration for service inventions should be declared as void being a depriving provision in a standard contract. We generally enter into assignment-of-invention agreements with our employees pursuant to which such individuals assign to us all rights to any inventions created in the scope of their employment or engagement with us. Although our employees have agreed to assign to us service invention rights and have specifically waived their right to receive any special remuneration for such service inventions beyond their regular salary and benefits, we may face claims demanding remuneration in consideration for assigned inventions.

We may not be successful in obtaining or maintaining necessary rights to our products and technologies through intellectual property rights in-licenses.

We currently have rights to the intellectual property, through licenses from third parties and under patents that we own, to develop our products and technologies. Because our programs may require the use of proprietary rights held by third parties, the growth of our business will likely depend in part on our ability to in-license, or use these proprietary rights. In addition, our products and technologies may require specific formulations to work effectively and efficiently and the rights to these formulations may be held by others. We may be unable to acquire or in-license any compositions, methods of use, processes, or other third-party intellectual property rights from third parties that we identify as necessary for our products and technologies. The licensing and acquisition of third-party intellectual property rights is a competitive area, and a number of more established companies are also pursuing strategies to license or acquire third-party intellectual property rights that we may consider attractive. These established companies may have a competitive advantage over us due to their size, cash resources, and greater development and commercialization capabilities.

In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us. We also may be unable to license or acquire third-party intellectual property rights on terms that would allow us to make an appropriate return on our investment. If we are unable to successfully obtain rights to required third-party intellectual property rights, we may have to abandon development of that program and our business and financial condition could suffer.

We may not be able to fully enforce covenants not to compete with our key employees, and therefore we may be unable to prevent our competitors from benefiting from the expertise of such employees.

Our employment agreements with our key employees contain non-compete provisions. These provisions prohibit our key employees, if they cease working for us, from competing directly with us or working for our competitors for a limited period of time. We may be unable to enforce these provisions under applicable laws in Israel where all of our key employees reside. In Israel, the Basic Law: Freedom of Occupation, as interpreted by binding case law, may restrict our ability to enforce non-compete provisions against our employees. If we cannot enforce our non-compete provisions against our employees, we may be unable to prevent our competitors from benefiting from the expertise of such employees. Even if these provisions are enforceable, they may not adequately protect our interests. As a result, if one or more of our employees leaves our employment and subsequently becomes employed by one of our competitors, our business, results of operations and ability to capitalize on our proprietary information may be materially adversely affected.

We may not be able to protect our intellectual property rights throughout the world.

Filing, prosecuting, and defending patents on products and technologies in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can be less extensive than those in the United States. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States.

Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and may also export otherwise infringing products to territories where we have patent protection, but enforcement is not as strong as that in the United States. These products may compete with our products and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets, and other intellectual property protection, which could make it difficult for us to stop the infringement of our patents or marketing of competing products in violation of our proprietary rights generally. Proceedings to enforce our patent rights in foreign jurisdictions, whether or not successful, could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

Risks Related to Our Operations in Israel

Our headquarters and other significant operations are located in Israel and, therefore, our results may be adversely affected by political, economic and military instability in Israel.

Our executive offices, application department, labs, production site and warehouse are located in Migdal Ha'Emek (in three different sites), Israel. In addition, all of our officers and directors are residents of Israel. Accordingly, political, economic and military conditions in Israel may directly affect our business. Since the establishment of the State of Israel in 1948, a number of armed conflicts have taken place between Israel and its neighboring countries and militia groups. Any hostilities involving Israel or the interruption or curtailment of trade between Israel and its trading partners could adversely affect our operations and results of operations. Certain of these conflicts involved missile strikes against civilian targets in various parts of Israel, including the city in which our headquarters are located as well as areas in which our employees and some of our consultants are located, and negatively affected business conditions in Israel. Any armed conflicts, terrorist activities or political instability in the region could adversely affect business conditions and could harm our results of operations and could make it more difficult for us to raise capital. Parties with whom we do business may sometimes decline to travel to Israel during periods of heightened unrest or tension, forcing us to make alternative arrangements when necessary in order to meet our business partners face to face. In addition, the political and security situation in Israel may result in parties with whom we have agreements involving performance in Israel claiming that they are not obligated to perform their commitments under those agreements pursuant to force majeure provisions in such agreements. Israel also faces threats from more distant neighbors, in particular, Iran, an ally of Hezbollah and Hamas.

Several countries, principally in the Middle East, still restrict doing business with Israel and Israeli companies, while some of these countries are eliminating these constraints, additional countries may impose restrictions on doing business with Israel and Israeli companies if hostilities in Israel or political instability in the region continues or increases. These restrictions may limit materially our ability to obtain raw materials from these countries or sell our products to companies or persons in these countries. Any hostilities involving Israel or the interruption or curtailment of trade between Israel and its present trading partners, or significant downturn in the economic or financial condition of Israel, could adversely affect our operations and product development, cause our sales to decrease and, if our securities become publicly traded, adversely affect the share price of our securities.

Our commercial insurance does not cover losses that may occur as a result of an event associated with the security situation in the Middle East. Although the Israeli government is currently committed to covering the reinstatement value of direct damages that are caused by terrorist attacks or acts of war, we cannot assure you that this government coverage will be maintained, or if maintained, will be sufficient to compensate us fully for damages incurred. Any losses or damages incurred by us could have a material adverse effect on our business. Any armed conflicts or political instability in the region would likely negatively affect business conditions generally and could harm our results of operations.

The Israeli government grants we have received for research and development expenditures restrict our ability to manufacture products and transfer technologies outside of Israel and require us to satisfy specified conditions. If we fail to satisfy these conditions, we may be required to refund grants previously received together with interest and penalties.

We have received grants from the Israel Innovation Authority, the IIA or the Authority (formerly operating as Office of the Chief Scientist of the Ministry of Economy of the State of Israel, or the OCS), for research and development programs and intend to apply for further grants in the future. In order to maintain our eligibility for these grants, we must comply with the requirements of the Encouragement of Research, Development and Technological Innovation in the Industry Law 5744-1984 (formerly known as the Law for the Encouragement of Research and Development in Industry 5744-1984), and the regulations and guidelines promulgated thereunder, or the Innovation Law. Under the terms of the grants under the Innovation Law also generally requires that the products developed as part of the programs under which the grants were given be manufactured in Israel and that the know-how developed thereunder may not be transferred outside of Israel, unless a prior written approval is received from the IIA (such approval is not required for the transfer of a portion of the manufacturing capacity which does not exceed, in the aggregate, 10% of the portion declared to be manufactured outside of Israel in the applications for funding, in which case only notification is required) and additional payments are required to be made to the IIA. It should be noted, that this does not restrict the export of products that incorporate the funded know-how. As of the date of this annual report on Form 20-F, we have not sought to obtain such approvals, as we do not have immediate plans to manufacture outside of Israel. We may not receive the required approvals for any transfer of manufacturing activities, if such transfer will be contemplated in the future. Even if we do receive approval to manufacture products developed with government grants outside of Israel, the royalty rate may be increased and we may be required to pay up to 300% of some or all of the grant amounts requiring repayment plus interest, depending on the manufacturing volume that is performed outside of Israel. This restriction may impair our ability to outsource manufacturing or engage in our own manufacturing operations for those products or technologies.

Additionally, under the Innovation Law, we are prohibited from transferring, including by way of license, the Authority-financed technologies and related intellectual property rights and knowhow outside of the State of Israel, except under limited circumstances and only with the approval of the Authority's Research Committee. As of the date of this annual report on Form 20-F, we have not sought to obtain such approvals, as we do not have immediate plans to transfer the Authority-financed technologies and related intellectual property rights and knowhow outside of Israel. We may not receive the required approvals for any proposed transfer, if any, and even if received, we may be required to pay the Authority a portion of the consideration that we receive upon any sale of such technology to a non-Israeli entity up to 600% of the grant amounts plus interest. The scope of the support received, the royalties that we have already paid to the Authority, the amount of time that has elapsed between the date on which the knowhow or the related intellectual property rights were transferred and the date on which the Authority grants were received and the sale price and the form of transaction will be taken into account in order to calculate the amount of the payment to the Authority. Approval of the transfer of technology to residents of the State of Israel is required, and may be granted in specific circumstances only if the recipient abides by the provisions of applicable laws, including the restrictions on the transfer of knowhow and the obligation to pay royalties. No assurance can be made that approval to any such transfer, if requested, will be granted.

These restrictions may impair our ability to sell our technology assets or to perform or outsource manufacturing outside of Israel, engage in change of control transactions or otherwise transfer our knowhow outside of Israel and may require us to obtain the approval of the Authority for certain actions and transactions and pay additional royalties and other amounts to the Authority. In addition, any change of control and any change of ownership of our ordinary shares that would make a non-Israeli citizen or resident an "interested party," as defined in the Innovation Law, requires a written notice to the Authority, and such non-Israeli "interested party" will be required to execute an undertaking to the Authority to abide with the provisions of the Innovation Law.

These restrictions will continue to apply even after we have repaid the full amount of royalties on the grants. If we fail to satisfy the conditions of the Innovation Law, we may be required to refund certain grants previously received together with interest and penalties, and may become subject to criminal charges.

The Government of Israel has reduced the grants available under the Authority's program in recent years, and this program may be discontinued or curtailed in the future. If we do not receive additional grants in the future, we will be required to allocate other funds to product development at the expense of other operational costs.

We have received a grant from the Office of the Authority of the Ministry of National Infrastructures, Energy and Water Resources, or the Ministry of Infrastructures, for one of our research and development programs. In order to maintain our eligibility for this grant, we must meet specified conditions, including the payment of royalties with respect to the grant received. If we fail to comply with these conditions in the future, sanctions (such as the cancellation of the grant) might be imposed on us, and we could be required to refund any payments previously received. Even following full repayment of any Ministry of Infrastructures grants, we must nevertheless continue to comply with the requirements of our agreement with the Ministry of Infrastructures. The terms of the Ministry of Infrastructures' grant require us to obtain the Ministry of Infrastructures' approval prior to any assignment of knowhow developed under the research and development program funded with its grant. The Ministry of Infrastructures also has a right to receive a nonexclusive royalty free license to the know how developed under any such program to the extent necessary for national needs (as determined by the Minister of Science and Technology, the Minister of Treasury and the Minister of Justice). Pursuant to the terms of the grant, we will be required to notify the Ministry of Infrastructures of any new investment we receive, and any new investor will be required to undertake in writing to the Ministry of Infrastructures to make reasonable efforts to ensure that the Company shall observe the terms of the research and development agreement with the Ministry of Infrastructures and the law governing the grant program of the Ministry of Infrastructures. In addition, in any case where one or more new investors makes an investment with the Company, the Ministry of Infrastructures has a right to negotiate with such investor(s) for the repayment by us of the grant provided to us by the Ministry of Infrastructures. At our request, the Ministry of Infrastructures confirmed our interpretation that the registration of the securities herein will not be deemed as a new investment.

Exchange rate fluctuations between the U.S. dollar and the NIS currencies may negatively affect our earnings.

We incur expenses both in U.S. dollars and NIS, but our consolidated financial statements are denominated in U.S. dollars. As a result, we are exposed to the risks that the New Israeli Shekel may appreciate relative to the U.S. dollar, or, if the New Israeli Shekel instead devalues relative to the U.S. dollar, that the inflation rate in Israel may exceed such rate of devaluation of the New Israeli Shekel, or that the timing of such devaluation may lag behind inflation in Israel. In any such event, the U.S. dollar cost of our operations in Israel would increase and our U.S. dollar-denominated results of operations would be adversely affected. We cannot predict any future trends in the rate of inflation in Israel or the rate of devaluation (if any) of the New Israeli Shekel against the U.S. dollar.

Provisions of Israeli law and our Fourth Amended Articles of Association, or our Articles of Association, may delay, prevent or make undesirable an acquisition of all or a significant portion of our shares or assets.

Provisions of Israeli law and our Articles of Association could have the effect of delaying or preventing a change in control of our Company; may make it more difficult for a third-party to acquire us; may make it more difficult for our shareholders to elect different individuals to our board of directors, even if doing so would be considered to be beneficial by some of our shareholders; and may limit the price that investors may be willing to pay in the future for our ordinary shares. Among other things:

- Israeli corporate law regulates mergers and requires that a tender offer be effected when more than a specified percentage of shares in a company are purchased;
- Israeli corporate law does not provide for shareholder action by written consent unless such consent is unanimous, thereby requiring all shareholder actions to be taken at a general meeting of shareholders in the absence of unanimity among our shareholders;
- our Articles of Association generally require a vote of the holders of a majority of our outstanding ordinary shares entitled to vote and present at a general meeting of shareholders; however, the amendment of a limited number of provisions related to the board of directors, proceedings of the board of directors, and business combinations require a vote of the holders of 60% of our outstanding ordinary shares entitled to vote and present at a general meeting (excluding abstentions);
- our Articles of Association require a vote of the holders of 60% of our outstanding ordinary shares entitled to vote and present at a general meeting (excluding abstentions) for the removal of directors prior to the expiration of his or her term of office;
- our Articles of Association provide that director vacancies may only be filled by our board of directors; and
- our Articles of Association prevent "business combinations" with "interested shareholders" for a period of three (3) years after the date of the transaction in which the person became an interested shareholder, unless the business combination is approved in accordance with our Articles of Association by a general meeting of our shareholders or satisfies other requirements specified in our Articles of Association.

On September 24, 2015, we held a general meeting of shareholders at which our shareholders approved, among other things, an amendment to the provisions of our Articles of Association applicable to the election of directors to provide for a board of directors consisting of no less than three (3) and no more than seven (7) directors, with all directors (other than the external directors, whose appointment is required under the Companies Law, as described below) divided into three (3) classes with staggered three-year terms with each class of directors to consist, as nearly as possible, of one-third of the total number of directors other than the external directors. This provision may make it more difficult for our shareholders to elect different individuals to our board of directors, even if doing so would be considered to be beneficial by some of our shareholders, may limit the price that investors may be willing to pay in the future for our ordinary shares, and may make it more difficult for a potential acquiror to effect a change of control of our Company or may deter potential acquirors from seeking to effect a change of control. On November 29, 2018, we held a general meeting of shareholders at which our shareholders approved, among other things, an amendment to the provisions of our Articles of Association applicable to the election of directors to provide for GTRIMG Investments Ltd., or GTRIMG, to designate one non-voting observer to the board of directors, or the Observer. The Observer is entitled to attend and participate in all meetings of the board of directors in a non-voting, observer capacity. Subject to limitations, the Observer is entitled to receive notice of, to attend and to receive copies of any documentation distributed to the directors before, during or after, all meetings of the board of directors at the same time such notice or material is provided or delivered to members of the board of directors. In addition, in the event that and conditioned upon the conversion of the loan amount or the investment of at least US \$2,000,000, GTRIMG shall be entitled to appoint one director for election to our board of directors. Such director shall serve as the chairman of the board of directors, provided that such nominee has the required qualifications under applicable laws including the stock exchange rules then applicable to us.

Further, Israeli tax considerations may make potential transactions undesirable to us or to some of our shareholders whose country of residence does not have a tax treaty with Israel granting tax relief to such shareholders from Israeli tax. With respect to mergers, Israeli tax law allows for tax deferral in certain circumstances but makes the deferral contingent on the fulfillment of numerous conditions, including a holding period of two (2) years from the date of the transaction during which certain sales and dispositions of shares of the participating companies are restricted. Moreover, with respect to certain share swap transactions, the tax deferral is limited in time, and when such time expires, the tax becomes payable even if no actual disposition of the shares has occurred.

The tax benefits that are available to us as a preferred enterprise require us to continue to meet various conditions and may be terminated or reduced in the future, which could increase our costs and taxes.

We have not yet elected to be treated as a preferred enterprise for Israeli tax purposes, a designation which would allow us to receive certain tax benefits, since we are still not at a stage where we have to pay tax due to carry forward losses. Once we are liable for tax payments, we may be entitled to reduced tax rates and other tax benefits. See “Item 10 E. — Taxation — Law for the Encouragement of Capital Investments, 5719-1959”. If these tax benefits were reduced or eliminated or if we no longer comply with the various pre-conditions required, the amount of taxes that we pay would consequently be subject to corporate tax at the standard rate, which could adversely affect our results of operations.

It may be difficult to enforce a judgment of a United States court against us and our officers and directors and the Israeli experts named in this annual report on Form 20-F located in Israel or the United States, to assert United States securities laws claims in Israel or to serve process on our officers and directors and these experts.

We were incorporated in Israel. Our Chief Executive Officer and all of our directors reside outside of the United States, and all of our assets and most of the assets of these persons are located outside of the United States. Therefore, a judgment obtained against us, or any of these persons, including a judgment based on the civil liability provisions of the U.S. federal securities laws, may not be collectible in the United States and may not necessarily be enforced by an Israeli court. It also may be difficult for you to effect service of process on these persons in the United States or to assert U.S. securities law claims in original actions instituted in Israel. Additionally, it may be difficult for an investor, or any other person or entity, to initiate an action with respect to United States securities laws in Israel. Israeli courts may refuse to hear a claim based on an alleged violation of United States securities laws, reasoning that Israel is not the most appropriate forum in which to bring such a claim. In addition, even if an Israeli court agrees to hear a claim, it may determine that Israeli law and not United States law is applicable to the claim. If United States law is found to be applicable, the content of applicable United States law must be proven as a fact by expert witnesses, which can be a time consuming and costly process. Certain matters of procedure will also be governed by Israeli law. There is little binding case law in Israel that addresses the matters described above. As a result of the difficulty associated with enforcing a judgment against us in Israel, you may not be able to collect any damages awarded by either a United States or foreign court.

Risks Related to Our Securities

Our U.S. investors may suffer adverse tax consequences if we are characterized as a passive foreign investment company.

Generally, if for any taxable year 75% or more of our gross income is passive income, or at least 50% of our assets are held for the production of, or produce, passive income, we would be characterized as a passive foreign investment company, or a PFIC, for U.S. federal income tax purposes. We have not determined whether we have been a PFIC for 2019 or any previous year, or whether we will be a PFIC in any future year. Because PFIC status is determined annually and is based on our income, assets and activities for the entire taxable year, there can be no assurance that we will not be classified as a PFIC in any year. If we were to be characterized as a PFIC for U.S. federal income tax purposes in any taxable year during which a U.S. Investor, as defined in “Item 10 E. — Taxation — Certain Material U.S. Federal Income Tax Considerations”, owns ordinary shares, such U.S. Investor could face adverse U.S. federal income tax consequences, including having gains realized on the sale of our ordinary shares classified as ordinary income, rather than as capital gain, the loss of the preferential rate applicable to dividends received on our ordinary shares by individuals who are U.S. Investors, and having interest charges apply to distributions by us and the proceeds of share sales. A “qualified electing fund” election may alleviate some of the adverse consequences of PFIC status; however, we do not intend to provide the information necessary for U.S. Investors to make qualified electing fund elections if we are classified as a PFIC. See “Item 10 E. — Taxation — Certain Material U.S. Federal Income Tax Considerations.”

Your rights and responsibilities as a shareholder will be governed by Israeli law which differs in some material respects from the rights and responsibilities of shareholders of U.S. companies.

The rights and responsibilities of our shareholders are governed by Israeli law and our Articles of Association. These rights and responsibilities differ in some material respects from the rights and responsibilities of shareholders in typical U.S.-based corporations. In particular, a shareholder of an Israeli company has a duty to act in good faith and in a customary manner in exercising its rights and performing its obligations towards the company and other shareholders and to refrain from abusing its power in the company, including, among other things, in voting at general meetings of shareholders on certain matters, such as an amendment to the company’s articles of association, an increase of the company’s authorized share capital, a merger of the company and approval of related party transactions that require shareholder approval. A shareholder also has a general duty to refrain from discriminating against other shareholders. In addition, a controlling shareholder or a shareholder who knows that it possesses the power to determine the outcome of a shareholders’ vote or to appoint or prevent the appointment of an office holder in the company has a duty to act in fairness towards the company. However, Israeli law does not define the substance of this duty of fairness. There is limited case law available to assist us in understanding the nature of this duty or the implications of these provisions. These provisions may be interpreted to impose additional obligations and liabilities on our shareholders that are not typically imposed on shareholders of U.S. corporations.

We have never paid cash dividends on our share capital, and we do not anticipate paying any cash dividends in the foreseeable future.

We have never declared or paid cash dividends on our share capital, nor do we anticipate paying any cash dividends on our share capital in the foreseeable future. We currently intend to retain all available funds and any future earnings to fund the development and growth of our business. As a result, capital appreciation, if any, of our ordinary shares will be investors’ sole source of gain for the foreseeable future. In addition, Israeli law limits our ability to declare and pay dividends, and may subject our dividends to Israeli withholding taxes. Furthermore, our payment of dividends (out of tax-exempt income) may retroactively subject us to certain Israeli corporate income taxes, to which we would not otherwise be subject.

Our directors, executive officers and controlling persons as a group have significant voting power and may take actions that may not be in the best interest of shareholders.

Our directors (including shareholders they represent, as applicable), executive officers and controlling persons as a group beneficially owned approximately 32.3% of our outstanding ordinary shares as of December 31, 2019. As a result, they will have the ability to exert substantial influence over all matters requiring approval by our shareholders, including the election and removal of directors and any proposed merger, consolidation or sale of all or substantially all of our assets. In addition, due to their share ownership, our executive officers and controlling persons could dictate the management of our business and affairs. Further, if GTRIMG, exercises all its rights under the convertible securities it holds, it will hold approximately 47.1% of our share capital on a fully diluted basis as of December 31, 2019 (such rate was calculated based on the assumption that GTRIMG will convert all its loans and exercise all its warrants at a conversion and exercise price of \$0.17, such price may be different based on the calculation mechanism agreed in convertible securities agreement, See “Item 5.B. Liquidity and Capital Resources” for additional information). This concentration of ownership could have the effect of delaying, deferring or preventing a change in control, or impeding a merger or consolidation, takeover or other business combination that could be favorable to you. This significant concentration of share ownership may also adversely affect the trading price for our ordinary shares, if a public market further develops for such securities, because investors may perceive disadvantages in owning stock in a company with controlling affiliated shareholders.

We incur significant costs as a result of operating as a public company, and our management is required to devote substantial time to new compliance initiatives.

We are subject to the requirements to file periodic and annual reports under Section 15(d) of the Exchange Act, and are otherwise subject to laws applicable to public reporting companies in the United States. As a public reporting company, we incur significant legal, accounting, and other expenses. In addition, the Sarbanes-Oxley Act, as amended, and the rules and regulations of the SEC thereunder, have imposed various requirements on public companies. Shareholder activism, the current political environment, and the current high level of government intervention and regulatory reform may lead to substantial new regulations and disclosure obligations, which may lead to additional compliance costs and impact the manner in which we operate our business in ways we cannot currently anticipate. Our management and other personnel need to devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations increase our legal and financial compliance costs and will make some activities more time consuming and costly.

As an “emerging growth company,” as defined in the Exchange Act, we are entitled (and intend) to take advantage of certain exemptions from various reporting requirements including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act. If and when these exemptions cease to apply, we expect to incur additional expenses and devote increased management effort toward ensuring compliance with them. We cannot predict or estimate the amount of additional costs we may incur as a result of becoming a public reporting company or the timing of such costs.

We are a “foreign private issuer” and have disclosure obligations that are different from those of U.S. domestic reporting companies.

We are a foreign private issuer and are not subject to the same requirements that are imposed upon U.S. domestic issuers by the SEC. Under the Exchange Act, we are subject to reporting obligations that, in certain respects, are less detailed and less frequent than those of U.S. domestic reporting companies. For example, we are not required to issue quarterly reports, proxy statements that comply with the requirements applicable to U.S. domestic reporting companies. Furthermore, although under a recent amendment to the regulations promulgated under the Companies Law, as an Israeli public company listed overseas we are required to disclose the compensation of our five (5) most highly compensated officers on an individual basis (rather than on an aggregate basis, as was previously permitted for Israeli public companies listed overseas prior to such amendment), this disclosure is not as extensive as that required of U.S. domestic reporting companies. We also have four (4) months and an automatic extension of 15 days after the end of each fiscal year to file our annual reports with the SEC and are not required to file current reports as frequently or promptly as U.S. domestic reporting companies. Furthermore, our officers, directors and principal shareholders are exempt from the requirements to report short-swing profit recovery contained in Section 16 of the Exchange Act. Also, as a “foreign private issuer,” we are also not subject to the requirements of Regulation FD (Fair Disclosure) promulgated under the Exchange Act. These exemptions and leniencies will reduce the frequency and scope of information and protections available to you in comparison to those applicable to a U.S. domestic reporting companies.

Offers or availability for sale of a substantial number of our ordinary shares may cause the price of our ordinary shares to decline.

If our shareholders sell substantial amounts of our ordinary shares in the public market (if one develops) or if there is a perception in the market that substantial sales may occur in the future upon the expiration of any statutory holding period, under Rule 144, or upon the exercise of outstanding options or Warrants, the market price of our ordinary shares could fall. The occurrence of such substantial sales or the perception that substantial sales of common stock may occur in the future could also make it more difficult for us to raise additional financing through the sale of equity or equity related securities in the future at a time and price that we deem reasonable or appropriate.

Furthermore, we issued a significant number of warrants to an investor, which, if exercised, will have a material dilutive effect on our share capital. For more information see “Item 7 A. — Major Shareholders”.

The market price of our ordinary shares may fluctuate significantly.

If a public trading market further develops for our ordinary shares, the market price of the ordinary shares may fluctuate significantly in response to numerous factors, some of which are beyond our control, such as:

- the announcement of new products or product enhancements by us or our competitors;
- developments concerning intellectual property rights and regulatory approvals;

- variations in our and our competitors' results of operations;
- changes in earnings estimates or recommendations by securities analysts, if the ordinary shares are covered by analysts;
- fluctuations in economic and market conditions that affect the price of, and demand for, conventional and non-solar renewable energy sources, such as increases or decreases in the price of natural gas, coal, oil, and other fossil fuel;
- developments in the nanotechnology and alternative energy industries;
- the results of product liability or intellectual property lawsuits;
- future issuances of ordinary shares or other securities;
- the addition or departure of key personnel;
- announcements by us or our competitors of acquisitions, investments or strategic alliances; and
- general market conditions and other factors, including factors unrelated to our operating performance.

Further, in recent years, the stock market has experienced extreme price and volume fluctuations. Continued or renewed market fluctuations could result in extreme volatility in the price of our ordinary shares, which could cause a decline in the value of the ordinary shares. Price volatility of our ordinary shares might be significant if the trading volume of the ordinary shares is low, which often occurs with respect to securities quoted on the OTCQB or the OTC Pink.

Because our ordinary shares are traded as a "penny stock," it may be more difficult for investors to sell our ordinary shares, and the market price of our ordinary shares may be adversely affected.

Our ordinary shares are deemed a "penny stock" since, among other things, the stock price is currently trading below \$5.00 per share. Broker-dealers who sell penny stocks must provide purchasers of these stocks with a standardized risk-disclosure document prepared by the SEC. This document provides information about penny stocks and the nature and level of risks involved in investing in the penny-stock market. A broker must also give a purchaser, orally or in writing, bid and offer quotations and information regarding broker and salesperson compensation, make a written determination that the penny stock is a suitable investment for the purchaser and obtain the purchaser's written agreement to the purchase. Broker-dealers must also provide customers that hold penny stock in their accounts with such broker-dealer a monthly statement containing price and market information relating to the penny stock. If a penny stock is sold to an investor in violation of the penny stock rules, the investor may be able to cancel its purchase and get its money back.

The penny stock rules may make it difficult for investors to sell their ordinary shares. Because of the rules and restrictions applicable to a penny stock, there is less trading in penny stocks and the market price of the ordinary shares may be adversely affected. Also, many brokers choose not to participate in penny stock transactions. Accordingly, investors may not always be able to resell their ordinary shares publicly at times and prices that they feel are appropriate.

Compliance with changing regulations concerning corporate governance and public disclosure may result in additional expenses.

There have been changing laws, regulations and standards relating to corporate governance and public disclosure, including the Sarbanes-Oxley Act, new regulations promulgated by the SEC and rules promulgated by the national securities exchanges. These new or changed laws, regulations and standards are subject to varying interpretations in many cases due to their lack of specificity, and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies, which could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices. As a result, our efforts to comply with evolving laws, regulations and standards are likely to continue to result in increased general and administrative expenses and a diversion of management time and attention from revenue-generating activities to compliance activities. Our directors and executive officers could face an increased risk of personal liability in connection with the performance of their duties. As a result, we may have difficulty attracting and retaining qualified directors and executive officers, which could harm our business. If our efforts to comply with new or changed laws, regulations and standards differ from the activities intended by regulatory or governing bodies, we could be subject to liability under applicable laws or our reputation may be harmed.

ITEM 4. Information on the Company

A. History and development of the company

P.V. Nano Cell Ltd. was incorporated in Israel on June 24, 2009 as a private limited liability company, organized under the laws of State of Israel. In September 2015, we successfully filed our Registration Statement on Form F-1 in the United States. We have three (3) wholly owned subsidiaries, Nano Size Ltd., or Nano Size, a private company organized under the laws of the state of Israel which we acquired on December 31, 2009, Digiflex, which we acquired on December 3, 2017 and Jet CU commencing July 26, 2020.

Our Registration Statement on Form F-1 was declared effective by the SEC on September 30, 2015, and a FINRA-registered market maker subsequently filed an application on Form 211 with FINRA to quote the ordinary shares on the OTCQB. On March 31, 2016, the application on Form 211 with FINRA to make a market in our ordinary shares was approved by FINRA, and on December 15, 2016, quotation of our ordinary shares began on the OTCQB under the ticker symbol "PVNNF". Since December 18, 2019, our ordinary shares are quoted on the OTC Pink.

Our principal offices are located at 8 Hamasger Street, Migdal Ha'Emek, Israel 2310102. Our telephone number is (972) 4-654-6881. Our website address is www.pvnanocell.com. This website address is included in this annual report on Form 20-F as an inactive textual reference only. The information and other content appearing on our website are not part of this annual report on Form 20-F. The Company does not have a registered agent in the United States.

B. Business Overview

We are a conductive ink manufacturing company focused on developing, manufacturing, marketing and commercializing conductive inks for digital conductive printing applications (mainly inkjet and aerosol printing technologies). We have developed the Sicrys™ family of single crystal nano-metric conductive inks, which we believe enables a significantly less costly and less wasteful alternative to current screen printing and, in some cases, photolithography etching processes for photovoltaic (PV) and digital printed electronics (PE) applications. Our main strategy includes providing a "Complete Solution" or "End-to-End Solution" approach to our customer, meaning we provide the printing equipment, process and inks as a package. In some cases, we subsidize the printer, thus implementing a razor blade model. We also adapt our basic inks to specific customer requirements. We began low volume sales of our Sicrys™ silver-based inks for PV and PE applications in 2010 and are in the process of seeking to expand our sales efforts to include sales of Sicrys™ inks for a wider range of digital PE applications, including for the printing of windshields in automotive applications, photovoltaic devices, printed passive components, circuit boards, mobile phone antennas, 3D printed electronic devices, radio-frequency identification chips, sensors and touchscreens, among other digitally printed electronics. We have also developed what we believe is the first available commercially viable copper-based nano-metric ink for mass-production of printed electronics. We believe that copper inks represent a significant improvement over silver-based inks given copper's significantly lower cost and nearly identical electrical and conductive properties. We began low volume sales of our copper-based ink for printed electronics applications in the second half of 2014.

During 2019, we significantly increased the sale of our Sicrys™ inks, growth which has continued in 2020 (in spite of COVID-19 constrains). In this period, we have also continued to expand our ink portfolio adding additional silver, copper, gold, resistor and dielectric inks.

Background

Printed Electronics

Digital printed electronics is a set of methodologies by which electrical devices are digitally printed onto various substrates (i.e., base material) by depositing electrically functional inks (and possibly other additional functional inks such as insulating materials) on the substrate, creating active or passive devices, such as conductors, capacitors or resistors. The use of digital printed electronics presents an opportunity to facilitate widespread, production of new electronics, more efficient electronics and customized and personalized electronics while keeping production costs low.

According to our internal estimates based on various market studies, we expect that the total addressable worldwide market for the sale of inks which the Company is aiming to penetrate will be in excess of US\$75 billion by 2022. The total addressable market could be increased by an increase in the need and future capability to print embedded passive components economically. Our estimate based on a market report by Markets and Markets from June 2020, a segment of this market is the Printed electronics market which is a US\$7.8 billion market in 2020 and expected to grow to US\$20.7 billion in 2025.

The total addressable worldwide market is more specifically projected as set forth below:

Field	Market (US\$ billion)	Comment
PCB	80.1 in 2023 ⁽¹⁾	The complete PCB (both conductive & dielectric ink)
Internet of Things	4.2 in 2023 ⁽²⁾	Ink Only
PV Photovoltaic cells	113.1 in 2025 ⁽⁶⁾	~US\$1 billion potential for inks
Capacitors (passive component)	22.3 in 2023 ⁽³⁾	
Resistors (passive component)	5.7 in 2020 ⁽⁴⁾	Assumed at approximately 50% of Capacitor market size
Conductive 3D printing	1.7 in 2027	Assumed 7% is conductive
Printed Electronics	20.7 in 2025 ⁽⁵⁾	~US2 billion potential for inks
Inks for ceramics and glass	2.8 in 2022 ⁽⁷⁾	~US0.9 billion potential for inks. Includes automotive.

- (1) The global PCB market is expected to reach an estimated \$80.1 billion by 2023, with a compounded annual growth rate (“CAGR”) of 3.3% from 2018 to 2023.
- (2) According to a 2016 Markets and Markets report, the market size of conductive inks was \$3.17 billion in 2015 and is projected to reach \$3.91 billion by 2021, registering a CAGR of 3.5% between 2016 and 2021. In this report, 2015 is considered as the base year and forecast period is between 2016 and 2021. The global market for conductive inks is projected to reach \$3.1 billion by 2022. The global conductive inks market is expected to grow at a CAGR of 15.49% during 2016 to 2022. This was also reported in Merkle & Sears Market Report 2017 “Global Conductive Inks Market Analysis.” According to the 2018 Market Research Future Report (“MRFR”), the global conductive inks market is expected to reach more than \$4.22 billion by 2022 with a CAGR of 4%. The major factors which are likely to push the growth of the global conductive ink market are superior physical properties, growing application industries, huge demand from Asia-pacific regions, replacing traditional circuit and energy consuming wires and others. On the basis of product types, silver conductive inks have accounted for the largest market share and automotive is expected to be the largest segment on the basis of applications. Geographically, Asia-Pacific is expected to lead the global market. According to a research published on October 2018 by the Transparency Market Research, the global conductive inks market was \$2.34 billion in 2016 and the estimation is that such market will increase up to US\$ 4.27 billion by 2025.
- (3) According to a 2013 and 2015 report by Lucintel and Global Industry Analysts, the global capacitor industry is estimated to reach \$20.2 billion in total revenue by 2018, with a CAGR of 2.5% over the next five years. Competition is high in the industry because there are a large number of players and low product differentiation. We believe the industry will trend to and favor companies that focus on advancement in paper capacitors and modifications to aluminum electrolytic capacitors. “Growth Opportunities in the Global Capacitor Market”, published in January 2013; “Global Industry Analysts, Inc.”, published in October 2015.
- (4) According to the 2015 and 2018 press releases by Global Industry Analysts and Research Markets, global electronic resistor market will reach \$5.7 billion by 2020. This massive growth in the use and applications of 3D Printers is encouraging growth in the market for 3D printing materials. Detailed forecasts, using information from interviews with 90 key players in the industry and disclosed financial information, estimate key materials are expected to have a total market of over \$24 billion by 2027.
- (5) Estimated based on a 2020 report regarding the Printed Electronics Market from Markets and Markets
- (6) Estimated based on 2020 market reports from Markets and Markets and Grandview Research regarding the photovoltaic and solar panel markets
- (7) Estimated based on 2018 and 2019 market reports from Markets and Markets and Global Market Insights

We believe that the current analog printing and etching methods have inherent limitations when implemented in flexible electronics, 3D (three dimensional) electronics and in customized and small-scale printing. Furthermore, these processes currently utilize expensive materials and produce toxic by products which must be disposed of, which increases overall production costs. We believe that a significant market opportunity exists for inks, such as ours, that enable digital inkjet conductive printing, enabling printing on flexible substrates, three-dimensional printing and customized and small-scale printing at a lower price.

Photovoltaic Cell Metallization

PV cells (commonly known as solar cells) are the building blocks of solar module arrays that convert energy from sunlight into electricity. Multiple PV cells in an integrated group, all oriented in one plane, constitute a solar photovoltaic panel or module, and a group of connected modules make up an array. An array of PV cells is capable of converting solar energy into a usable amount of direct current electricity.

Most modern solar cells are made from either crystalline silicon or thin-film semiconductor material. Crystalline silicon cells are more efficient at converting sunlight to electricity, but generally have higher manufacturing costs. Thin-film materials are typically less efficient at converting sunlight into electricity, but can be cheaper to manufacture.

A key part of the PV crystalline silicon cell manufacturing process is the metallization of the cell – i.e., laying down metal electrodes to collect the electricity generated by the cell when exposed to sunlight. Typically, the metallization process is completed by the application of a silver paste to the front side and aluminum-silver pastes on the rear side of the cell using a screen-printing process. This process is one of the main bottlenecks to reducing the costs of the cells and the cost of electricity produced by the cells due to: high usage of metal (expensive silver), loss of paste in the process (some paste stays in the screens), cell breakage in the printing process (contact printing), wide printed patterns (higher shading of cells, less surface exposed to the light) and limited electrical properties of the pastes.

Although silver demand for photovoltaic applications is hard to estimate as markets and technologies are constantly changing, the leading new PV cells need only one-fifth or less as much silver as a decade before. According to a 2020 report from S&P Global, the photovoltaic sector accounts for ~ 10% of the total silver consumption, which is around 28,000 metric tons per year.

Silicon crystalline solar cells are being replaced by different types of cells like thin fil, HTJ, CIGS and others. By 2025 is expected that more than 10% of the market will be these type of cells. Most of these cells are temperature sensitive, therefore the screen printing process not compatible with them. Inkjet printing with our low temperature sintering inks is compatible with these cells. PVN has demonstrated with one of its customers that implementing Sicrys™ silver inks with inkjet printing increases substantially the efficiency of the cells.

We believe that a significant market opportunity exists for a non-contact metallization low temperature sintering solution that is competitive with traditional screen printing process, does not break silicon cells, allows for thinner PV cell wafers (thus reducing silicon costs, which we believe to be a major obstacle to the wider proliferation of solar cell technologies), increases the active area of the cell by printing narrower conductors, and yields better electrical performance than screen-printed conductors. We believe that the market for inks to be used in inkjet printing for PV applications is a small subset of the market for silver pastes and inks in PV cell production generally, as described above. We further believe that such market has a potential to grow over time given the benefits of inkjet printers and the benefits of our silver and copper based Sicrys™ inks, which, among others, apply to a range of printer devices, and have lower costs and simpler operating procedures when compared to photolithography processes commonly used. See “ITEM 4 B. — Business Overview — Our Solutions — Printed Electronics”.

The Market

The analog process used to produce electronics are very complicated, environmentally unfriendly, and inefficient as it contains many production steps, and is capex expensive and limited in its performance.

Digitally printing electronics present many advantages over the traditional analog method, including:

- It is an additive process, no etching, or dangerous waste are involved or generated;
- No need to prepare masks and fixtures (Time to Part measured in hours as opposed to days);
- Single machine will produce the final PCB (today the part is transferred between more than 10 different production machines);
- Shorten time to product;
- Digital process will allow printing of passive components (resistors & capacitors) embedded in the layers (\$75 billion addressable market excluding the sale of inks to print embedded passive components);

- a. Free mounting area on the outer surfaces (will allow minimizing the surface area and thickness).
- b. Saving component mounting costs and complexity.
- Shows narrower line and gap capabilities (will allow minimizing the surface area, thickness and production of denser circuitry);
- The digital process will allow any electrical connections between the different layers – easier design;
- Digital additive manufacturing processes are less sensitive to substrates types; and
- Additional flexibility in product design allowed, such as different metal thicknesses in same layer, embedded passive components printed in layers, customization of electronics and more.

While there are quite a few companies that have silver conductive inks (which are not compatible with mass production processes), there are very few companies offering copper nano particle dispersions, which, to our knowledge, are not inks. The Company offers silver and copper-based inks. Over 2019-2020 we have expanded our ink portfolio to include gold, resistors and dielectric inks.

As of December 15, 2020, the silver metal was approximately 100 times more expensive than copper metal which may eventually allow us to price copper inks at two to three times lower than silver inks and easily compete with analog conductive inks and processes.

Product Development

We offer and sell several conductive inks based on either silver or copper. Inks are sold through our web site as well as directly to customers or through distributors. Our operations team is well-trained for prompt delivery at a consistently high quality. To date, although we have had limited sales, we have not had any product returns.

Our Application and Research and Development, or R&D, team's efforts are focused on four main goals:

1. Continuous improvement and ink optimization (technical customer support):
 - a. Adapting the inks to the different available printers in the market;
 - b. Optimizing inks for new applications; and
 - c. Reducing the sintering temperature, or the process that physically connects between the nano metal particles to produce a continuous conductive layer.
2. Development of the Digiflex Integrated Prototype Design and R&D Printer (Digiflex printer adapted for the electronic field- DemonJet) in three main steps using the same frame and infrastructure:
 - a. Integrated Prototype, design and R&D printers for one conductive layer;
 - b. Integrated Prototype, design and R&D printer for one conductive layer and embedded passive components; and
 - c. Integrated Prototype, design and R&D printers for full multi-layer PCB including embedded passive components, and inter layer connectors.

This printer is intended to include all the necessary elements to print electronics in the same tool. These capabilities include the capability to print up to ten inks in parallel with very high accuracy, sintering, drying, and inspection capabilities at an affordable price.
3. Develop embedded passive components printing capability:
 - a. R&D with respect to conductive inks already developed so that can be produced in commercially required quantities.

- b. Finalize inks development:
 - i. Dielectric inks (Nonconductive inks to print insulator layers);
 - ii. Resistor inks (Less conductive inks to print resistor embedded components);
 - iii. Capacitor inks (Nonconductive inks to print capacitors embedded components); and
 - iv. Conductive ink (New formulated inks to print vias, which are the electronic connections between PCB layers).
 - c. Materialize the printing process.
4. Process development (engineering):
- a. We offer our customers a complete solution approach, meaning equipment, process and inks. In this framework we are developing for our customers the printing process for their specific applications, including printing samples and prototypes for them. These activities are an additional revenue stream.

Our Solutions

Printed Electronics

We currently offer silver-based Sicrys™ inks and our newly developed copper-based Sicrys™ for use in the production of PE utilizing inkjet printers. We believe that inkjet production of PE utilizing our Sicrys™ inks results in the following benefits relative to traditional screen printing and photolithography processes:

- Significant cost reductions, as we estimate that we will be able to market our copper-based inks at 30% to 50% of the price of inks currently used in screen printing and photolithography processes;
- Applications for flexible and customized electronics and three-dimensional (3D) printed device manufacturing, due to digital (non-contact) printing and the lower sintering temperatures required for nano-based inks;
- Lower overall cost and simpler processes (e.g., estimated 50% reduction in costs for printing displays when compared to photolithography processes), thus potentially supporting customized and small batch printing;
- Significant reductions in the generation of hazardous waste by products;
- Implementation of additive production processes as opposed to the etching process commonly used today (for example for production of printed circuit boards by digital printing);
- Implementation of additive digital printing processes that will enable additional new design and production capabilities, e.g. print embedded passive components in the layers of PCB (resistors, capacitors and coils);
- Replace wet chemistry processes to make electronic devices (for example replace the LDS production process to make 3D mobile phone antennas by a digital printing process); and
- Broad range of potential uses, including current projects in the fields of automotive (glass and electronics), mobile phones (antennas and touch screens), one-layer PCB and printed electronics, solar cells, semiconductor packaging and 3D printed, in which our Sicrys™ inks are been used.

Photovoltaic Cell Metallization

Our Sicrys™ family of inks are low viscosity, nano-particle inks optimized for inkjet printing. We believe that PV cell metallization via inkjet printing utilizing our Sicrys™ inks results in the following benefits relative to traditional screen-printing processes:

- Immediate cost savings of around 15%, due to substantially lower metallization costs and increased cell efficiency;

- Potential future cost savings due to the ability to utilize thinner wafers for PV cells, thus reducing silicon costs and potentially further increasing cell efficiency;
- A more efficient printing process without breakage of PV cells (estimated to occur at a rate of 0.15% to 5% in traditional screen-printing processes) and without the need to regularly replace printing screens;
- Enhanced performance due to improved conductive properties enabling printing of contact lines that are significantly thinner than the lines that can be produced with screen printing;
- Improve performance of temperature sensitive solar cells (CIGS, CdTe, HTJ, thin films and others); and
- Potential future costs savings with copper inks which we are currently investigating to penetrate the new technologies (heterojunction cells based on copper metallization).

Our Strategy

Our goal is to become a leading producer of conductive inks for digital electronic printing applications. Our strategy is to concentrate our efforts on mass production applications opportunities by selling inks to be used in mass production printers with high throughputs and high consumption of inks per year. We are currently striving to apply our “Complete Solution” or “End-to-End” Approach, in which we will supply our customers with equipment, process and inks for their applications. We intend to provide a service to customers by not only selling inks, but also securing equipment suitable for implementation in their production lines, including Digiflex printers, and by working with them to develop the production processes suitable to the relevant applications and their needs (including printing strategy, printing temperature, sintering temperatures and time).

To date, we have generated limited sales and market our products primarily online presence and printed electronics exhibitions. However, we are also working on supplying conductive dispersions and inks based on our nano metal particles (Sicrys™) that may yield additional sales.

A significant amount of our expenditures will be used to implement our “Complete Solution Approach” for mass production processes. During 2019, we started to supply inks to three printers which have been installed and expect the number of printers to grow over 2021. The installed printers have capacities to consume up to 100-200 kg ink per year. During 2021, we expect that our current customers will install additional printers with capacity of 400-1000 kg ink per year. We are also considering different business models to allow us to quickly and efficiently implement the “Complete Solution Approach”.

In addition, we are continuing our efforts to:

- *Develop materials and technologies to fully print multi-layer PCBs.* We have recently demonstrated the feasibility of printing one layer one side PCBs. We have also demonstrated that we can print the inner layers in multi-layer PCBs. Printing the inner layers has the potential to reduce costs and hazardous waste levels. We have installed two first beta printers (DemonJet) at a customer’s site in Europe, which we are currently debugging and we are working with the customer developing its printed products. One of the customers is developing its products on the printer already.
- *Develop a network of third-party distributors and sales agents.* We are presently searching for other suitable distributors and sales agents in addition to our US and Japanese and Italian distributors, and have commenced negotiations with potential sales agents.
- *Increase market awareness of our products and technologies.* We are attempting to raise our profile in the relevant markets, as well as raise awareness of our product and technology offerings, by attending conferences, exhibitions and trade shows when this is feasible.
- *Have our inks qualified and recommended for use with inkjet printers and printer heads produced by leading manufacturers in the industry* FujiFilm Dimatix Inc. (an affiliate of FujiFilm) has qualified our inks and informed us that it recommended our inks to certain of its customers. M-Solv (a United Kingdom company) has tested our inks for high throughput long term printing and provided a positive report. Additional customers have qualified our inks and others are in the process. Many customers are recurring customers.

- *Partner with leading digital inkjet manufacturers to supply PE and PV potential customers our “Complete Solution Approach.”* We are in discussions with printer manufacturers, to seek to develop a “Complete Solution Approach” which bundles a suitable printer together with the appropriate process and inks (taking into account quality, through put, pricing and other similar considerations), thereby providing our customers a complete solution for implementing a digital conductive printing technology into their production processes. We have signed a cooperation agreement with Notion Systems (Germany).
- *Apply our technology to other fields* We are currently investing substantial efforts with several potential customers (worldwide) to implement the digital printing technology in their processes. We are qualifying the inks and printing samples for their qualification process. In the automotive, solar and medical fields.
- *Develop copper based digital printing inks for solar cells applications* We are working to develop a copper ink and process (printing and sintering) which will be compatible with HJT type solar cells. This printing process would replace the wet plating chemistry used today to build the conductive patterns.

We have several development consortiums in the framework of the European Horizon 2020, an R&D support program in Europe, which provides grants for research and development, including to companies in Israel which are a part of the organization. The grants will be used to expand our knowhow and network through research and development that we commit to, the costs of which will be reimbursed in part by European Horizon 2020. Two consortiums have been successfully finalized during 2019 and 2020 (HIPERLAM and DigiMan).

The DigiMan project commenced its activities in December 2018 and was successfully finished in November 2020. The goal of the project was to develop digitally printed sensors in a roll-to-roll continuous digital printing system. The partners in this project were commercial companies and research entities in Israel, Germany and Russia. Namely, Chemnitz University (Germany), National Research Nuclear University (Russia), MEPHI (Russia), IKTS (Germany), Kerafol Keramische Folien (Germany) and CPC (Israel).

Additional projects have been approved for financing in 2019 and 2020 which are active:

- **InkJetPCB** – A two year project (started 2019) project financed by Eurostars, aiming to develop Inkjet-based fabrication of multilayer printed circuit boards with embedded printed passive elements. Based on our DemonJet Printers, two printers have been sold and installed to the project partners. The partners in this project are Profactor (Austria), SCIO (Austria), Notion (Germany), Fela (Germany) and Tiger (Austria).
- **RolaFlex** – A three-year project (started 2020) financed by the Horizon 2020 framework. The project vision is to combine high-resolution laser printing and laser patterning and new materials with high throughput R-2-R process. The technology will be demonstrated in the high-speed fabrication of OLAE components. The partners in this project are TNO (The Netherlands), Armor (France), Golem (Germany), Seqens (France), FlexEnable (UK), NTUA (Greece), Imperial Collage (UK), Avantama (Switzerland).
- **Tinker** – A three-year project (started 2020) financed by the Horizon 2020 framework (a ~\$12M budget, of which PVN has a budget of \$0.79M). The project’s vision is to provide a new cost and resource-efficient pathway for RADAR and LIDAR sensor package fabrication with high throughput of up to 250 units/min. Partners in this project are: Bosch (Germany), Infineon (Germany), Profactor (Austria), Ibeo (Germany), Marelli (Italy), Leti (France), Notion (Germany), Tiger (Austria), EVG (Austria), Inkron (Finland), Sentech (Germany), Forth (Greece), Austrian Standards (Austria), Besi (The Netherlands), and Amires (Switzerland).

Competition

The digital electronic printing and inkjet conductive ink manufacturing industries are extremely competitive. We are currently aware of various existing products in the market and in development that may compete with our products and technologies. To our knowledge, more than twenty other companies are currently developing silver-based inkjet inks for PE digital electronic inkjet printing applications. Some of these companies already sell conductive inkjet inks for PE applications. Of those, to our knowledge, no other company claims to have metallization inkjet inks for silicon nitride-based PV applications. We are aware of at least eight companies seeking to develop copper-based inks for inkjet printing, including NovaCentrix Corp, Hitachi Chemical Co. Ltd., IntrinsicQ Materials Ltd., Cuprochimique NV, Promethean Particles Ltd., Copprint Technologies Ltd., Printcb Ltd and Nanotec Electronic U.S. Inc. However, to our knowledge none of our competitors has copper based low viscosity inks compatible with digital printing in mass production and at a commercially viable price and quantity.

We believe that a number of other companies and entities, that we are not completely familiar with, claim to be able to supply nano silver particles, dispersions or inks. These include, but not limited to:

Applied Nanotech, Inc.
BASF SE
NCC Nano, LLC dba NovaCentrix
GENES'INK SA
InkTec Co., Ltd.
Sun Chemical Group.
Methode Electronics Inc.
NanoDimension Inc.

PCHEM Associates Inc.
Harima Chemicals Group, Inc.
Clariant International Ltd.
Poly ink
Paru Co., Ltd.
Dupont
Amepox Ltd.
ULVAC Inc.

To our knowledge, our competitors' inks differ substantially from our inks. We believe that our inks have the following competitive advantages, relative to those currently being sold by our competitors, especially when aiming to print on mass production applications and throughputs:

- Higher metal load at low viscosities, which results in a more cost-efficient printing process;
- Higher stability and for a longer period of time (over one year for Sicrys™ at room temperature as compared to less than six (6) months for our competitors, some of which require their inks to be stored at low temperatures to remain stable for an extended period of time);
- Copper inks with a similar stability profile as our silver inks (including its chemical stability), which is difficult to achieve due to the low oxidation point for copper, which results in certain of our competitors offering copper oxide inks as opposed to pure copper inks;
- More robust printing;
- Proven narrow pattern printing (< 50 μm);
- Low resistivity. ($\rho < 2.5 \times$ bulk. Laser and thermal sintering);
- Low sintering temperature (< 150 °C);
- Unique products – Silver environmental resistance, copper and solar cell metallization inks;
- Lower cost (due to low production costs for the inks and, with respect to our copper inks, the lower cost of copper as compared to silver);
- Silver inks suitable for solar cells metallization which can show higher efficiency due to enhanced electrical properties after firing the cells (low contact resistance and resistivity);
- Customizable per wafer type;
 - Customizable per application.
 - Additional inks including gold, resistor and dielectrics.
- Compatibility with high throughput industrial printing (high jetting frequencies for long periods of time); and
- Sicrys™ production process – 2 metric tons/year (soon 20 metric tons/year):
 - Scaled up.
 - Efficient and green process.
 - Low cost equipment & process.

Furthermore, we believe that there is a high barrier to entry for competitors to develop and successfully bring competing inks to market due to the long lead times required to develop nano particles of an appropriate size to formulate inks compatible with inkjet printing and the difficulty in producing nano-based inks in large-scale quantities. Moreover, in order to be suitable for use in a silicon nitride solar cell metallization process, nano-based inks require the use of additional additives. These additives are not readily commercially available, and we have an exclusive license for these additives from IKTS, which developed them especially for our inks. Pursuant to the license, IKTS has agreed to manufacture for us these ingredients in a limited quantity per year. If we require greater quantities, IKTS has agreed to transfer the production file and knowhow to our chosen manufacturer. We are required to pay royalties of \$25 per kg of these ingredients which will not be manufactured by IKTS. In addition, we are obligated to pay a minimum annual royalty of €2,000 (\$2,247 based on the exchange rate of \$1.00 / €0.89 in effect as of December 31, 2019) deductible against royalties due. To date, we have acquired the needed quantities of these ingredients solely from IKTS.

Notwithstanding the foregoing, many of our competitors have substantially greater financial, technical, and other resources, such as larger research and development staff and experienced marketing and manufacturing organizations. Mergers and acquisitions in the conductive ink industry may result in even more resources being concentrated in our competitors. As a result, these companies may be more effective in selling and marketing their products. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large, established companies. Competition may increase further as a result of advances in the commercial applicability of technologies and greater availability of capital for investment in this industry. Our competitors may succeed in developing, acquiring, or licensing on an exclusive basis, products that are more effective or less costly than our current or future products or technologies, or achieve earlier patent protection, product commercialization, and market penetration than we do. Additionally, technologies developed by our competitors may render our potential products and technologies uneconomical or obsolete, and we may not be successful in marketing our products and technologies against competitors.

System Competition to our Digiflex Printer

To our knowledge, most print producers offer printers that can print one or two prints at a time and do not have the additional capabilities that the Digiflex printers include, such as drying, laser sintering and inspection. We note that one of our competitors, Nano Dimension Ltd (Nasdaq: NNDM), focuses on the 3D PCB prototype market, using silver & Dielectric inks to print at very low speeds.

Research and Development Agreements, License Agreements and Material Contracts

We are engaged in R&D programs with the Authority, pursuant to the Encouragement of Research, Development and Technological Innovation in the Industry Law 5744-1984 (formerly known as the Law for the Encouragement of Research and Development in Industry 5744-1984), and the regulations promulgated thereunder. Under the terms of these programs, we are required to pay to a royalty of 3.0% of sales of products resulting from research and development partially financed by the Authority. However, such royalty obligations will not exceed the grant amount received, as linked to the U.S. dollar and including accrued interest at the LIBOR rate. The obligation to pay these royalties is contingent on actual sales of the products and in the absence of such sales, no payment is required. During 2019, 2018 and 2017, we paid royalties to the Authority in the amount of \$2,091, \$2,551 and \$305, respectively. The total grants we and Nano Size received as of December 31, 2019 aggregated to \$1,150,559. Our total contingent liability (including interest) as of December 31, 2019 with respect to royalty-bearing participation received, net of royalties paid, amounted to \$1,472,856. As of December 31, 2019 and 2018, Digiflex, received grants for research and development efforts from the Authority in an aggregate amount of approximately \$2.2 million, out of which an amount of approximately \$1.1 million was repaid to the Authority by Jet CU PCB Ltd (“Jet CU”) as a result of their technology and know-how sale to a foreign company which was authorized by the Authority and resulted in such payment in January 2018. The contingent remaining liability (after additional payments) was reduced to approximately \$1.0 million.

Term Sheet with Large Chemical Pharmaceutical Company.

In April 2018, we entered into a non-binding term sheet with a large chemical pharmaceutical company, subject to the execution of a supply agreement, which sets forth the key terms for the supply of nano silver particle dispersions to such company pursuant to purchase orders to be supplied by such company to us. Pursuant to the term sheet, the Company will grant such company an exclusive license to use the ink it will purchase in such company’s decorative applications. The term sheet is in effect for three (3) years.

Intellectual Property

An important part of our business and product development strategy is to seek, when appropriate, protection for our products and proprietary technology through the use of various United States and foreign patents. Our patent application covering silver single crystal particle inks and dispersions have been granted in China, Russia, Japan, Europe, India, Israel, Korea, Brazil and the U.S. We currently have patent applications pending in the European Union and Israel supporting our silver-based inks. We have patent applications based on PCT/IB2015/051536, relating to copper-based ink, filed on March 3, 2015, which have been submitted to national phase and has been granted in the Russia and United States and are pending in additional countries. We have an approved joint patent with Ramot (Tel Aviv University) for “Conductive Nanowire Films” (WO 2013/128458, US 9,373,515 B2) which Ramot maintains pursuant to the termination settlement of the Magnetron Program.

The silver family (granted in the United States (9,556,350), Russia (RU 2593311), China (CN 103282969), Europe (2649621), Israel (226665), India (324986), Korea (10-1932781), Brazil (11 2013 013885-8 A2) and Japan (JP 6067573 & JP 6363138)) main claims are on the concentrated dispersions and inks made of a majority of single crystal Nano silver particles and the method for producing them. The single crystal particles are easy to police against infringement. The priority date is December 6, 2010.

The copper family relates to nano-metric copper formulations and stable dispersions containing single-crystal metallic copper particles, and to the method of producing such formulations and dispersions. It is in national phase in the United Kingdom, Europe, Brazil, India, South Korea, Japan, China, Israel, Russia and the United States. The priority date is March 3, 2015. The patent has been granted in the United States (1/1/2019 number 10,166,602).

In 2013, we submitted a joint patent with Tel Aviv University: Device and process to make transparent conductive coatings based on very high aspect ratio nano-wires, which form on the substrate: US 9,373,515 B2 Conductive Nanowires Films.

Our wholly-owned subsidiary, Nano Size, has been granted several patents in the field of ultrasonic manufacturing of nano materials (7,157,058 (US); 7,504,075 (US); 144638 (IL); 149932 (IL)). We do not believe that these patents are material to our business. We intend to continue to seek patent protection for our products that we may develop in the future.

Digiflex has been granted several patents for inks, primers and primer lamination in the field of graphic arts in several countries, including, but not limited to, the United States, European Union, Canada, China, France, Germany, United Kingdom, Germany, India and Israel. These include: Process for Producing a Photomask on a Photopolymeric Surface; USA 9,513,551 and 12 countries and Process for Dry-coating of Flexographic Surfaces; USA 9,352,544.

The patenting of technology-related products and processes involves uncertain and complex legal and factual questions. To date, no consistent policy has emerged regarding the breadth of claims of such technology patents. Therefore, there is no assurance that our pending applications will issue, or what scope of protection any issued patents will provide, or whether any such patents ultimately will be upheld as valid by a court of competent jurisdiction in the event of a legal challenge. The costs of such proceedings would be significant and an unfavorable outcome could result in the loss of rights to the invention at issue in the proceedings. If we fail to obtain patents for our technology and are required to rely on unpatented proprietary technology, there is no assurance that we can protect our rights in such unpatented proprietary technology, or that others will not independently develop substantially equivalent proprietary products and techniques, or otherwise gain access to our proprietary technology.

Competitors have filed applications for, or have been issued patents, and may obtain additional patents and proprietary rights relating to products or processes used in, necessary to, competitive with, or otherwise related to, our patents. The scope and validity of these patents, and the extent to which we may be required to obtain licenses under these patents or under other proprietary rights and the cost and availability of licenses is unknown. This may limit our ability to license our technology. Litigation concerning these or other patents could be protracted and expensive. If suit were brought against us for patent infringement, a challenge in the suit by us as to the validity of the other patent would have to overcome a legal presumption of validity. There can be no assurance that the validity of the patent would not be upheld by the court or that, in such event, a license of the patent to us would be available. Moreover, even if a license were available, the payments that would be required are unknown and could materially reduce the value of our interest in the affected products.

We also rely upon unpatented trade secrets. No assurances can be given that others will not independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets or disclose such technology or that we can meaningfully protect our rights to our unpatented trade secrets. We require our employees, consultants, advisors, and any third parties who have access to our proprietary know-how, information, or technology to enter into confidentiality agreements with us, which provide that all confidential information developed or made known to the individual during the course of the relationship is to be kept confidential and not disclosed to third parties except in specific circumstances. In the case of employees and consultants, the agreements provide that all inventions conceived by the individual will be our exclusive property or will be assigned to us. There is no assurance, however, that these agreements will provide meaningful protection for our trade secrets and other confidential proprietary information in the event of unauthorized use or disclosure of such information.

Marketing and Sales

We currently have a small marketing and sales operation consisting of two full-time employees (Chief Business Development Officer and Inside Sales Manager). In addition, our Chief Executive Officer generally devotes a portion of his efforts to increasing awareness of, and marketing, our products. We are already working with distributors in the United States, South Korea, Italy, Japan and China and intend to collaborate with additional third-party distributors and sales agents with established sales and marketing operations and industry experience to market our inks. However, there can be no assurance that we will be able to enter into distribution and/or sales agency agreements on terms acceptable to us or at all, or that such distributors or sales agents will be successful in marketing our inks. We are not currently aiming to expand the Digiflex graphics arts fields, as we transition and integrate its printers into the electronics field. As such we are not yet marketing these printers for the graphic arts field and just have started to market them for the electronics field now.

Seasonality

Our business and operations are generally not affected by seasonal fluctuations or factors.

Raw Materials and Suppliers

We believe that the raw materials that we require to manufacture our inks are readily available in adequate quantities from multiple sources, except that certain additives required to make our inks suitable for use in solar cell metallization processes are not readily commercially available, and we have an exclusive license for these additives from IKTS as described above under “—Research and Development Agreements, License Agreements and Material Contracts.” In addition, the manufacturing process for our silver-based inks utilizes a silver salt the price of which is linked to the price of silver. The price of silver is affected by numerous factors beyond our control, including inflation, fluctuation of the United States dollar and foreign currencies, global and regional demand, speculative activities by commodities traders and others and the political and economic conditions of major silver producing countries throughout the world. See “Item 3 D. — Risk Factors — We are subject to risks resulting from fluctuations in the price of silver.”

Manufacturing

We manufacture our inks at our Migdal Ha’Emek facilities. We currently have capacity to produce an estimated two (2) tons of ink per year, and intend to upgrade our facilities (at an estimated cost of \$500,000) to increase production capacity to 19 tons per year, if and when demand for our inks is projected to surpass our production capabilities and we have sufficient financing to do so. In the event that demand for our inks outgrows our internal manufacturing capacity, we intend to engage third-party manufacturers to produce additional inks. There can be no assurance that we will be able to enter into agreements with qualified manufacturers on terms acceptable to us, or at all, or that, once contracted, such manufacturers will perform as expected.

Government Regulation

We are subject to various environmental, health and safety laws, regulations and permitting requirements, including those governing the emission and discharge of hazardous materials into ground, air or water; noise emissions, the generation, storage, use, management and disposal of hazardous waste; the registration of chemicals and in the future also import and export; the clean-up of contaminated sites; and the health and safety of our employees. Under such laws and regulations, we are required to obtain environmental permits from governmental authorities for certain operations. The manufacture of our products requires storing or using certain hazardous materials. Pursuant to the Israeli Dangerous Substances Law - 1993, we are required to (and did) obtain a toxin permit from the Ministry of Environmental Protection. Our permit is valid until November 5, 2021.

Other than applicable local laws in Israel relating to the handling and disposal of hazardous materials and waste, there are no government regulations that are material to the conduct of our business. If we establish manufacturing operations in other jurisdictions, we expect to become subject to environmental, health and safety laws, regulations and permitting requirements in those jurisdictions, which may be similar to or more onerous than those described above.

C. Organizational structure

We have three (3) wholly owned subsidiaries, Nano Size Ltd., or Nano Size, a private company organized under the laws of the state of Israel which we acquired on December 31, 2009, Digiflex, which we acquired on December 3, 2017. Additionally, we indirectly own, through Digiflex, two (2) subsidiaries of Digiflex, one in the USA (Digiflex Inc.) and one in Hong Kong, Digiflex HK Limited, which was inactive since inception and materially dissolved during March 2019 and Jet CU, a private company organized under the laws of the state of Israel which we acquired on July 26, 2020.

D. Property, plants and equipment

We currently lease, through Nano Size, approximately 7,300 square feet of space in Migdal Ha'Emek, Israel for our principal offices and manufacturing facilities at a monthly cost of approximately NIS 15,493 (\$4,483). Those current lease agreements expires on June 30, 2022.

Additionally, Digiflex leased approximately 2,900 square feet of space at 6 Yad Haruzim, Kfar Saba, Israel for its principal office and laboratory at a monthly cost of approximately NIS 12,500 (\$3,617). This lease was mutually ended on March 15, 2020. Digiflex currently lease approximately 1,200 square feet of space in Migdal Ha'Emek, Israel for its principal office and laboratory at a monthly cost of approximately NIS 5,000 (\$1,447). This lease agreement expires on September 14, 2021.

We currently own production equipment, housed in our Migdal Ha'Emek facilities, capable of producing up to two (2) tons of ink per year. We intend to upgrade our facilities (at an estimated cost of \$500,000) to increase production capacity to 20 tons per year, if and when demand for our inks is projected to surpass our production capabilities.

ITEM 4A. Unresolved Staff Comments.

Not applicable.

ITEM 5. Operating and Financial Review and Prospects.

A. Operating results

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with “Item 3 A. — Selected Financial Data” above and our consolidated financial statements and related notes that appear elsewhere in this annual report on Form 20-F. In addition to historical financial information, the following discussion contains forward-looking statements that reflect our plans, estimates and beliefs. Our actual results could differ materially from those discussed in the forward-looking statements. Factors that could cause or contribute to these differences include those discussed below and elsewhere in this annual report on Form 20-F, particularly in the sections titled “Item 3 D. — Risk Factors” and “Cautionary Note Regarding Forward-Looking Statements.”

Overview

We are a conductive ink manufacturing company focused on developing, manufacturing, marketing and commercializing conductive inks for digital conductive printing applications (mainly inkjet and aerosol printing technologies). We have developed the Sicrys™ family of single crystal nano-metric conductive inks, which we believe enables a significantly less costly and less wasteful alternative to current screen printing and, in some cases, photolithography etching processes for photovoltaic (PV) and printed electronics (PE) applications. Our main strategy includes providing a “complete solution” to our customer, meaning we provide the printing equipment, process and inks as a package. In some cases we subsidize the printer, thus implementing a razor blade model). We also adapt our basic inks to specific customer requirements. We began low volume sales of our Sicrys™ silver-based inks for PV and PE applications in 2010 and are in the process of seeking to expand our sales efforts to include sales of Sicrys™ inks for a wider range of PE applications, including for the printing of windshields in automotive applications, circuit boards, mobile phone antennas, 3D printed electronic devices, radio-frequency identification chips, sensors and touchscreens, among other digitally printed electronics. We have also developed what we believe is the first available commercially viable copper-based nano-metric ink for mass-production of printed electronics. We believe that copper inks represent a significant improvement over silver-based inks given copper's significantly lower cost and nearly identical electrical and conductive properties. We began low volume sales of our copper-based ink for printed electronics applications in the second half of 2014. The sales of our Sicrysilver inks have continued to increase from 2018 to 2020 through 2019.

Notwithstanding the effects of COVID-19, our business (sales and projects) has continued to grow through 2020 (incomes from sales almost doubled in 2020 to over \$800,000 and grants for R&D consortiums have passed \$500,000). Our growth has been limited (sales grew less than expected) due to slow down of our customers and partners, and also due to traveling constrains imposed by governments due to COVID-19. Two of our main customers have purchased inks and services from us much less than forecasted and expected. Our plans to upgrade our DemonJet printers, develop the inks and technologies to print passive components have been slowed down due to the reduction of activities of our partners in Europe and reduced available resources. One of our employees has been put in unpaid leave and we have reduced the team by two team members. Due to the COVID-19 influence on the world economics, silver prices (our main raw material have increased substantially (from 17.1 US\$/oz in January 2019 to 24.08 US\$/oz in December 14 2020, [https://ycharts.com/indicators/silver price](https://ycharts.com/indicators/silver_price)). Until now we have managed to raise our product prices to counter effect this price increase of silver. We have started to test the anti-viral activity of our nano particles. First tests have shown positive results but these tests have not been completed yet.

Financial Overview

We have incurred net losses since our inception in 2009, including a net loss of approximately \$4.0 million for the year ended December 31, 2019. As of December 31, 2019, we had an accumulated deficit of approximately \$21.0 million. We have devoted substantially all of our financial resources to identifying, acquiring, licensing, and developing our products and technologies and providing general and administrative support for these operations. To date, we have financed our operations primarily through the sale of equity and convertible securities and government grants. The amount of our future net losses will depend, in part, on the rate of our future expenditures and our ability to generate significant revenues via commercialization of our products or technologies. We are dependent upon external sources to finance our operations and there can be no assurance that we will succeed in obtaining the necessary financing to continue our operations. As a result, our independent registered public accounting firm has expressed substantial doubt about our ability to continue as a going concern.

Results of Operations

The following table sets forth a summary of our operating results:

US \$	Year ended December 31,		
	2019	2018	2017
Consolidated Statement of Operations Data:			
Revenues	\$ 478,520	\$ 460,739	\$ 88,691
Cost of Revenues	236,493	388,265	94,238
Amortization of intangible assets	428,431	470,773	37,694
Gross loss	186,404	398,299	43,241
Research and development, net	731,021	775,643	404,891
Sales and marketing	673,983	550,008	480,963
General and administrative	1,319,239	1,297,711	1,227,632
Goodwill impairment	-	161,381	-
Acquisition related costs	-	-	750,956
Total operating expenses	2,724,243	2,784,743	2,864,442
Operating loss	2,910,647	3,183,042	2,907,683
Financial expenses (income), net	1,042,358	(1,210,484)	(63,778)
Net loss	\$ 3,953,005	\$ 1,972,558	\$ 2,843,905

Year ended December 31, 2019, compared to year ended December 31, 2018:

Revenues

With respect to the years ended December 31, 2019 and December 31, 2018, total revenues amounted to \$478,520 and \$460,739, respectively, an increase of \$17,781 or 4%. The slight increase in revenues related primarily to organic growth year over year in PVN due to the sales of more Inks and engineering service which was introduced in 2019, partially offset by a decrease in Digiflex business, as the Digiflex business is not consistent with our shift towards printed electronics technology. Therefore, we expect this decrease trend to continue. Our revenues continued to grow significantly in 2020.

Cost of revenues

With respect to the years ended December 31, 2019 and December 31, 2018, total cost of revenues amounted to \$236,493 and \$388,265, respectively, a decrease of \$151,772 or 39%. The decrease as a percentage of revenues or the increase in the gross margin is due to on-going efforts to optimize and improve our production process (higher yields per raw materials, workforce and lower costs) as well as increases in the prices of some products.

Amortization of intangible assets

With respect to the years ended December 31, 2019 and December 31, 2018, total amortization of intangible assets amounted to \$428,431 and \$470,773, respectively, a decrease of \$42,342 or 9%. We recorded Technology and Backlog as Intangible assets as part of the Digiflex purchase as of December 3, 2017 and commenced amortizing both on that date over ten (10) years and one (1) year, respectively. The slight decrease relates to the fact that the Backlog amortization ended on December 2, 2018.

Gross loss

With respect to the years ended December 31, 2019 and December 31, 2018, total gross loss amounted to \$186,404 and \$398,299, respectively, a decrease of \$211,895 or 53%. The decrease related to an increase of \$17,781 in revenues, a decrease of \$151,772 in cost of revenues and a decrease of \$42,342 in amortization of intangible assets.

Research and development expenses, net

With respect to the years ended December 31, 2019 and December 31, 2018, net research and development expenses, were \$731,021, net of \$256,423 grants received and \$775,643, net of \$314,652 grants received, respectively, a decrease of \$44,622 or 6%, respectively. The decrease in research and development related primarily to lower workforce which was partially offset by lower grants year over year. Over the last few years, we have succeeded to build several network projects which helped us with research and development efforts and at the same time resulted in receiving supporting research and development grants.

Sales and marketing expenses

With respect to the years ended December 31, 2019 and December 31, 2018, sales and marketing expenses amounted to \$673,983 and \$550,008, respectively, an increase of \$123,975 or 23%. The increase in sales and marketing expenses related primarily to additional workforce year over year.

General and administrative expenses

With respect to the years ended December 31, 2019 and December 31, 2018, general and administrative expenses amounted to \$1,319,239 and \$1,297,711, respectively, an increase of \$21,528 or 2%. The increase in general and administrative expenses related primarily to additional workforce year over year.

Goodwill impairment

With respect to the years ended December 31, 2019 and December 31, 2018, goodwill impairment amounted to \$0 and \$161,381, respectively. The goodwill was recorded as part of the Digiflex purchase as of December 3, 2017. We adopted the quantitative goodwill impairment test by comparing the fair value of its reporting unit with its carrying value. The result of that test as of December 31, 2019 was that the fair value was greater than the reporting unit's carrying value and therefore no goodwill impairment was recorded as of that date while as of December 31, 2018 the reporting unit's carrying value was greater than its fair value and as a result, we recorded a goodwill impairment charge of \$161,381 and presented such charge as a separate line item within its statement of comprehensive loss for the year ended December 31, 2018.

Operating expenses

With respect to the years ended December 31, 2019 and December 31, 2018, operating expenses amounted to \$2,724,243 and \$2,784,743 respectively, a decrease of \$60,500 or 2%. The decrease related to a decrease of \$161,381 in goodwill impairment and \$44,622 in research and development, net, partially offset by an increase of \$123,975 in sales and marketing expenses and an increase of \$21,528 in general and administrative expenses.

Operating loss

With respect to the years ended December 31, 2019 and December 31, 2018, operating loss amounted to \$2,910,647 and \$3,183,042, respectively, a decrease of \$272,395 or 9%. The decrease in operating loss related to a decrease of \$211,895 in gross loss and a decrease of \$60,500 in operating expenses.

Financial expenses (income), net

With respect to the years ended December 31, 2019 and December 31, 2018, financial expenses (income), net, amounted to \$1,042,358 and (\$1,210,484). The change in financial expenses (income), net relates primarily to a change in fair value of warrants and capital note presented at fair value of \$2,246,936, partially offset by a decrease of \$69,110 in financial expenses in connection with convertible loans.

Net loss

With respect to the years ended December 31, 2019 and December 31, 2018, net loss amounted to \$3,953,005 and \$1,972,558, respectively, an increase of \$1,980,447 or 100%. The increase in net loss related to an increase of \$2,252,842 in financial expenses (income), net, partially offset by a decrease of \$272,395 in operating loss.

Year ended December 31, 2018, compared to year ended December 31, 2017:

Revenues

With respect to the years ended December 31, 2018 and December 31, 2017, total revenues amounted to \$460,739 and \$88,691, respectively, an increase of \$372,048 or 420%. The increase in revenues relates to the fact that during 2018 we recorded Digiflex activities for the entire year within our statement of operations while in previous year we recorded such activities only commencing the purchase date (December 3, 2017 through December 31, 2017) as well as an organic growth in the Company's revenues.

Cost of revenues

With respect to the years ended December 31, 2018 and December 31, 2017, total cost of revenues amounted to \$388,265 and \$94,238, respectively, an increase of \$294,027 or 312%. The increase is consistent with the increase in revenues.

Amortization of intangible assets

With respect to the years ended December 31, 2018 and December 31, 2017, total amortization of intangible assets amounted to \$470,773 and \$37,694, respectively, an increase of \$433,079 or 1,149%. This amortization was recorded as a result of the intangible assets that were acquired as part of the Digiflex acquisition. The increase relates to the fact that during 2018 the Company recorded an amortization for the entire year while in previous year only commencing the purchase date (December 3, 2017 through December 31, 2017).

Gross loss

With respect to the years ended December 31, 2018 and December 31, 2017, total gross loss amounted to \$398,299 and \$43,241, respectively, an increase of \$355,058 or 821%. The increase related to an increase of \$433,079 in amortization of intangible assets and \$294,027 in cost of revenues, partially offset by an increase of \$372,048 in revenues.

Research and development expenses, net

With respect to the years ended December 31, 2018 and December 31, 2017, net research and development expenses, were \$775,643, net of \$314,652 grants received and \$404,891, net of \$382,134 grants received, respectively, an increase of \$370,752 or 92%, respectively. The increase in the net research and development costs relates primarily to the fact that during 2018 we recorded Digiflex activities for the entire year within our statement of operations while in previous year we recorded such activities only commencing the purchase date (December 3, 2017 through December 31, 2017). Those purchased activities contain, among other thing, additional employees who joined the Group which resulted in an additional salaries and related year over year.

Sales and marketing expenses

With respect to the years ended December 31, 2018 and December 31, 2017, sales and marketing expenses amounted to \$550,008 and \$480,963, respectively, an increase of \$69,045 or 14%. The increase in sales and marketing expenses relates primarily to the fact that during 2018 we recorded Digiflex activities for the entire year within our statement of operations while in the previous year we recorded such activities only commencing the purchase date (December 3, 2017 through December 31, 2017). Those purchased activities contain, among other thing, additional employees who joined the Group which resulted in an additional salaries and related year over year.

General and administrative expenses

With respect to the years ended December 31, 2018 and December 31, 2017, general and administrative expenses amounted to \$1,297,711 and \$1,227,632, respectively, an increase of \$70,079 or 6%. The increase in general and administrative expenses relates primarily to the fact that during 2018 we recorded Digiflex activities for the entire year within our statement of operations while in previous year we recorded such activities only commencing the purchase date (December 3, 2017 through December 31, 2017), partially offset by a decrease in the Company's professional services. Those purchased activities contain, among other thing, additional employees who joined the Group which resulted in an additional salaries and related year over year.

Goodwill impairment

With respect to the years ended December 31, 2018 and December 31, 2017, goodwill impairment amounted to \$161,381 and \$0, respectively. The goodwill was recorded as part of the Digiflex purchase as of December 3, 2017. We adopted ASU 2017-04, the quantitative goodwill impairment test by comparing the fair value of its reporting unit with its carrying value. The results of this test were that the reporting unit's carrying value was greater than its fair value and as a result, we recorded an impairment charge of \$161,381 which equal to the amount by which the carrying value exceeds the reporting unit's fair value.

Acquisition related costs

With respect to the years ended December 31, 2018 and December 31, 2017, acquisition related costs amounted to \$0 and \$750,956, respectively. The acquisition related costs during the year ended December 31, 2017 related to finder's fee in connection with the Digiflex acquisition. Such amount includes the following: (1) \$675,926 representing the fair value of warrants granted and (2) \$75,030 cash payment.

Operating expenses

With respect to the years ended December 31, 2018 and December 31, 2017, operating expenses amounted to \$2,784,743 and \$2,864,442 respectively, a decrease of \$79,699 or 3%. The decrease related to a decrease of \$750,956 in acquisition related costs, partially offset by an increase of \$370,752 in research and development, net, \$161,381 in goodwill impairment, \$70,079 in general and administrative expenses and \$69,045 in sales and marketing expenses.

Operating loss

With respect to the years ended December 31, 2018 and December 31, 2017, operating loss amounted to \$3,183,042 and \$2,907,683, respectively, an increase of \$275,359 or 10%. The increase in operating loss related to an increase of \$355,058 in gross loss, partially offset by a decrease of \$79,699 in operating expenses.

Financial income, net

With respect to the years ended December 31, 2018 and December 31, 2017, financial income, net, amounted to \$1,210,484 and \$63,778, respectively, an increase of \$1,146,706 or 1,798%. The increase in financial income, net relates primarily to an increase of \$1,788,434 in the change in the fair value of warrants and capital notes presented at fair value, partially offset by an increase of \$737,387 in Interest and accretion back in connection with convertible loans.

Net loss

With respect to the years ended December 31, 2018 and December 31, 2017, net loss amounted to \$1,972,558 and \$2,843,905, respectively, a decrease of \$871,347 or 31%. The decrease in net loss related to an increase of \$1,146,706 in financial income, net, partially offset by an increase in operating loss of \$275,359.

Summary of Critical Accounting Policies

The preparation of consolidated financial statements in conformity with GAAP 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. Critical accounting policies are those that are the most important to the portrayal of our financial condition and results of operations, and that require our most difficult, subjective and complex judgments. While our significant accounting policies are described in more detail in the notes to our consolidated financial statements, our most critical accounting policies, mentioned below, pertain to revenue recognition and Fair value of financial instruments. Estimates, by their nature, are based upon judgments and information currently available to us. The estimates that we make are based upon historical factors, current circumstances and the experience and judgment of management. We evaluate our assumptions and estimates on an ongoing basis.

Revenue recognition

For information with respect to revenue recognition, see Note 2.i. to the audited consolidated financial statements for the year ended December 31, 2019 included elsewhere in this annual report on Form 20-F.

Fair value of financial instruments

For information with respect to fair value of financial instruments, see Note 2.p. to the audited consolidated financial statements for the year ended December 31, 2019 included elsewhere in this annual report on Form 20-F.

Recent Accounting Pronouncements

For information with respect to recent accounting pronouncements, see Note 2.t. to the audited consolidated financial statements for the year ended December 31, 2019 included elsewhere in this annual report on Form 20-F.

Share-Based Compensation and Liabilities Presented at Fair Value

Ordinary Share Valuations

The fair value of the ordinary shares was used to determine the value of the warrants presented as a liability and share-based compensation. The following table sets forth the fair value of our ordinary shares as of the following dates:

	Date	Fair Value
Ordinary share	December 31, 2017	\$ 1.00
Ordinary share	December 31, 2018	0.11
Ordinary share	December 31, 2019	\$ 0.11

Up to mid-2019, the fair value of our ordinary shares was determined by our management. Even though we are a publicly traded company, our ordinary shares were traded at a very low volume and therefore we concluded that our traded ordinary share fair value does not represent a reliable fair value. As such, we selected a market approach and relied primarily on the late 2018 third-parties convertible loans transactions to determine our ordinary share fair value which was utilized as the basis for our warrants and options fair value calculations. Our management exercised significant judgment and considered numerous objective and subjective factors to determine the fair value of our ordinary shares in that period. Commencing mid-end 2019, our ordinary shares were traded at a decent volume and therefore we relied on the stock trading fair value.

Option Valuations

Under U.S. GAAP, we account for share-based compensation for employees and others in accordance with the provisions of the FASB's ASC Topic 718 "Compensation—Stock Based Compensation," or ASC 718, which requires us to measure the cost of options based on the fair value of the award on the grant date.

We selected the Black-Scholes option pricing model as the most appropriate method for determining the estimated fair value of options. The resulting cost of an equity incentive award is recognized as an expense over the requisite service period of the award, which is usually the vesting period. We recognize compensation expense over the vesting period using the straight-line method and classify these amounts in the consolidated financial statements based on the department to which the related employee reports.

The determination of the grant date fair value of options using the Black-Scholes option pricing model is affected by estimates and assumptions regarding a number of complex and subjective variables. These variables are estimated as follows:

- *Fair Value of our ordinary shares.* Discussed in the above “Ordinary Share Valuations”.
- *Risk-free Interest Rate.* The risk-free interest rate is based on the yield from U.S. Treasury zero-coupon bonds with a term equivalent to the contractual life of the options.
- *Volatility.* The expected share price volatility derived from sample of similar companies.
- *Dividend Yield.* We have never declared or paid any cash dividends and do not presently plan to pay cash dividends in the foreseeable future. Consequently, we used an expected dividend yield of zero.
- *Expected Life.* We used the “simplified” method, meaning the expected life is set as the average of the vesting period for each vested tranche of options and the contractual term for those options.

If any of the assumptions used in the Black-Scholes option pricing model change significantly, share-based compensation for future awards may differ materially compared with the awards previously granted.

The following table presents the weighted-average assumptions used to estimate the fair value of options granted to employees, officers and consultants during the periods presented.

	Year Ended December 31,		
	2019	2018	2017
Dividend yield	0%	0%	0%
Expected volatility	60%	60%	64%-70%
Risk-free interest	2.33%-2.71%	2.15%-2.91%	1.78%-2.28%
Expected life (in years)	4.15-7.00	3.50-4.37	4.50-7.00

Liabilities Presented at Fair Value

Some of our warrants are classified as liabilities in accordance with ASC No. 815-40, “Distinguishing Liabilities From Equity”. Accordingly, these warrants are required to be marked to market at each reporting date.

We estimated the fair value of these warrants and such conversion feature using a Black-Scholes option pricing model, which is affected by estimates and assumptions regarding a number of complex and subjective variables. These variables are estimated as follows:

- *Fair Value of our ordinary shares.* Discussed in the above “Ordinary Share Valuations”.
- *Risk-free Interest Rate.* The risk-free interest rate is based on the yield from U.S. Treasury zero-coupon bonds with a term equivalent to the contractual life of the warrants.
- *Volatility.* The expected share price volatility derived from sample of similar companies.
- *Dividend Yield.* We have never declared or paid any cash dividends and do not presently plan to pay cash dividends in the foreseeable future. Consequently, we used an expected dividend yield of zero.

In addition, the conversion feature of the Capital Note (as defined in “Item 7 B. — Related Party Transactions”) issued to a shareholder, is required to be marked to market at each reporting date. We estimated the fair value of the Capital Note by taking into account the expected occurrence of certain trigger events (such as Public Offering or M&A), multiplied by the value in a probability that the event will occur (based on our subjective assumptions) and discounting the value in an appropriate discount factor (based on the weighted average cost of capital of the Company) for a period of two (2) years.

Reporting Currency

Our functional currency is the U.S. Dollar, although substantial portion of our costs are incurred in NIS. We finance our operations mainly in U.S. dollars and a substantial portion of our costs and revenues from its primary markets are anticipated to be incurred and generated in U.S. dollars. As such, we believe that the U.S. dollar is the currency of the primary economic environment in which we operate.

Transactions and balances that are denominated in dollars are presented at their original amounts. Non-dollar transactions and balances have been re-measured to dollars in accordance with Accounting Standards Codification (“ASC”) No. 830, “Foreign Currency Matters”. All foreign currency transaction gains and losses are reflected in the statements of operations as financial income or expenses, as appropriate.

B. Liquidity and Capital Resources

We currently have limited liquidity. As of December 31, 2019 and 2018, our cash and cash equivalents on hand was \$34,382 and \$144,948, respectively. Based on our current cash burn rate, strategy and operating plan, we believe that our cash reserves as of December 31, 2020, will enable us to operate for a period of approximately two (2) months. In order to fund our anticipated liquidity needs beyond such period (or possibly earlier if our current cash burn rate, strategy or operating plan change in a way that accelerates or increases our liquidity needs), we will need to raise additional capital.

Cash flow resulting from financing activities:

To date, we have financed our operations primarily through the sale of equity and convertible securities as well as through government grants.

On October 10, 2018, we entered into a Convertible Loan Agreement with GTRIMG, or the GTRIMG Convertible Loan Agreement. Pursuant to the GTRIMG Convertible Loan Agreement, GTRIMG loaned us an initial amount of \$1,000,000, or the Initial Loan Amount, structured as a 24 month- convertible loan or less in case of a public offering of our shares, bearing interest at Israeli prime plus 4% per annum. Under the terms of the GTRIMG Convertible Loan Agreement, GTRIMG was granted an option to lend us an additional amount of up to \$2,000,000, or the Additional Loan Amount, out of which we received up to the date of this report an amount aggregated to \$1,266,748 in several installments (all of such loans matured in October 2020). We also granted GTRIMG a warrant to purchase ordinary shares for an aggregate purchase price of \$5,000,000, and an additional warrant conditioned upon the investment of an Additional Loan Amount to purchase ordinary shares for an aggregate purchase price of up to \$5,000,000 calculated pro-rata to the amount out of Additional Loan Amount provided. As of the date of this report, an amount of \$3,166,870 of the purchase price of the additional warrant has become exercisable. The conversion price for both the Initial Loan Amount, the Additional Loan Amount and the warrants shall be as calculated as set forth below but shall not fall below \$0.17 per share:

Whereas

“**CP**” – shall mean the Conversion Price

“**CPR**” – shall mean the Conversion Price Ratio

“**Closing NAV**” – shall mean the Total Shareholders’ Equity, as recorded in the most recent audited financial statements of the Company reported by the Company prior to the Closing Date, i.e. (\$2,802,720 as per the 2017 audited consolidated financial statements)

“**Conversion NAV**” – shall mean the Total Shareholders’ Equity, as recorded in the most recent audited financial statements of the Company reported by the Company prior to the Notice of Conversion.

“**NI**” – additional cash equity invested in the Company after the Closing Date and prior to the Conversion Date which was included in the most recent audited financial statements of the Company reported by the Company prior to the Notice of Conversion, provided that any changes in the Shareholders Equity due to other transactions which are not cash investments, i.e. changes due to merger, share swap, sale of assets etc. shall not be deducted under the NI. The CP shall not be affected by the transactions contemplated hereunder (i.e. by the Loan Amounts or the Warrants)

Accordingly,

$CPR = (\text{Conversion NAV} - NI) / \text{Closing NAV}$

And $CP = \$0.27 \times CPR$, but not less than \$0.17

On December 31, 2019, the Company and GTRIMG entered into a memorandum of understanding, or the MOU, pursuant to which GTRIMG agreed to provide additional loans to the Company and GTRIMG would receive additional Warrants. The MOU also provided for certain amendments to the existing Convertible Loan Agreement. We agreed to adopt a forecast, providing that, during 2020 grants, plus revenues, plus convertible loans (other than those received from GTRIMG) less liabilities on the balance sheet as of December 31, 2019 should not be less than \$2,500,000, or the Management Minimum Forecast, out of which \$1,250,000 shall be available in our bank account as of March 31, 2020, or the Target. Under the MOU, GTRIMG agreed to provide an additional loan as of the execution of the MOU in the amount of \$150,000 under the existing Convertible Loan Agreement, or the Initial MOU Loan.

In addition, the MOU provides that if we fail to meet the Target, then: (a) the Company's valuation for purposes of all investments after January 1, 2018 shall be \$2.0 million pre-money as of such date, thereby reflecting a price per share of \$0.068, and (b) GTRIMG shall make loans to the Company of \$100,000 per month for a period of 12 months commencing April 1, 2020, and under the same terms as the Convertible Loan Agreement, as adjusted under (a) above, or the Additional MOU Loans; provided, that following each six month period, GTRIMG may review whether the Company has complied with the Management Minimum Forecast as defined therein, and if it was not met for any six month period (beginning with the six month period ended June 30, 2020), then, three months after such review, GTRIMG may determine not to fund additional amounts.

Furthermore, under the MOU, we agreed to call a meeting of shareholders within 15 days of the date of the MOU in order to approve (i) the transactions contemplated by the MOU, (ii) an amendment to the articles of association of the Company to provide that GTRIMG may appoint a number of directors as shall reflect its holding should the Target not be met (assuming all convertible loans are converted) and (iii) an increase in authorized share capital as necessary. The Company also agreed to immediately appoint a representative of GTRIMG as chairman of the board of directors.

In January 2020, GTRIMG made the Initial MOU Loan.

In March 2021, the Company directors received a notice before legal action letter from GTRIMG's lawyer associated with their previous agreements (including the MOU mentioned above). The main request derives from this letter is to convert all the CLA so far at a price per share of \$0.068. Due to the early stage of this letter, we are in a process of assessing its consequences.

In December 2020, we called a meeting of shareholders in accordance with the terms of the MOU and the transactions contemplated by the MOU were not approved by our shareholders. Accordingly, we believe that the terms of the MOU are no longer binding.

All of the convertible loans received from GTRIMG were required to be repaid by October 2020. GTRIMG did not exercise its conversion right under the convertible loans prior to their repayment date and therefore became repayable in cash as such time. We did not timely repay such loans due to financial difficulties and therefore we are currently in default under the Convertible Loan Agreement.

For additional information regarding how we financed our operations, please refer to Note 8 and Note 11 to our consolidated financial statements appear elsewhere in this annual report on Form 20-F for information regarding our loans and convertible loans and sale of equity, respectively.

We expect to continue to fund our operations through equity or debt financings, strategic collaborations, grants and, to the extent our marketing and commercialization efforts are successful, sales of our products or technologies.

We have experienced cumulative losses of \$21.0 million from inception through December 31, 2019. In addition, we have not yet established a stable recurring source of revenues sufficient to cover our operating costs and expect to continue to generate losses for the foreseeable future. There is no assurance that we will be able to obtain an adequate level of financing needed for our near-term requirements or the long-term development and commercialization of our product. These conditions raise substantial doubt about our ability to continue as a "going concern".

Cash Flows

Net cash used in operating activities for the years ended December 31, 2019, 2018 and 2017 was \$1,979,138, \$2,592,047 and \$2,169,889, respectively, a decrease of \$612,909 or 24% (from 2018 to 2019) and an increase of \$422,158 or 19% (from 2017 to 2018). The decrease in net cash used in operating activities in 2019 relative to 2018 was primarily attributable to a change in fair value of warrants and capital note, partially offset by an increase in the net loss. The increase in net cash used in operating activities in 2018 relative to 2017 was primarily attributable to a change in fair value of warrants and capital note, partially offset by a decrease in the net loss.

Net cash provided by (used in) investing activities for the years ended December 31, 2019, 2018 and 2017 was \$(11,906), \$(18,237) and \$13,195, respectively, an increase of \$6,331 or 34% (from 2018 to 2019) and a decrease of \$31,432 (from 2017 to 2018). The increase in net cash used in investing activities in 2019 relative to 2018 was attributable to higher purchase of property and equipment. The decrease in net cash used in investing activities in 2018 relative to 2017 was attributable to higher purchase of property and equipment and net cash acquired in acquisition of Digiflex.

Net cash provided by financing activities for the years ended December 31, 2019, 2018 and 2017 were \$1,881,719, \$2,304,221 and \$2,496,157, respectively, a decrease of \$422,502, or 18% and a decrease of \$191,936, or 8% (from 2017 to 2018). The decrease in net cash provided by financing activities in 2019 relative to 2018 was primarily attributable to a change in in short term bank credit and a lower proceeds from convertible loans, net of issuance costs. The decrease in net cash provided by financing activities in 2018 relative to 2017 is primarily attributable to lower proceeds from issuance of warrants and receipt on account of ordinary shares and warrants which were partially offset by higher proceeds from convertible loans, net of issuance costs.

C. Research and Development, patents and licenses, etc.

For information regarding our research and development activities, see “Item 4 B. — Business Overview” and “Item 5 A. — Operating Results”.

D. Trend Information

We are a development stage company and it is not possible for us to predict with any degree of accuracy the outcome of our research, development or commercialization efforts. As such, it is not possible for us to predict with any degree of accuracy any significant trends, uncertainties, demands, commitments or events that are reasonably likely to have a material effect on our net sales or revenues, income from continuing operations, profitability, liquidity or capital resources, or that would cause financial information to not necessarily be indicative of future operating results or financial condition. However, to the extent possible, certain trends, uncertainties, demands, commitments and events are in this “Item 5. Operating and Financial Review and Prospects.”

E. Off-Balance Sheet Arrangements

As of December 31, 2019, and as of the date of this annual report on Form 20-F and during the periods presented, we do not and did not, respectively, have any off-balance sheet arrangements.

F. Tabular disclosure of contractual Obligations

The following table summarizes our contractual obligations as of December 31, 2019:

	Payments due by period (U.S. dollars)				
	Total	Less than 1 Year	1-3 Years	4-5 Years	More than 5-Years
Lease Obligations ¹	\$ 169,571	\$ 76,581	\$ 92,990	\$ -	\$ -
Interest rate associated with conversion loans received	262,730	241,886	20,844	-	-
Total	\$ 432,301	\$ 318,467	\$ 113,834	\$ -	\$ -

¹ Relates to obligations under lease agreements for our headquarters in Migdal Ha’Emek and an office in Kfar Saba which was mutually ended on March 15, 2020, both in Israel. For additional information, see “Item 4D. Information on the Company—Property, plants and equipment.”

G. Safe Harbor.

This annual report on Form 20-F contains forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act and as defined in the Private Securities Litigation Reform Act of 1995. See “Cautionary Note Regarding Forward-Looking Statements.”

ITEM 6. Directors, Senior Management and Employees.

A. Directors and Senior Management

The following table sets forth information regarding our directors and senior management team as of December 31, 2020, and the date of this annual report on Form 20-F.

Name	Age	Position
Dov Farkash	61	Active Chairman of the Board
Dr. Fernando de la Vega	63	Chief Executive Officer and Director
Dr. Astorre Modena ⁽¹⁾ ⁽²⁾	50	Director
Orly Solomon ⁽¹⁾ ⁽²⁾	52	External Director
Ido Lapidot ⁽¹⁾ ⁽²⁾	57	External Director
Evyatar Cohen	48	Chief Financial Officer
Hanan Markovich	45	Chief Business Development Officer

(1) Member of our Audit Committee

(2) Member of our Compensation Committee

The address of each of our directors and executive officers is c/o P.V. Nano Cell Ltd., 8 Hamasger Street Migdal Ha'Emek 2310102, Israel.

Dov Farkash has served as our executive chairman since April 2020. Mr. Farkash has more than 25 years of experience in business leadership and technology development in the Electronics industry. From January 2000 to September 2019 Mr. Farkash has served in a range of senior business leadership and technology development positions at Nova Measuring Instruments Ltd., including Senior Vice President Strategic Development, Senior Corporate Vice President Modeling Software Division, Vice President Sales and Vice President Business Development. Prior to joining Nova, Mr. Farkash served as worldwide Sales and Marketing Manager of AFCON Ltd., and AFCON Inc. in the USA. Prior to that, Mr. Farkash served in various software development managerial positions at various hi-tech companies. Mr. Farkash holds a B.Sc. in Computer Engineering and an MBA from the Technion – Israel Institute of Technology, Haifa, Israel.

Dr. Fernando de la Vega co-founded PV Nano Cell Ltd. in 2009 and has served as our Chief Executive Officer and a Director of our board of directors since that time (and as a Chairman the majority of that time). Dr. de la Vega has more than 35 years industrial and entrepreneurial experience, having served in managerial positions with responsibility over research and development, quality and operations and has founded or co-founded several businesses in the fields of nano technology and functional materials. From 2001 to early 2009, Dr. de la Vega served as General Manager and a Director of Cima, a company focused on the development of innovative technologies in the field of flexible printed electronics. Dr. de la Vega also co-founded and, from 2003 through 2009, served as Chairman of the Nano Functional Materials Consortium, a five-year, \$25 million research consortium which performed general research on nanotechnology, sponsored by Israel's Office of the Authority as part of the MAGNET program, a special program intended to encourage cooperation between industry and academia. Dr. de la Vega has also co-founded three European research and development consortiums. He is a co-inventor of more than 11 patent families in the fields of nanomaterials and nanotechnology and author and co-author of many scientific and technical publications (including on conductive inks for inkjet printing). Dr. de la Vega holds a Ph.D. in Applied Chemistry from the Casali Institute at the Hebrew University of Jerusalem, as well as a M.Sc. in Applied Chemistry and a B.Sc. in Chemistry from the Hebrew University of Jerusalem.

Dr. Astorre Modena has served as a director of the Company since 2010. In 2005, he co-founded, and currently serves as General Partner of, Terra Venture Partners, an Israeli venture capital fund focused on clean technology. Prior to co-founding Terra Venture Partners, from 2001 to 2005, Dr. Modena was Associate and then Principal at Israel Seed Partners, a leading Israeli seed-stage venture capital firm. From 1998 to 2001, Dr. Modena was a consultant with McKinsey & Co., where he consulted for leading Italian, French and Israeli manufacturing and financial corporations on strategic and operational issues. Dr. Modena holds a Ph.D. in Plasma Physics from Imperial College in London and a B.Sc. in Physics from the Hebrew University of Jerusalem (where he was a part of the Honors Program for Outstanding Students). Dr. Modena was also a researcher in the laser-plasma physics department at Imperial College in London and École Polytechnique in Paris.

Orly Solomon has served as an external director of the Company since December 2017. Ms. Solomon is Chief Financial Officer of Inuitive Ltd. Ms. Solomon currently serves as Financial Director and Advisor to board of directors of Med and Beyond Ltd. Ms. Solomon served on the board of directors of Shikmona, a governmental and city owned corporation in Haifa from 2014 to 2017 as a director with financial expertise. From 2014 to 2016, Ms. Solomon served as Chief Financial Officer of Future Values Ltd. During 2013, Ms. Solomon served as Chief Executive Officer of D. Medical Industries Ltd. (NASDAQ /TASE: DMED). She was also the chairman of the board of directors of RSL Electronics Ltd. (TASE: RSL) from 2011 to 2012. From 2010 to 2012, Ms. Solomon served as Chief Financial Officer and Deputy to the Chief Executive Officer of Lito Group Ltd. (TASE: LTGR-M). From 2009 to 2010, Ms. Solomon served as co-founder and Chief Financial Officer of Atid Team, Israel. From 2006 to 2010, Ms. Solomon served as co-founder and a director of Altshuler Shacham Benefits Israel. Ms. Solomon holds an MBA in Finance and Economics from the Hebrew University in Jerusalem, and a Bachelor of Science Accounting, with honors, from Rutgers University at Newark, New Jersey.

Ido Lapidot has served as an external director of the Company since December 2017. Mr. Lapidot is a “TRIZ- Effective Innovation” consultant for various companies, inter alia, Elbit, Verint, Edwards Lifesciences, Tama and HP. From 2016 to 2020, he is a partner at Next Leap Ventures, a former Intel employees investment club. From 2009 to 2016, Mr. Lapidot served as a Strategic Technologies Planner and TRIZ Program Leader at Intel R&D and Intel Labs. From 2008 to 2014, Mr. Lapidot served as an External Teacher for TRIZ and Systematic Innovation at Afeka College for Engineering, Israel. From 2005 to 2008, Mr. Lapidot served as LEAN Manufacturing and TRIZ Program Leader at Intel Corporate Services-EMEA. From 1995 to 2005, Mr. Lapidot served as Environment, Health and Safety Manager at Intel’s factories. Mr. Lapidot also serves as a director of Carrar, Nanofabrica, and Sanolla. Mr. Lapidot holds an MA in Environmental Science, a BA in Chemistry, and a B.A. in Atmospheric Science from the Hebrew University of Jerusalem and a TRIZ L3 certification from MA-TRIZ GEN3 Partners.

Evyatar Cohen has served as our Chief Financial Officer since November 2017. Currently and prior to his appointment as our Chief Financial Officer, Mr. Cohen serves and has served as a Chief Financial Officer and financial consultant for several public companies traded in the United States, Israel and Europe as well as privately held companies. Mr. Cohen worked at PricewaterhouseCoopers in both the Tel-Aviv and New York. Mr. Cohen has gained vast experience in many industries such as high-tech, bio-tech, oil and gas, entertainment and media, and venture capital. Mr. Cohen holds a B.A. in Business Management from the College of Management in Israel with B.A. in Business Management in 2000 and was awarded his Masters of Law degree from the Bar Ilan University, Israel in 2003. Mr. Cohen is a licensed and certified public accountant in both the United States and Israel.

Hanan Markovich has served as our Chief Business Development Officer since February 2019. Mr. Markovich is also a self-employed technology consultant. From 2017 to 2019, Mr. Markovich served as Chief Product & Marketing Officer of Robust E2C, a company focused on IoT framework solutions. Mr. Markovich also co-founded, and from 2015 through 2017, served as Chief Executive Officer of IllumaSense, a company that helps cities manage their infrastructure and gather information from the urban environment. Prior to co-founding IllumaSense, from 2014 to 2015, Mr. Markovich served as Executive Vice President Business Development of Gaash Lighting. Mr. Markovich holds a B.Sc. in Mechanical Engineering from the Technion – Israel Institute of Technology and an MBA from the University of Haifa, Israel.

Family Relationships

There are no family relationships between any members of our executive management and our directors.

B. Compensation

The table below reflects the compensation granted to our five most highly compensated office holders (as defined in the Companies Law) during or with respect to the year ended December 31, 2019. We refer to the five individuals for whom disclosure is provided herein as our “Covered Executives”. For purposes of the table below, “compensation” includes amounts accrued or paid in connection with salary cost, consultancy fees, bonuses, share-based compensation, retirement or termination payments, benefits and perquisites (as applicable) to provide such compensation. All amounts reported in the table are in terms of cost to the Company, as recognized in our consolidated financial statements for the year ended December 31, 2019, plus compensation paid to such Covered Executives following the end of the year in respect of services provided during the year. Each of the Covered Executives was covered by our director and officer liability insurance policy and was entitled to indemnification and exculpation in accordance with applicable law and our articles of association.

Individual Covered Executive Compensation Name and Principal Position	Salary⁽²⁾	Share-based Compensation⁽³⁾	Total
		US \$	
Fernando de la Vega, Chief Executive Officer and Director	\$ 220,977	\$ 6,460	\$ 227,437
Orly Solomon, External Director	22,290	1,410	26,448
Ido Lapidot, External Director	22,290	4,198	26,448
Evyatar Cohen, Chief Financial Officer	151,501	35,926	187,427
Hanan Markovich, Chief Business Development Officer ⁽¹⁾	\$ 152,321	\$ 1,410	\$ 153,731

(1) Mr. Markovich joined the Company on February 10, 2019.

(2) Salary includes the Covered Executive's gross salary plus payment of social benefits made by us on behalf of such Covered Executive. Such benefits may include, to the extent applicable to the Covered Executive, payments, contributions and/or allocations for savings funds (e.g., managers' life insurance policy), education funds (referred to in Hebrew as "keren hishtalmut"), pension, severance, risk insurances (e.g., life, or work disability insurance), payments for social security and tax gross-up payments, vacation, medical insurance and benefits, convalescence or recreation pay and other benefits and perquisites consistent with our policies.

(3) Represents the share-based compensation expenses recorded in the Company's consolidated financial statements for the year ended December 31, 2019, based on the option's fair value, calculated in accordance with accounting guidance for share-based compensation.

Compensation of Executive Officers and Directors as a Group

The aggregate compensation paid by us to our executive officers and directors for the year ended December 31, 2019, was approximately \$621,571, including share-based compensation expenses of approximately \$52,192. This amount does not include business travel, relocation, professional and business association dues and expenses reimbursed to officers, and other benefits commonly reimbursed or paid by companies in Israel. We did not set aside or accrue any amounts to provide pension, retirement or similar benefits to any officers or directors of the Company in the year ended December 31, 2019.

On January 7, 2020 and June 22, 2020, in connection with their services as board members, we issued options to purchase 9,225,796 ordinary shares at an exercise price per ordinary share of \$0.068 to each of the following directors: Dov Farkash (was elected as our active chairman in April 19, 2020), Dr. Fernando de la Vega, Dr. Astorre Modena, Orly Solomon and Ido Lapidot. The options will vest over three (3) years, subject to earlier termination in accordance with our 2010 Israeli Option Plan, or the Plan.

We do not have any written agreements with any director providing for benefits upon the termination of such director's relationship with our company, other than our consulting agreement with our chief executive officer as described below.

Our office holders are also employed under the terms and conditions prescribed in personal contracts. These personal contracts provide for notice periods of varying duration for termination of the agreement by us or by the relevant executive officer, during which time the executive officer will continue to receive base salary and benefits. These agreements also contain acceleration provisions upon material events such as a change of control or entry into a material agreement, customary provisions regarding non-competition, confidentiality of information and assignment of inventions. However, the enforceability of the non-competition and assignment of inventions provisions may be limited under applicable law. See "Item 3 D. — Risk Factors — Risks Related to Our Intellectual Property". Under current Israeli law, we may not be able to enforce office holders' covenants not to compete and therefore may be unable to prevent our competitors from benefiting from the expertise of some of our former officer holders.

Our employees are employed under the terms prescribed in their respective personal contracts, in accordance with the decisions of our management. Under these employment contracts, the employees are entitled to the social benefits prescribed by law and as otherwise provided in their personal contracts. Each of these employment contracts contains provisions standard for a company in our industry regarding non-competition, confidentiality of information and assignment of inventions. Under current applicable employment laws, we may not be able to enforce covenants not to compete and therefore may be unable to prevent our competitors from benefiting from the expertise of some of our former employees. See "Item 3 D. — Risk Factors — Risks Related to Our Intellectual Property" for a further description of the enforceability of non-competition clauses. We also provide certain of our employees with a company car, which is leased from a leasing company.

Compensation of External Directors

In 2019, each of our external directors was compensated in accordance with the Israeli Companies Regulations (rules regarding compensation and expense reimbursement of external directors) - 2000.

Directors and Officers Equity-Based Compensation

As of December 31, 2020, a total of 12,678,712 options to purchase our ordinary shares were outstanding and held by certain current executive officers and directors (consisting of seven (7) persons), of which 4,061,685 options are currently exercisable or exercisable within 60 days of December 31, 2020. See "Item 6 E. — Share Ownership" in this annual report on Form 20-F.

Compensation of nonemployee Directors

Our directors, other than our External Directors, do not receive any cash compensation.

During fiscal 2019, we were not party to any service agreements with any of the members of our board of directors, other than the services agreement with respect to Dr. de la Vega's service as our chief executive officer, which is described below.

Employment or Service Agreements with our Active Chairman, Chief Executive Officer, Chief Financial Officer and Chief Business Development Officer

Dov Farkash. On April 19, 2020, an Active Chairman Agreement, or the Chairman Agreement with Exoro Ltd., or Exoro, a company wholly owned by Mr. Dov Farkash. The Chairman Agreement provides that Exoro, through Mr. Farkash is to provide certain services to us as active chairman, focusing on go-to-market strategy. We agreed to enter into an indemnification agreement with Mr. Farkash and to include him in our directors and officers insurance. Mr. Farkash has agreed not to provide any services that would conflict with or complete with ours. We agreed to pay a monthly service fee of NIS 40,000 (\$11,574) plus VAT to Exoro. Mr. Farkash is entitled to options to purchase 939,164 shares (0.5% of our fully-diluted equity) under our 2010 Option Plan, in accordance with our director compensation plan, at an exercise price of \$ 0.068 per share, vesting over three years from April 19, 2020 with one-third vesting after one year and the remainder monthly over a 24-month period. Exoro is entitled to reimbursement of expenses in connection with the provision of the services and shall have a budget of \$10,000/month for travel. The term of the Chairman Agreement was for four (4) months, with our right to renew for an additional nine months, which was utilized. Either party could terminate upon 45 days prior written notice. The Chairman Agreement could also be terminated by us for Cause (as defined in the Chairman Agreement).

Dr. Fernando de la Vega. On September 9, 2009, we entered into a services agreement, or the DBG Services Agreement, as amended, with Dr. de la Vega's wholly-owned service company, Dolev Bar-Guy Consulting and Management Ltd., or DBG, as amended, or the DBG Services Agreement, pursuant to which Dr. de la Vega provides us management services as our chief executive officer. Pursuant to the terms of the DBG Services Agreement, as amended, Dr. de la Vega is currently entitled to a monthly consultancy fee in the amount of NIS 51,750 (approximately \$14,974) plus value added tax and car allowance in the amount of NIS 2,500 (approximately \$723) plus value added tax per month plus reimbursement for fuel expenses and tolls. The monthly consultancy fee shall be updated to NIS 65,000 (approximately \$18,807) plus value added tax per month, if the company will secure an additional investment of \$1,000,000 (such update commenced in April 2018). Dr. de la Vega may terminate the DBG Services Agreement at any time for any reason upon a three months' prior written notice. If we wish to terminate the engagement with Dr. de la Vega, not as a result of Dr. de la Vega's breach of his terms of office, the Company shall be required to provide a six months' prior written notice.

In addition, our chief executive office may receive:

- (a) An annual cash bonus in an amount equivalent to up to four (4) times his monthly service fee, plus VAT, based on achievement of certain performance targets which are determined by our compensation committee and the board of directors on an annual basis.
- (b) A special one-time bonus in an amount equivalent to six times his monthly service fee, plus VAT upon the occurrence of an Exit Event (as described below), provided that our pre-money valuation shall be at least \$50,000,000 at the closing of such transaction or within 12 months following such closing.

(c) An Equity Based Award:

Upon the occurrence of an Exit Event, an equity-based award, in accordance with the following calculation:

- (i) 0.5% of the Company's share capital on a fully diluted basis, if the Company's pre-money valuation shall be equal to or higher than \$30,000,000 but less than \$40,000,000;
- (ii) 1.25% of the Company's share capital on a fully diluted basis, if the Company's pre-money valuation shall be equal to or higher than \$40,000,000 but less than \$50,000,000;
- (iii) 2% of the Company's share capital on a fully diluted basis, if the Company's pre-money valuation shall be equal to or higher than \$50,000,000.

An 'Exit Event' is defined as: (i) the consummation of an initial public offering of ordinary shares of the Company on a recognized stock exchange; or (ii) a sale of all or substantially all of the share capital of the Company to any individual, firm, corporation, partnership, trust, incorporated or unincorporated association, joint venture, joint stock company, governmental authority or other entity of any kind, and shall include any successor (by merger or otherwise) of such entity, or a Person; (iii) a sale, lease, conveyance or disposition of all or substantially all of the assets of the Company; (iv) a merger of the Company with or into another entity in which the shareholders of the Company immediately prior to such merger do not hold a majority of the share capital and voting rights of the surviving entity held by them by virtue of their holdings in the Company prior to the consummation of the transaction or a transaction or series of transactions in which a Person or group of Persons acquire more than 50% of the issued and outstanding share capital of the Company (other than an acquisition of such share capital from the Company); or (v) an up-listing to a higher exchange.

Mr. Evyatar Cohen. On November 12, 2017, we entered into a consultancy agreement with Mr. Evyatar Cohen to serve as our Chief Financial Officer during the term of the agreement. Mr. Cohen's services include, among others, the services of Ms. Moran Cohen as our controller. Pursuant to the terms of the agreement, Mr. Cohen is entitled to a monthly fee of NIS 33,000 (approximately \$9,548) plus value added tax. As agreed in his engagement agreement, the monthly fee was increased to NIS 45,000 (approximately \$13,020) plus value added tax commencing May 15, 2018, following the filing of our 2017 annual report on Form 20-F. Either we or Mr. Cohen may terminate the agreement by providing a 45 days prior notice.

Hanan Markovitch. We have entered into an employment agreement dated February 10, 2019 with Mr. Hanan Markovitch to serve as chief business development officer. Mr. Markovitch, as a full-time employee, is entitled to a gross monthly salary of NIS 28,000 (\$8,102); overtime pay of NIS 7,000 per month (\$2,025); a car allowance of NIS 5,000 per month (\$1,447); social benefits and special bonus as detailed in his employment agreement. Each party can terminate this employment agreement with a three (3) months' notice.

Incentive Compensation Plan

The purpose of the Plan is to serve as an incentive to attract new employees, directors, consultants and service providers, and to retain persons of training, experience and ability by providing them with opportunities to purchase securities, including shares of the Company, pursuant to the Plan, as approved by the board of directors of the Company. As of December 31, 2019, a total of 1,360,898 ordinary shares were reserved for issuance under the Plan. The number of ordinary shares reserved for issuance under the Plan may be changed from time to time in the sole discretion of the board of directors.

The Plan is administered by our board of directors, provided that the board of directors may delegate responsibility for the administration of the Plan to a committee designated by the board of directors. The board of directors has authority to: designate grantees of awards under the Plan and the terms of any award granted, including the type of securities to be granted, the vesting terms of any securities granted, and any restrictions on transfer of any securities granted under the Plan.

Pursuant to the Plan, the Company may (1) grant awards of securities under the Plan under the capital gains track pursuant to Section 102 of the Israeli Income Tax Ordinance, or the Ordinance, to our directors, officers and employees who are not holders of 10% or more of our total share capital and are not otherwise controlling shareholders, and (2) grant awards pursuant to Section 3(i) of the Ordinance to non-employee Israeli service providers, consultants and shareholders who hold 10% or more of our total share capital or are otherwise controlling shareholders.

Section 102 of the Ordinance allows employees, directors and officers, who are not controlling shareholders and are considered Israeli residents, to receive favorable tax treatment for compensation in the form of shares or options. Our non-employee Israeli service providers, consultants and controlling shareholders, which includes any shareholder holding 10% or more of the Company's ordinary shares on a fully diluted basis, may only be granted options under Section 3(i) of the Ordinance, which does not provide for similar tax benefits. Section 102 of the Ordinance includes two alternatives for tax treatment involving the issuance of options or shares to a trustee for the benefit of the grantees and also includes an additional alternative for the issuance of options or shares directly to the grantee. Section 102(b)(2) of the Ordinance, the most favorable tax treatment for grantees, permits the issuance to a trustee under the "capital gains" track. However, under this track we are not allowed to deduct any expense with respect to the issuance of the options or shares. In order to comply with the terms of the capital gains track, all options granted under the Plan pursuant and subject to the provisions of Section 102 of the Ordinance, as well as the ordinary shares issued upon exercise of these options and other shares received subsequently following any realization of rights with respect to such options, such as share dividends and share splits, must be granted to a trustee for the benefit of the relevant employee, director or officer and should be held by the trustee for at least two (2) years after the date of the grant. If such options or shares are sold by the trustee or are transferred to the grantee before the end of the two-year period, then the grantee would be taxed at top marginal rates upon selling the shares.

Options granted under the Plan will vest in accordance with the vesting dates determined by the board of directors with respect to each grant. Options that are not exercised within seven years from the grant date will expire, unless a shorter or longer term is provided for by the board of directors. Generally, if we terminate a grantee's employment or services to the Company, all options granted to such grantee that are then vested will be exercisable for a period of six (6) months after the termination date (unless a shorter period is determined by the board of directors) or, if earlier, the expiration date of such options if we terminate a grantee's employment or service for cause, all of the grantee's vested and unvested unexercised options will expire and terminate on the date of termination. In case of termination for reasons of disability or death, the grantee or his legal successor may exercise options that have vested prior to termination within a period of twelve (12) months from the date of disability or death.

In the event of a merger or consolidation of our Company subsequent to which we would no longer exist as a legal entity, or a sale of all, or substantially all, of our ordinary shares or assets or other transaction having a similar effect on us, the Company will seek to cause the acquirer in such transaction to substitute all outstanding and unexercised options under the Plan for an appropriate number of the same type of shares or other securities of the successor company as were distributed to the Company or the shareholders in connection with such transaction. If the acquirer refuses to substitute the options, unvested options held by any grantee will vest in accordance with the following formula: $X+Y*X/Z$, where X = the number of vested options held by the grantee, Y = the number of unvested options held by the grantee, and Z = the number of options held by the grantee.

C. Board Practices

Board of Directors

Under the Companies Law, the management of our business is vested in our board of directors. Our board of directors may exercise all powers and may take all actions that are not specifically granted to our shareholders or to management. Our Chief Executive Officer is responsible for our day-to-day management and has responsibilities established by our board of directors. Our Chief Executive Officer is appointed by, and serves at the discretion of, our board of directors, subject to the terms of a consulting agreement that we have entered into with him. Our Chief Executive Officer may retain additional executive officers to assist in the day to day management of our business.

Election and Removal of Directors

Our Articles of Association provide for a board of directors consisting of no less than three (3) and no more than seven (7) directors, with all directors (other than the external directors, whose appointment is required under the Companies Law, as described below) divided into three classes with staggered three-year terms designated as Class I, Class II and Class III, with each class of directors to consist, as nearly as possible, of one-third of the total number of directors other than the external directors. At each annual general meeting of our shareholders thereafter, the election or re-election of directors following the expiration of the term of office of the directors of that class of directors will be for a term of office that expires on the third annual general meeting following such election or re-election. Each director so elected will hold office until the annual general meeting of our shareholders for the year in which his or her term expires, unless the tenure of such director expires earlier pursuant to the Companies Law or unless he or she is removed from office as described below. Our board of directors is divided among the three staggered classes of directors (except for the external directors) as follows:

- The Class I director is Mr. Dov Farkash, who was appointed on April 19, 2020 and serves as our Active Chairman was elected at our annual meeting of the shareholders on December 28, 2020 for a three (3) year term ending at the 2023 annual meeting.

- The Class II director is Dr. Astorre Modena, elected in 2018, for a term of three (3) years, ending at the 2021 annual general meeting.
- The Class III director is Dr. Fernando de la Vega, elected in 2019, for a term of three (3) years, ending at the 2022 annual general meeting.

In addition, our shareholders have elected two (2) external directors who are not part of the staggered board, as described further below.

Observer

On November 29, 2018, we held a general meeting of shareholders at which our shareholders approved, among other things, an amendment to the provisions of our Articles of Association applicable to the election of directors to provide for GTRIMG the right to designate one (1) non-voting observer to the board of director, or the Observer, provided that the Observer shall not be a competitor of ours, or employed by a competitor of ours. In October 2018, Rami Zeevi, the son of Gadi Zeevi who is the controlling shareholder of GTRIMG was appointed as an observer to our board of directors. In addition to the right to appoint an observer, in the event that and conditioned upon the conversion of the loan amount or the investment of at least US \$2,000,000, GTRIMG shall be entitled to nominate one (1) director to our board of directors. Such director will serve as our chairman of the board of directors, provided that such nominee has the required qualifications under applicable laws including the stock exchange rules then applicable. The rights of GTRIMG will remain effective as long as GTRIMG holds at least 5% of our issued and outstanding share capital. The MOU provided that GTRIMG would have the right to nominate one (1) director, who would be the chairman of the board. We appointed Mr. Dov Farkash as executive chairman in accordance with the terms of the MOU.

Chairman of the Board

Our amended and restated articles of association provide that, unless otherwise appointed as described above, the chairman of the board is appointed by the members of the board of directors and serves as chairman of the board throughout his term as a director, unless resolved otherwise by the board of directors. Under the Companies Law, the Chief Executive Officer (referred to as a “general manager” under the Companies Law) or a relative of the Chief Executive Officer may not serve as the chairman of the board of directors, and the chairman of the board of directors or a relative of the chairman may not be vested with authorities of the Chief Executive Officer without shareholder approval consisting of a majority vote of the shares present and voting at a shareholders meeting, *provided* that either:

- at least a majority of the shares of non-controlling shareholders and shareholders that do not have a personal interest in the approval voted at the meeting are voted in favor (disregarding abstentions); or
- the total number of shares of non-controlling shareholders and shareholders who do not have a personal interest in such appointment voting against such appointment does not exceed two percent of the aggregate voting rights in the company.

A person subordinated, directly or indirectly, to the Chief Executive Officer may not serve as the chairman of the board of directors; the chairman of the board of directors may not be vested with authorities that are granted to those subordinated to the Chief Executive Officer; and the chairman of the board of directors may not serve in any other position in the company or a controlled company, but he or she may serve as a director or chairman of the board of directors of a subsidiary.

External Directors

Under the Companies Law, companies incorporated under the laws of the State of Israel whose shares are publicly traded are required to appoint at least two (2) external directors who meet the qualification requirements set forth in the Companies Law.

At our general meeting of shareholders held in 2017, we appointed Ms. Orly Solomon and Mr. Ido Lapidot as our external directors for three (3) years and they were re-elected in our general meeting of shareholders held in 2020 for additional three (3) years.

The Companies Law provides for special approval requirements for the election of external directors. External directors must be elected by a majority vote of the shares present and voting at a shareholders meeting, provided that either:

- such majority includes at least a majority of the shares held by all shareholders who are not controlling shareholders and do not have a personal interest in such election (other than a personal interest which is not derived from a relationship with a controlling shareholder), present and voting at such meeting, excluding abstainers; or
- the total number of shares of non-controlling shareholders and shareholders who do not have a personal interest in such election (other than a personal interest which is not derived from a relationship with a controlling shareholder) voting against the election of an external director does not exceed 2% of the aggregate voting rights in the company.

After an initial term of three (3) years, an external director may be re-elected to serve in that capacity for up to two additional terms of three (3) years each under one of two alternatives. Under the first alternative, the external director may be nominated by the board of directors, and such external director's re-election is approved by a majority of the shareholders that was required to elect such external director in such director's initial election. Under the second alternative, the external director may be nominated by a shareholder(s) holding 1% or more of the voting power and at the general meeting of shareholders such re-election is approved by a majority of those shares present and voting that are held by shareholders who are non-controlling shareholders and do not have a personal interest in the re-election, provided that such shares represent at least 2% of the total voting power in the company.

The term of office for external directors for Israeli companies traded on certain foreign stock exchanges (which does not include the OTCQB or OTC Pink), may be extended indefinitely in increments of additional three-year terms, provided that, prior to each nomination for re-election, the board of directors of the company confirm that, in light of the external director's expertise and special contribution to the work of the board of directors and its committees, the re-election for such additional period is beneficial to the company and provided that the reasons for such confirmation are presented to the shareholders at the general meeting at which such re-election is being sought and the external director is re-elected in accordance with the appropriate approval method described above.

Under the Companies Law, an external director cannot be dismissed from office unless the board of directors has learned there is a concern that: the external director no longer meets the statutory requirements for his appointment as an external director; or the external director is in breach of his or her duty of loyalty to the company. The board of directors shall discuss the matter no later than in the first board of directors meeting convened after the board had become aware of such circumstances. In the event the board of directors has determined that an external director had ceased to comply with the requirements set forth under the Companies Law or that he or she breached his or her duty of loyalty to the company, then the board of directors shall convene a general meeting of the shareholders and will include on the agenda a resolution for the removal from office of such external director. The shareholders vote required to removal of an external director from office is the same majority required for the appointment; provided, however, that the external director has been given the opportunity to present his or her position. In addition, a court of law may determine, upon a request of a director or a shareholder, to dismiss the external director after finding that such external director no longer meets the statutory requirements of an external director set under the Companies Law or that the external director is in breach of his or her duty of loyalty to the company.

Each committee of the board of directors that exercises powers of the board of directors is required to include at least one external director, and the audit and compensation committees are required to all of such company's external directors.

Under the Companies Law, external directors of a company are prohibited from receiving, directly or indirectly, any compensation from the company other than for their services as external directors pursuant to the provisions and limitations set forth in regulations promulgated under the Companies Law, which compensation is determined prior to their appointment and may not be changed throughout the term of their service as external directors (except for certain exceptions set forth in the regulations).

The Companies Law provides that a person is not qualified to serve as an external director if, as of the appointment date or at any time during the two (2) years preceding his or her appointment, that person or a relative, partner or employer of that person, any person to whom that person is subordinate (whether directly or indirectly), or any entity under that person's control, had any affiliation or business relationship with the company, any controlling shareholder or relative of a controlling shareholder or an entity that, as of the appointment date is, or at any time during the two (2) years preceding that date was, controlled by the company or by any entity controlling the company.

The term affiliation for this purpose includes (subject to certain exceptions):

- an employment relationship;
- a business or professional relationship maintained on a regular basis;
- control; and
- service as an office holder, excluding service as a director in a private company prior to the first offering of its shares to the public if such director was appointed as a director of the private company in order to serve as an external director following the public offering.

The Companies Law defines the term "office holder" of a company to include a general manager, chief business manager, deputy general manager, vice general manager, any other person assuming the responsibilities of any of these positions regardless of such person's title, a director and any other manager directly subordinate to the general manager.

The following additional qualifications apply to an external director:

- a person may not be elected as an external director if he or she is a relative of a controlling shareholder;
- if a company does not have a controlling shareholder or a holder of 25% or more of the voting power, then a person may not be elected as an external director if he or she (or his or her relative, partner, employer or any entity under his or her control) has, as of the date of the person's election to serve as an external director, any affiliation with the then chairman of the board of directors, Chief Executive Officer, a holder of 5% or more of the issued share capital or voting power, or the most senior financial officer of the company;
- a person may not serve as an external director if he or she (or his or her relative, partner, employer, a person to whom he or she is subordinated or any entity under his or her control) has business or professional relations with anyone with whom affiliation is prohibited as described above, and even if these relations are not on a regular basis (other than immaterial relations); and
- a person may not continue to serve as an external director if he or she accepts, during his or her tenure as an external director, direct or indirect compensation from the company for his or her role as a director, other than the amounts prescribed under the regulations promulgated under the Companies Law, indemnification, the company's undertaking to indemnify such person and insurance coverage.

Furthermore, no person may serve as an external director if that person's professional or other activities create, or may create, a conflict of interest with that person's responsibilities as a director or otherwise interfere with that person's ability to serve as an external director or if such person is an employee of the Israel Securities Authority or of an Israeli stock exchange. Following the termination of an external director's membership on the board of directors, such former external director and his or her spouse and children may not be provided a direct or indirect benefit by the company, its controlling shareholder or any entity under its controlling shareholder's control, including serving as an executive officer or director of the company or a company controlled by its controlling shareholder and cannot be employed by or provide professional services to the company for pay, either directly or indirectly, including through a corporation controlled by that former external director, for a period of two (2) years (the prohibition also applies to relatives of the former external director who are not his or her spouse or children, but only for a period of one year).

If at the time an external director is appointed, all members of the board of directors who are not controlling shareholders or their relatives are of the same gender, the external director must be of the other gender. A director of one company may not be appointed as an external director of another company if a director of the other company is acting as an external director of the first company at such time.

Pursuant to the regulations promulgated under the Companies Law, a person may be appointed as an external director only if he or she either has professional qualifications or has accounting and financial expertise as defined in those regulations. In addition, at least one of the external directors must be determined by our board of directors to have accounting and financial expertise and the board is required to determine the minimum number of board members who are required to possess accounting and financial expertise. In determining the number of directors required to have such expertise, the members of our board of directors must consider, among other things, the type and size of the company and the scope and complexity of its operations.

Our board of directors has determined that the minimum number of directors with financial and accounting expertise is one and that Ms. Orly Solomon qualifies as such. The external director who qualifies to have such expertise is Ms. Orly Solomon. In addition, our Board has determined that Ms. Orly Solomon qualifies as an audit committee financial expert pursuant to the applicable SEC rules.

A director with accounting and financial expertise is a director who, due to his or her education, experience and skills, possesses a high degree of proficiency in, and an understanding of, business-accounting matters and financial statements, such that he or she is able to understand the financial statements of the company, in depth, and initiate a discussion about the manner of presentation of the financial data. A director is deemed to have professional qualifications if he or she has any of (i) an academic degree in economics, business management, accounting, law or public administration, (ii) an academic degree or has completed another form of higher education in the primary field of business of the company or in a field which is relevant to his/her position in the company, or (iii) at least five (5) years of experience serving in one of the following capacities, or at least five (5) years of cumulative experience serving in two or more of the following capacities: (a) a senior business management position in a company with a significant volume of business; (b) a senior position in the company's primary field of business; or (c) a senior position in public administration or service. Our board of directors is charged with determining whether a director possesses financial and accounting expertise or professional qualifications.

Audit Committee

Our Audit Committee is comprised of the following members: Dr. Modena, Mr. Lapidot (external director) and Ms. Solomon (external director). Ms. Solomon is the Chairwoman of the Audit Committee.

Pursuant to the Companies Law, the audit committee must be comprised of at least three (3) directors, including all of the external directors, and a majority of its members must be unaffiliated directors. An unaffiliated director is an external director or a director who is appointed or classified as such, and who meets the qualifications of an external director (other than the professional qualifications/accounting and financial expertise requirement), whom the audit committee has confirmed to meet the external director qualifications, and who has not served as a director of the company for more than nine (9) consecutive years (with any period of up to two (2) years during which such person does not serve as a director not being viewed as interrupting a nine-year period).

For Israeli companies traded on certain foreign stock exchanges (which does not include the OTCQB or the OTC Pink), a director who qualifies as an independent director for the purposes of such director's membership on our audit committee in accordance with the rules of such stock exchange is also deemed to be an unaffiliated director under the Companies Law. Such person must meet the non-affiliation requirements as to relationships with the controlling shareholder (and any entity controlled by the controlling shareholder, other than the company and other entities controlled by the company) and must meet the nine-year requirement described above. Following the nine-year period, a director of an Israeli company traded on such foreign stock exchange may continue to be considered an unaffiliated director for unlimited additional periods of three (3) years each, provided the audit committee and the board of directors of the company confirm that, in light of the director's expertise and special contribution to the work of the board of directors and its committees, the re-election for such additional period is beneficial to the company.

Under the Companies Law, the audit committee may not include the chairman of the board, any director employed by the company or who regularly provides services to the company (other than as a board member), a controlling shareholder or any relative of the controlling shareholder, as each term is defined in the Companies Law. In addition, the audit committee may not include any director employed by the company's controlling shareholder or by a company controlled by such controlling shareholder, or who provides services to the company's controlling shareholder or a company controlled by such controlling shareholder, on a regular basis, or a director whose main livelihood is from the controlling shareholder. The chairman of the audit committee is required to be an external director.

Audit Committee Role

Our board of directors adopted an audit committee charter that sets forth the responsibilities of the audit committee as well as the requirements for such committee under the Companies Law, including the following:

- oversight of our independent registered public accounting firm and recommending the engagement, compensation or termination of engagement of our independent registered public accounting firm to the board of directors in accordance with Israeli law;
- recommending the engagement or termination of the person filling the office of our internal auditor; and
- recommending the terms of audit and non-audit services provided by the independent registered public accounting firm for pre-approval by our board of directors.

Our audit committee provides assistance to our board of directors in fulfilling its legal and fiduciary obligations in matters involving our accounting, auditing, financial reporting, internal control and legal compliance functions by pre-approving the services performed by our independent auditors and reviewing their reports regarding our accounting practices and systems of internal control over financial reporting. Our audit committee also oversees the audit efforts of our independent auditors and takes those actions that it deems necessary to satisfy itself that the auditors are independent of management.

Under the Companies Law, our audit committee is responsible for:

- determining whether there are deficiencies in the business management practices of our company, including in consultation with our internal auditor or the independent auditor, and making recommendations to the board of directors to improve such practices;
- determining whether to approve certain related party transactions (including transactions in which an office holder has a personal interest and whether such transaction is extraordinary or material under Companies Law) and establishing the approval process for certain transactions with a controlling shareholder or in which a controlling shareholder has a personal interest (see “—Fiduciary duties and approval of specified related party transactions under Israeli law”);
- where the board of directors approves the working plan of the internal auditor, examining such working plan before its submission to the board of directors and proposing amendments thereto;
- examining our internal controls and internal auditor’s performance, including whether the internal auditor has sufficient resources and tools to dispose of its responsibilities;
- examining the scope of our auditor’s work and compensation and submitting a recommendation with respect thereto to our board of directors or shareholders, depending on which of them is considering the appointment of our auditor; and
- establishing procedures for the handling of employees’ complaints as to deficiencies in the management of our business and the protection to be provided to such employees.

Our audit committee may not approve any actions requiring its approval (see “—Fiduciary duties and approval of specified related party transactions under Israeli law”), unless at the time of the approval a majority of the committee’s members are present, which majority consists of unaffiliated directors including at least one external director.

Compensation Committee

Our Compensation Committee is comprised of Dr. Modena, Mr. Lapidot and Ms. Solomon.

Ms. Solomon is the chairwoman of the compensation committee. We have a Compensation Committee Charter and a Compensation Policy.

Under the Companies Law, the compensation committee is required to be comprised of at least three (3) directors, including all of the external directors. The additional members of the Compensation Committee must be directors that receive compensation subject to the provisions and limitations set forth in the regulations promulgated under the Companies Law. Under the Companies Law, an external director must serve as the chairman of the Compensation Committee.

Under the Companies Law, the external directors shall constitute a majority of our compensation committee.

Our compensation committee's duties include, among other things, recommending compensation policies to the board of directors, overseeing compensation policy implementation, and ratifying the compensation of executive officers.

Compensation Policy under the Companies Law

In adopting the compensation policy, the compensation committee is required to take into account factors such as the office holder's education, experience, past compensation arrangements with the Company, and the proportional difference between the person's compensation and the average compensation of the Company's employees. The compensation policy must be approved at least once every three (3) years at the Company's general meeting of shareholders, and is subject to the approval of a majority vote of the shares present and voting at a shareholders meeting, provided that either:

- such majority includes at least a majority of the shares held by all shareholders who are not controlling shareholders and do not have a personal interest in such election (other than a personal interest which is not derived from a relationship with a controlling shareholder), present and voting at such meeting; or
- the total number of shares of non-controlling shareholders and shareholders who do not have a personal interest in such election (other than a personal interest which is not derived from a relationship with a controlling shareholder) voting against the approval of the compensation policy does not exceed 2% of the aggregate voting rights in the company.

Our board of directors approved and adopted the compensation policy on February 22, 2018 and was approved by our shareholders at our annual general meeting on September 12, 2019.

The compensation policy serves as the basis for decisions concerning the financial terms of employment or engagement of executive officers and directors, including exculpation, insurance, indemnification or any monetary payment or obligation of payment in respect of employment or engagement. The compensation policy relates to certain factors, including advancement of the company's objectives, the company's business and its long-term strategy, and creation of appropriate incentives for executives. It also considers, among other things, the Company's risk management, size and the nature of its operations. The compensation policy furthermore considers the following additional factors:

- the knowledge, skills, expertise and accomplishments of the relevant director or executive;
- the director's or executive's roles and responsibilities and prior compensation agreements with him or her;
- the relationship between the terms offered to the relevant director or executive and the average compensation of the other employees of the company, including those employed through outsourcing firms;
- the impact of disparities in salary upon work relationships in the Company;
- the possibility of reducing variable compensation at the discretion of the board of directors, and the possibility of setting a limit on the exercise value of non-cash variable compensation; and
- as to severance compensation, the period of service of the director or executive, the terms of his or her compensation during such service period, the Company's performance during that period of service, the person's contribution towards the Company's achievement of its goals and the maximization of its profits, and the circumstances under which the person is leaving the company.

The compensation policy also includes the following principles:

- the link between variable compensation and long-term performance and measurable criteria;

- the relationship between variable and fixed compensation, and the ceiling for the value of variable compensation;
- the conditions under which a director or executive would be required to repay compensation paid to him or her if it was later shown that the data upon which such compensation was based was inaccurate and was required to be restated in the company's financial statements;
- the minimum holding or vesting period for variable, equity-based compensation while referring to appropriate a long-term perspective based incentives; and
- maximum limits for severance compensation.

The compensation committee is responsible for (a) recommending the compensation policy to the Company's board of directors for its approval (and subsequent approval by our shareholders) and (b) duties related to the compensation policy and to the approval of the terms of engagement of office holders, including:

- recommending whether a compensation policy should continue in effect, if the then-current policy has a term of greater than three (3) years (approval of either a new compensation policy or the continuation of an existing compensation policy must in any case occur every three (3) years);
- recommending to the board of directors periodic updates to the compensation policy;
- deciding upon the approval of certain compensation terms of officers which require compensation committee approval under the Companies Law; and
- determining whether the compensation terms of a proposed transaction need not be brought to approval of the shareholders.

The Compensation Committee's duties include recommending compensation policies to the board of directors, overseeing compensation policy implementation, and ratifying the compensation of executive officers.

Compensation of Directors

Under the Companies Law, the compensation of our directors requires the approval of our Compensation Committee, the subsequent approval of the board of directors and, unless exempted under the regulations promulgated under the Companies Law, the approval of the shareholders at a general meeting. Where the director is also a controlling shareholder, the requirements for approval of transactions with controlling shareholders apply, as described below under "—Fiduciary duties and approval of specified related party transactions under Israeli law—Disclosure of Personal Interests of a Controlling Shareholder and Approval of Acts and Transactions."

The directors are also entitled to be paid reasonable travel, hotel and other expenses expended by them in attending board meetings and performing their functions as directors of the Company, all of which is to be determined by the board of directors.

External directors are entitled to remuneration subject to the provisions and limitations set forth in the regulations promulgated under the Companies Law.

Internal Auditor

Under the Companies Law, we are required to appoint an internal auditor recommended by the audit committee and appointed by the board of directors. The role of the internal auditor is, among other things, to examine whether a company's actions comply with applicable law and orderly business procedure. Under the Companies Law, the internal auditor cannot be an interested party or an office holder or a relative of an interested party or an office holder, nor may the internal auditor be the company's independent auditor or its representative. An "interested party" is defined in the Companies Law as: (i) a holder of 5% or more of the issued share capital or voting power in a company, (ii) any person or entity who has the right to designate one or more directors or to designate the chief executive officer of the company, or (iii) any person who serves as a director or as a chief executive officer of the company. As of the date of this annual report on Form 20-F, the board of directors has not appointed an internal auditor, and the Company is therefore not currently in compliance with the requirements of the Companies Law. Due to such non-compliance with the Companies Law, the Company may be subject to third parties' and/or shareholders' claims under the Israeli Torts Ordinance.

Fiduciary duties and approval of specified related party transactions under Israeli law

Fiduciary duties of office holders

The Companies Law imposes a duty of care and a duty of loyalty on all office holders of a company. An office holder is defined in the Companies Law as a general manager, chief business manager, deputy general manager, vice general manager, any other person assuming the responsibilities of any of these positions regardless of such person's title, a director and any other manager directly subordinate to the general manager. The duty of care of an office holder is based on the duty of care set forth in connection with the tort of negligence under the Israeli Torts Ordinance (New Version) 5728-1968. This duty of care requires an office holder to act with the degree of proficiency with which a reasonable office holder in the same position would have acted under the same circumstances. The duty of care includes a duty to use reasonable means, in light of the circumstances, to obtain information on the advisability of a given action brought for his or her approval or performed by virtue of his or her position and all other important information pertaining to these actions.

The duty of care includes a duty to use reasonable means to obtain:

- information on the appropriateness of a given action submitted for his or her approval or performed by virtue of his or her position; and
- all other important information pertaining to these actions.

The duty of loyalty requires an office holder to act in good faith and for the benefit of the company, and includes the duty to:

- refrain from any act involving a conflict of interest between the performance of his or her duties in the company and his or her other duties or personal affairs;
- refrain from any activity that is competitive with the business of the company;
- refrain from exploiting any business opportunity of the company for the purpose of gaining a personal advantage for himself or herself or others; and
- disclose to the company any information or documents relating to the company's affairs which the office holder received as a result of his or her position as an office holder.

We may approve an act performed in breach of the duty of loyalty of an office holder provided that the office holder acted in good faith, the act or its approval does not harm the company, and the office holder discloses his or her personal interest a sufficient amount of time before the date for discussion of approval of such act.

Disclosure of personal interests of an office holder and approval of acts and transactions

The Companies Law requires that an office holder promptly disclose to the company any personal interest that he or she may have and all related material information or documents relating to any existing or proposed transaction by the company. A personal interest includes an interest of any person in an act or transaction of a company, including a personal interest of one's relative or of a corporate body in which such person or a relative of such person is a 5% or greater shareholder, director or general manager or in which he or she has the right to appoint at least one director or the general manager, but excluding a personal interest stemming solely from one's ownership of shares in the company. A personal interest includes the personal interest of a person for whom the office holder holds a voting proxy or the personal interest of the office holder with respect to his or her vote on behalf of a person for whom he or she holds a proxy, discretionary or otherwise, even if such shareholder has no personal interest in the matter.

An interested office holder's disclosure must be made promptly and in any event no later than the first meeting of the board of directors at which the transaction is considered. An office holder is not obliged to disclose such information if the personal interest of the office holder derives solely from the personal interest of his or her relative in a transaction that is not considered an extraordinary transaction.

Under the Companies Law, extraordinary transactions that require approval are defined as any of the following:

- a transaction other than in the ordinary course of business;

- a transaction that is not on market terms; and
- a transaction that may have a material impact on the company's profitability, assets or liabilities.

Under the Companies Law, once an office holder has complied with the disclosure requirement described above, a company may approve a transaction between the company and the office holder or a third-party in which the office holder has a personal interest, or approve an action by the office holder that would otherwise be deemed a breach of duty of loyalty. However, a company may not approve a transaction or action that is adverse to the company's interest or that is not performed by the office holder in good faith.

Approval first by the company's audit committee and subsequently by the board of directors is required for an extraordinary transaction (meaning, any transaction that is not in the ordinary course of business, not on market terms or that is likely to have a material impact on the company's profitability, assets or liabilities) in which an office holder has a personal interest.

A director and any other office holder who has a personal interest in a transaction which is considered at a meeting of the board of directors or the audit committee may generally (unless it is with respect to a transaction which is not an extraordinary transaction) not be present at such a meeting or vote on that matter unless a majority of the directors or members of the audit committee, as applicable, have a personal interest in the matter. If a majority of the members of the audit committee or the board of directors has a personal interest in the approval of such a transaction then all of the directors may participate in deliberations of the audit committee or board of directors, as applicable, with respect to such transaction and vote on the approval thereof and, in such case, shareholder approval is also required.

Pursuant to the Companies Law, public company compensation arrangements such as insurance, indemnification or exculpation arrangements with office holders who are not the Chief Executive Officer or a director require compensation committee approval and subsequent approval by the board of directors. Compensation arrangements must comply with the compensation policy of the company.

In special circumstances, the compensation committee and the board of directors may approve compensation arrangements that do not match the compensation policy of the company, subject to the approval of a majority vote of the shares present and voting at a shareholders meeting, provided that either: (a) such majority includes at least a majority of the shares held by all shareholders who are not controlling shareholders and do not have a personal interest in such compensation arrangement; or (b) the total number of shares of non-controlling shareholders and shareholders who do not have a personal interest in the compensation arrangement and who vote against the arrangement does not exceed two percent of the company's aggregate voting rights, or Special Majority Vote for Compensation. In the event that the Special Majority Vote for Compensation is not obtained, the compensation committee and the board of directors may reconsider the compensation arrangement and approve it, after a detailed review.

Pursuant to the Companies Law, public company compensation arrangements with the Chief Executive Officer require compensation committee approval, approval by the board of directors and Special Majority for Compensation approval at the shareholders' meeting. Compensation arrangements with the Chief Executive Officer must comply with the compensation policy of the company. In the event that Special Majority Vote for Compensation is not obtained, then the compensation committee and the board of directors may reconsider the compensation arrangement and approve it after a detailed review. Notwithstanding the above, the compensation committee is authorized to refrain from submitting a proposed compensation arrangement with a Chief Executive Officer candidate for shareholder approval, if (a) doing so would jeopardize the company's engagement of the candidate and (b) the proposed arrangement complies with the company's compensation policy.

With respect to amending an existing compensation arrangement, only the approval of the compensation committee is required, provided the committee determines that the amendment is not material in relation to the existing compensation arrangement. With respect to amending an existing related-party transaction, only the approval of the audit committee is required, provided the committee determines that the amendment is not material in relation to the existing arrangement.

Compensation arrangements with directors who are not controlling shareholders, including compensation arrangements with directors in their capacities as executive officers, (unless exempted under the applicable regulations), require the approval of the compensation committee, the board of directors and the company's shareholders, in that order.

Disclosure of personal interests of a controlling shareholder and approval of acts and transactions

Pursuant to the Companies Law, the disclosure requirements regarding personal interests that apply to directors and executive officers also apply to a controlling shareholder of a public company. A controlling shareholder is a shareholder who has the ability to direct the activities of a company, including a shareholder who holds 25% or more of the voting rights if no other shareholder holds more than 50% of the voting rights. For this purpose, the holdings of all shareholders who have a personal interest in the same transaction will be aggregated.

An extraordinary transaction between a public company and a controlling shareholder, or in which a controlling shareholder has a personal interest, and the terms of any compensation arrangement of a controlling shareholder who is an office holder or his relative, require the approval of a company's audit committee (or compensation committee with respect to compensation arrangements), board of directors and shareholders, in that order. In addition, the shareholder approval must fulfill one of the following requirements:

- at least a majority of the voting rights in the company held by shareholders who have no personal interest in the transaction and who are present and voting at the general meeting, must be voted in favor of approving the transaction (for this purpose, abstentions are disregarded); or
- the voting rights held by shareholders who have no personal interest in the transaction and who are present and voting at the general meeting, and who vote against the transaction, do not exceed 2% of the voting rights in the company.

To the extent that any such transaction with a controlling shareholder or his relative is for a period extending beyond three (3) years, shareholder approval is required once every three (3) years, unless, in respect to certain transactions, the audit committee determines that the duration of the transaction is reasonable under the circumstances.

Duties of Shareholders

Under the Companies Law, a shareholder has a duty to refrain from abusing its power in the company and to act in good faith and in an acceptable manner in exercising its rights and performing its obligations to the company and other shareholders, including, among other things, voting at general meetings of shareholders on the following matters:

- an amendment to the company's articles of association;
- an increase in the company's authorized share capital;
- a merger; and
- the approval of related party transactions and acts of office holders that require shareholder approval.

A shareholder also has a general duty to refrain from discriminating against other shareholders.

The remedies generally available upon a breach of contract will also apply to a breach of the above-mentioned duties, and in the event of discrimination against other shareholders, additional remedies are available to the injured shareholder.

In addition, any controlling shareholder, any shareholder that knows that its vote can determine the outcome of a shareholder vote and any shareholder that, under a company's articles of association, has the power to appoint or prevent the appointment of an office holder, or has another power with respect to a company, is under a duty to act with fairness towards the company. The Companies Law does not describe the substance of this duty except to state that the remedies generally available upon a breach of contract will also apply in the event of a breach of the duty to act with fairness, taking the shareholder's position in the company into account.

Exculpation, Insurance and Indemnification of Office Holders

Under the Companies Law, a company may not exculpate an office holder from liability for a breach of the duty of loyalty. A company may exculpate an office holder in advance from liability to the company, in whole or in part, for damages caused to the company as a result of a breach of the duty of care but only if a provision authorizing such exculpation is included in its articles of association. Our amended and restated articles of association include such a provision. An Israeli company may not exculpate a director from liability arising out of a breach of the duty of care with respect to a dividend or distribution to shareholders.

Under the Companies Law and the Securities Law, 5738—1968, or the Securities Law, a company may indemnify an office holder in respect of the following liabilities, payments and expenses incurred for acts performed as an office holder, either pursuant to an undertaking made in advance of an event or following an event, provided a provision authorizing such indemnification is contained in its articles of association:

- a monetary liability incurred by or imposed on him or her in favor of another person pursuant to a judgment, including a settlement or arbitrator's award approved by a court. However, if an undertaking to indemnify an office holder with respect to such liability is provided in advance, then such undertaking must be limited to certain events which, in the opinion of the board of directors, can be foreseen based on the company's activities when the undertaking to indemnify is given, and to an amount or according to criteria determined by the board of directors as reasonable under the circumstances, and such undertaking shall detail the foreseen events and described above amount or criteria;
- reasonable litigation expenses, including reasonable attorneys' fees, incurred by the office holder as (1) a result of an investigation or proceeding instituted against him or her by an authority authorized to conduct such investigation or proceeding, provided that (i) no indictment was filed against such office holder as a result of such investigation or proceeding; and (ii) no financial liability was imposed upon him or her as a substitute for the criminal proceeding as a result of such investigation or proceeding or, if such financial liability was imposed, it was imposed with respect to an offense that does not require proof of criminal intent; or (2) in connection with a monetary sanction; a monetary liability imposed on him or her in favor of an injured party at an Administrative Procedure (as defined below) pursuant to Section 52(54)(a)(1)(a) of the Securities Law;
- expenses incurred by an office holder or certain compensation payments made to an injured party that were instituted against an office holder in connection with an Administrative Procedure under the Securities Law, including reasonable litigation expenses and reasonable attorneys' fees; and
- reasonable litigation expenses, including attorneys' fees, incurred by the office holder or imposed by a court in proceedings instituted against him or her by the company, on its behalf or by a third party or in connection with criminal proceedings in which the office holder was acquitted or as a result of a conviction for an offense that does not require proof of criminal intent.

Administrative Procedure" is defined as a procedure pursuant to chapters H3 (Monetary Sanction by the Israeli Securities Authority), H4 (Administrative Enforcement Procedures of the Administrative Enforcement Committee) or I1 (Arrangement to prevent Procedures or Interruption of procedures subject to conditions) to the Securities Law.

Under the Companies Law and the Securities Law, a company may insure an office holder against the following liabilities incurred for acts performed by him or her as an office holder if and to the extent provided in the company's articles of association:

- a breach of duty of care to the company or to a third party, to the extent such a breach arises out of the negligent conduct of the office holder;
- a breach of duty of loyalty to the company, provided that the office holder acted in good faith and had a reasonable basis to believe that the act would not harm the company;
- a monetary liability imposed on the office holder in favor of a third party;
- a monetary liability imposed on the office holder in favor of an injured party at an Administrative Procedure pursuant to Section 52(54)(a)(1)(a) of the Securities Law; and
- expenses incurred by an office holder in connection with an Administrative Procedure instituted against him or her, including reasonable litigation expenses and reasonable attorneys' fees.

Under the Companies Law, a company may not indemnify, exculpate or insure an office holder against any of the following:

- a breach of duty of loyalty, except for indemnification and insurance for a breach of the duty of loyalty to the company to the extent that the office holder acted in good faith and had a reasonable basis to believe that the act would not harm the company;

- a breach of the duty of care committed intentionally or recklessly, excluding a breach arising out of the negligent conduct of the office holder;
- an act or omission committed with intent to derive illegal personal benefit; or
- a fine, monetary sanction or forfeit levied against the office holder.

Under the Companies Law, exculpation, indemnification and insurance of office holders must be approved by the compensation committee and the board of directors and, with respect to certain office holders or under certain circumstances, also by the shareholders. See “Item 6 C. — Board Practices — Fiduciary duties and approval of specified related party transactions under Israeli law.”

Our amended and restated articles of association permit us to, exculpate, indemnify and insure our office holders as permitted under the Companies Law. Our office holders are currently covered by a directors and officers’ liability insurance policy. As of the date of this annual report on Form 20-F, no claims for directors’ and officers’ liability insurance have been filed under this policy, we are not aware of any pending or threatened litigation or proceeding involving any of our directors or officers in which indemnification is sought, nor are we aware of any pending or threatened litigation that may result in claims for indemnification by any director or officer.

We have entered into indemnification agreements with each of our directors exculpating them from a breach of their duty of care to us to the fullest extent permitted by law, subject to limited exceptions. This indemnification is limited to events determined as foreseeable by the board of directors based on our activities, and to an amount or according to criteria determined by the board of directors as reasonable under the circumstances. We intend to enter into new agreements with each of our directors and executive officers exculpating them from liability to us for damages caused to us as a result of a breach of duty of care and undertaking to indemnify them, in each case, to the fullest extent permitted by our amended and restated articles of association to be effective upon the effectiveness of our registration statement and the Companies Law, including with respect to liabilities resulting from this offering to the extent that these liabilities are not covered by insurance. The maximum aggregate amount of indemnification that we may pay to all of our directors and office holders together based on the indemnification agreement is \$5,000,000. Such indemnification amounts will be in addition to any amounts available under our directors’ and office holders’ liability insurance policy.

D. Employees

As of December 31, 2019, we had twelve (12) full time employees, two (2) part time employee in PVN and two full time employees in Digiflex, located in Israel. There was one additional employee in the United States, employed by Digiflex Inc and his contract was terminated in September 2020. Israeli labor laws govern the length of the workday, minimum wages for employees, procedures for hiring and dismissing employees, determination of severance pay, annual leave, sick days, advance notice of termination of employment, equal opportunity and anti-discrimination laws and other conditions of employment of our Israeli employees. Subject to certain exceptions, Israeli law generally requires severance pay upon the retirement, death or dismissal of an employee, and requires us and our employees to make payments to the National Insurance Institute, which is similar to the U.S. Social Security Administration. Our Israeli employees have pension plans in accordance with the applicable Israeli legal requirements.

While none of our employees are party to any collective bargaining agreements, certain provisions of the collective bargaining agreements between the Histadrut (General Federation of Labor in Israel) and the Coordination Bureau of Economic Organizations (including the Industrialists’ Associations) are applicable to our employees by extension orders issued by the Israeli Ministry of Industry, Trade and Labor. These provisions primarily concern the length of the workday, minimum daily wages for professional workers, pension fund benefits for all employees, insurance for work-related accidents, procedures for dismissing employees, determination of severance pay and other conditions of employment. We generally provide our employees with benefits and working conditions beyond the required minimums.

E. Share Ownership

Share ownership by Directors and Executive Officers

For information regarding ownership of our ordinary shares by our directors and executive officers, see “Item 7 A. — Major Shareholders”.

Share Option Plans

For information on our share option plan see “Item 6 B. — Compensation — Incentive Compensation Plans”.

ITEM 7. Major Shareholders and Related Party Transactions

A. Major Shareholders.

The following table sets forth certain information regarding the beneficial ownership of our ordinary shares as of December 31, 2020, by:

- each of our directors and executive officers;
- all of our executive officers and directors as a group; and
- each person (or group of affiliated persons) known by us to be the beneficial owner of more than 5% of the outstanding ordinary shares.

The beneficial ownership of our ordinary shares is determined in accordance with the rules of the SEC. Under these rules, a person is deemed to be a beneficial owner of a security if that person has or shares voting power, which includes the power to vote or to direct the voting of the security, or investment power, which includes the power to dispose of or to direct the disposition of the security. For purposes of the table below, we deem ordinary shares issuable pursuant to options that are currently exercisable or exercisable within 60 days as of December 31, 2020, if any, to be outstanding and to be beneficially owned by the person holding the options or warrants for the purposes of computing the percentage ownership of that person, but we do not treat them as outstanding for the purpose of computing the percentage ownership of any other person. The percentage of ordinary shares beneficially owned is based on 26,986,203 ordinary shares outstanding as of December 31, 2020. Certain of the convertible loans provided to us and warrants issued by us commencing October 2018, which are included in the table below, have an exercise price that is subject to the conversation mechanism described in those agreements but not less than \$0.17. The number of beneficial owned ordinary shares presented in the table below was calculated based on an exercise price of \$0.17, representing the maximum potential ordinary share amount of the conversion price, as applicable. See “Item 10. Additional Information —C. Material Contracts —Convertible Loan Agreements.”

Except where otherwise indicated, we believe, based on information furnished to us by such owners and based on public information, that the beneficial owners of the ordinary shares listed below have sole investment and voting power with respect to such shares. In addition, none of our shareholders have different voting rights from other shareholders.

	No. of Shares Beneficially Owned	Percentage Owned
Holders of more than 5% of our voting securities:		
GTRIMG Investments Ltd.	78,425,488 ⁽¹⁾	74.69%
Legov Ltd.	13,292,893 ⁽²⁾	35.56%
Teuza – A Fairchild Technology Venture Ltd.	8,076,221 ⁽³⁾	24.35%
Slobel NV	7,828,273 ⁽⁴⁾	23.60%
Terra Venture partners	6,151,259 ⁽⁵⁾	22.37%
Hypermarketing Inc.	7,146,202 ⁽⁶⁾	20.94%
Y.T.Y. Lenny Investments Ltd	2,877,870 ⁽⁷⁾	9.95%
Dr. Fernando de la Vega	3,162,292 ⁽⁸⁾	9.65%
Fineline PCB (Cyprus) Ltd.	2,623,529 ⁽⁹⁾	8.86%
Amnon Mendelboim	2,121,023 ⁽¹⁰⁾	7.29%
Bio Rad Laboratories Inc.	1,862,826 ⁽¹¹⁾	6.69%
Ariel Lijtenstein	1,586,276 ⁽¹²⁾	5.59%
ProSeed - Venture Capital Fund	1,466,054 ⁽¹³⁾	5.29%
Directors and executive officers who are not 5% holders:		
Dov Farkash	-	-
Orly Solomon	449,200	1.58%
Ido Lapidot	449,200	1.58%
Evyatar Cohen	668,378	2.32%
Hanan Markovich	325,856	1.17%
Directors and executive officers as a group	1,892,634	6.65%

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- (1) Includes (i) 406,122 ordinary shares beneficially owned by GTRIMG Investments Ltd., a company incorporated under the laws of the State of Israel, or GTRIMG Investments, which is wholly owned by TRIMG Communication International Ltd., a company incorporated under the laws of the State of Israel, or the TRIMG Communication, which itself is wholly owned by GTRIMG Ltd., a company incorporated under the laws of the British Virgin Islands, or GTRIMG Ltd., and together with GTRIMG Investments and GTRIMG Communication, the GTRIMG Entities, which itself is wholly owned by GTRIMG Foundation, a foundation incorporated under the laws of the Principality of Liechtenstein, or the Foundation, the beneficiaries of which are Messrs. Talia Zeevi, Rami Zeevi, Yael Zeevi Shoer, Michal Zeevi Bender, and Gur Zeevi, collectively, the GTRIMG Group, (ii) 14,782,590 ordinary shares issuable to the GTRIMG Group upon the conversion of a convertible loan exercisable within 60 days as of December 31, 2020, and (iii) 63,236,776 ordinary shares issuable upon exercise of outstanding warrants exercisable within 60 days as of December 31, 2020.
 - (2) Includes (i) 2,525,090 ordinary shares beneficially owned, (ii) 372,469 ordinary shares beneficially owned by GlenRock Israel Ltd. (iii) 1,287,102 ordinary shares issuable upon the conversion of a convertible loan and exercisable within 60 days as of December 31, 2020, and (iv) 9,108,232 ordinary shares issuable upon exercise of outstanding warrants exercisable within 60 days as of December 31, 2020. The shares listed as beneficially owned by GlenRock Israel Ltd. are held of record by Legov Ltd.
 - (3) Includes (i) 1,895,654 ordinary shares beneficially owned, (ii) 966,559 ordinary shares issuable upon the conversion of a convertible loan and exercisable within 60 days as of December 31, 2020, and (iii) 5,214,008 ordinary shares issuable upon exercise of outstanding warrants exercisable within 60 days as of December 31, 2020.
 - (4) Includes (i) 1,648,286 ordinary shares beneficially owned, (ii) 2,957,700 ordinary shares issuable upon the conversion of a convertible loan exercisable within 60 days as of December 31, 2020, and (iii) 3,222,287 ordinary shares issuable upon exercise of outstanding warrants exercisable within 60 days as of December 31, 2020.
 - (5) Includes (i) 4,392,273 ordinary shares beneficially owned by Terra Venture Partners Sicar, (ii) 1,244,619 ordinary shares beneficially owned by Terra Venture LP, (iii) 305,562 ordinary shares issuable to Terra Venture Partners Sicar upon the conversion of a convertible loan and exercisable within 60 days of December 31, 2020, (iv) 86,584 ordinary shares issuable to Terra Venture LP upon the conversion of a convertible loan and exercisable within 60 days of December 31, 2020 (v) 95,235 ordinary shares issuable to Terra Venture Partners Sicar upon the exercise of warrants and exercisable within 60 days of December 31, 2020, and (vi) 26,986 ordinary shares issuable to Terra Venture LP upon the exercise of warrants and exercisable within 60 days of December 31, 2020. The shares listed as beneficially owned by Terra Venture Partners or Terra are held of record by Terra Venture Partners S.C.A. Sicar and Terra Venture Partners, L.P. Each of Dr. Astorre Modena and Dr. Harold Wiener is a General Partner of Terra Ventures Partners, the manager of Terra Venture Partners S.C.A. Sicar and Terra Venture Partners, L.P. Each of Dr. Astorre Modena and Dr. Harold Wiener has shared voting and dispositive power over all shares owned by Terra.
 - (6) Includes (i) 1,263,849 ordinary shares issuable upon the conversion of a convertible loan and exercisable within 60 days as of December 31, 2020, and (ii) 5,882,353 ordinary shares issuable upon exercise of outstanding warrants exercisable within 60 days as of December 31, 2020.
 - (7) Includes (i) 955,112 ordinary shares beneficially owned, and (ii) 1,922,758 ordinary shares issuable upon exercise of outstanding warrants exercisable within 60 days as of December 31, 2020.
 - (8) Includes (i) 1,336,140 ordinary shares beneficially owned, (ii) options to purchase 1,826,152 ordinary shares exercisable within 60 days of December 31, 2020.
 - (9) Includes 2,623,529 ordinary shares issuable upon the conversion of a convertible loan and exercisable within 60 days as of December 31, 2020.
 - (10) Includes 2,121,023 ordinary shares issuable upon exercise of outstanding warrants exercisable within 60 days as of December 31, 2020.
 - (11) Includes (i) 1,022,904 ordinary shares beneficially owned, and (ii) 839,922 ordinary shares issuable upon exercise of outstanding warrants exercisable within 60 days as of December 31, 2020.
 - (12) Includes (i) 180,556 ordinary shares beneficially owned, (ii) 548,203 ordinary shares issuable upon the conversion of a convertible loan and exercisable within 60 days as of December 31, 2020, and (iii) 857,517 ordinary shares issuable upon exercise of outstanding warrants exercisable within 60 days as of December 31, 2020.
 - (13) Includes (i) 722,606 ordinary shares beneficially owned, and (ii) 743,448 ordinary shares issuable upon exercise of outstanding warrants exercisable within 60 days as of December 31, 2020.
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Record Holders

As of December 31, 2020, our ordinary shares were held by 71 registered holders (including CEDE & Co.). Based on the information provided to us by our transfer agent, as of December 31, 2020, 16 registered holders were U.S. domiciled holders.

To our knowledge, the significant changes in the percentage of beneficial ownership held by our major shareholders during the past three years have been as follows:

Changes in 2019 vs. 2018:

- Hypermarketing Inc – exceeding 5% of beneficial ownership in 2019
- Y.T.Y. Lenny Investments Ltd – exceeding 5% of beneficial ownership in 2019
- Bio Rad Laboratories Inc. – exceeding 5% of beneficial ownership in 2019
- Ariel Lijtenstein – exceeding 5% of beneficial ownership in 2019
- ProSeed - Venture Capital Fund – exceeding 5% of beneficial ownership in 2019
- Jet CU P.C.B. Ltd. – lost its 5% of beneficial ownership in 2019
- Leifer Partners – lost its 5% of beneficial ownership in 2019
- Marcelo Einhorn – lost its 5% of beneficial ownership in 2019
- FirstFire Global Opportunities Fund LLC – lost its 5% of beneficial ownership in 2019
- Infinity IP Bank International (Suzhou) Co., Ltd. – lost its 5% of beneficial ownership in 2019
- Hermetic Trust (1975) Ltd. (in trust for Israel Electric Corporation, Ltd.) – lost its 5% of beneficial ownership in 2019

Changes in 2018 vs. 2017:

- GTRIMG Investments Ltd. – exceeding 5% of beneficial ownership in 2019
- Finline PCB (Cyprus) Ltd. – exceeding 5% of beneficial ownership in 2019
- Amnon Mendelboim – exceeding 5% of beneficial ownership in 2019
- Leifer Partners – exceeding 5% of beneficial ownership in 2019
- Marcelo Einhorn – exceeding 5% of beneficial ownership in 2019
- FirstFire Global Opportunities Fund LLC – exceeding 5% of beneficial ownership in 2019
- Infinity IP Bank International (Suzhou) Co., Ltd. – exceeding 5% of beneficial ownership in 2019
- Steven Hsieh – lost its 5% of beneficial ownership in 2019

B. Related Party Transactions

Please refer to Note 13 to our consolidated financial statements that appear elsewhere in this annual report on Form 20-F for information regarding our related party transactions and also to the following:

Employment and Services Agreements. Employment and services agreements entered into with our senior managers (including our active Chairman), as described above under “Item 6 B. — Compensation — Employment or Service Agreements with Senior Managers.”

Indemnification Agreements with Directors and Senior Managers. Customary indemnification agreements with our directors and senior managers, as described above under “Item 6 C. — Board Practices — Exculpation, Insurance and Indemnification of Office Holders.”

Option Agreement with Directors and Senior Managers. Option Agreements entered into with our directors and senior managers, as described above under “Item 6 E. — Share Ownership — Incentive Compensation Plan”.

We believe that we have executed all of our transactions with related parties on terms no less favorable to us than those we could have obtained from unaffiliated third parties. We are required by Israeli law to ensure that all future transactions between us and our officers, directors and principal shareholders and their affiliates are approved by a majority of our board of directors, including a majority of the independent and disinterested members of our board of directors, and that they are on terms no less favorable to us than those that we could obtain from unaffiliated third parties.

C. Interests of Experts and Counsel.

Not applicable.

ITEM 8. Financial Information.

A. Consolidated Financial Statements and Other Financial Information.

See “Item 18. Financial Statements” for a list of all financial statements filed as part of this Annual Report on Form 20-F.

Legal Proceedings

Please refer to Note 9.b. to our consolidated financial statements appear elsewhere in this annual report on Form 20-F.

Dividend Policy

We have never declared or paid any cash dividends on our ordinary shares and do not anticipate paying any cash dividends in the foreseeable future. Payment of cash dividends, if any, in the future will be at the discretion of our board of directors and will depend on then-existing conditions, including our financial condition, operating results, contractual restrictions, capital requirements, business prospects and other factors our board of directors may deem relevant.

Payment of dividends may also be subject to Israeli withholding taxes. See “Item 10 E. — Taxation — Certain Israeli Tax Considerations” for additional information.

B. Significant Changes.

No significant changes with respect to our consolidated financial statements have occurred since December 31, 2019 other than as described in Note 16 to our consolidated financial statements appear elsewhere in this annual report on Form 20-F.

ITEM 9. The Offer and Listing.

9.A.4 Offer and Listing Details

Our ordinary shares are quoted on the OTC Pink under the symbol "PVNNF."

9.B. Plan of distribution

Not applicable.

9.C. Market for ordinary shares

Not applicable.

9.D. Selling shareholders

Not applicable.

9.E. Dilution

Not applicable.

9.F. Expenses of the issue

Not applicable.

ITEM 10. Additional Information.

A. Share Capital.

Not applicable.

B. Memorandum and Articles of Association.

General

As of December 31, 2019, our authorized share capital consists of 200,000,000 ordinary shares, par value NIS 0.01 (approximately \$0.003) per share, of which 24,393,218 are issued and outstanding. On December 28, 2020, as part of the annual general meeting of the shareholders', the authorized ordinary shares were increased by an additional 1,000,000,000 ordinary shares of NIS 0.01 (\$0.003) par value.

All of our outstanding ordinary shares are validly issued, fully paid and non-assessable. Our ordinary shares do not have any preemptive rights.

Registration Number and Purposes of the Company

Our original articles of association were registered with the Israeli Registrar of Companies at the time of incorporation of the Company on June 24, 2009, under our Israeli registration number 514287093. Our purpose is set forth in Section 4 of our articles of association and includes every lawful purpose.

Voting Rights and Conversion

All ordinary shares will have identical voting and other rights in all respects.

Transfer of shares

Our fully paid ordinary shares are issued in registered form and may be freely transferred under our amended and restated articles of association, unless the transfer is restricted or prohibited by another instrument, applicable law or the rules of a stock exchange on which the shares are listed for trade. The ownership or voting of our ordinary shares by non-residents of Israel is not restricted in any way by our amended and restated articles of association or the laws of the State of Israel, except for ownership by nationals of some countries that are, or have been, in a state of war with Israel.

Election of directors

Under our amended and restated articles of association, our board of directors must consist of not less than three (3) but no more than seven (7) directors. Pursuant to our amended and restated articles of association, each of our directors, other than the external directors, for whom special election requirements apply under the Companies Law, will be appointed by a simple majority vote. Our Board consists of three (3) classes of directors (not including external directors who do not form part of any class), with one class being elected each year by shareholders at the Company's annual general meeting for a term of approximately three years. A director shall hold office until his or her successors are elected and qualified.

In addition, our amended and restated articles of association allow our board of directors, at any time and from time to time, to appoint any person to be a director, to fill a vacancy however created. Further, our board of directors has the power, at any time and from time to time, to appoint any person to be a director in addition to the existing board of directors, so long as the total number of directors shall not at any time exceed the maximum number prescribed by the our amended and restated articles of association. A director appointed by our board of directors as aforementioned shall be deemed, for all intents and purposes, as having been appointed by the annual general meeting, and, without derogating from the generality of the aforesaid, shall serve as a director until the expiry of the term of office of the class to which he or she was appointed.

Further, under our amended and restated articles of association, GTRIMG Investments Ltd., or GTRIMG, is entitled to designate one non-voting observer to the board of directors, or the Observer. The Observer is entitled to attend and participate in all meetings of the board of directors in a non-voting, observer capacity. Subject to limitations, the Observer is entitled to receive notice of, to attend and to receive copies of any documentation distributed to the directors before, during or after, all meetings of the board of directors at the same time such notice or material is provided or delivered to members of the board of directors. In addition, in the event that and conditioned upon the conversion of the loan amount or the investment of at least US \$2,000,000, GTRIMG shall be entitled to elect one director to our board of directors. Such director shall serve as the chairman of the board of directors, provided that such nominee has the required qualifications under applicable laws including the stock exchange rules then applicable. In the MOU, it was agreed that we would appoint a director nominated by GTRIMG as chairman of the board in accordance with the terms of our amended and restated articles of association. As a result, Dov Farkash was appointed as our Active Chairman of the Board of Directors commencing April 19, 2020.

Dividend and Liquidation Rights

We may declare a dividend to be paid to the holders of our ordinary shares in proportion to their respective shareholdings. Under the Companies Law, dividend distributions are determined by the board of directors and do not require the approval of the shareholders of a company unless the company's articles of association provide otherwise. Our amended and restated articles of association do not require shareholder approval of a dividend distribution and provide that dividend distributions may be determined by our board of directors.

Pursuant to the Companies Law, the distribution amount is limited to the greater of retained earnings or earnings generated over the previous two years, according to our then last reviewed or audited financial statements, provided that the end of the period to which the financial statements relate is not more than six months prior to the date of the distribution. If we do not meet such criteria, then we may distribute dividends only with court approval. In each case, we are only permitted to distribute a dividend if our board of directors and the court, if applicable, determines that there is no reasonable concern that payment of the dividend will prevent us from satisfying our existing and foreseeable obligations as they become due.

In the event of our liquidation, after satisfaction of liabilities to creditors, our assets will be distributed to the holders of our ordinary shares in proportion to their shareholdings. This right, as well as the right to receive dividends, may be affected by the grant of preferential dividend or distribution rights to the holders of a class of shares with preferential rights that may be authorized in the future.

Exchange Controls

There are currently no Israeli currency control restrictions on remittances of dividends on our ordinary shares, proceeds from the sale of the shares or interest or other payments to non-residents of Israel, except for shareholders who are subjects of countries that are, or have been, in a state of war with Israel.

Shareholder meetings

Under Israeli law, we are required to hold an annual general meeting of our shareholders once every calendar year that must be held no later than 15 months after the date of the previous annual general meeting. All meetings other than the annual general meeting of shareholders are referred to in our amended and restated articles of association as special general meetings. Our board of directors may call special general meetings whenever it sees fit, at such time and place, within or outside of Israel, as it may determine. In addition, the Companies Law provides that our board of directors is required to convene a special general meeting upon the written request of (i) any two or more of our directors or one-quarter or more of the members of our board of directors or (ii) one or more shareholders holding, in the aggregate, either (a) 5% or more of our outstanding issued shares and 1% or more of our outstanding voting power or (b) 5% or more of our outstanding voting power.

Subject to the provisions of the Companies Law and the regulations promulgated thereunder, shareholders entitled to participate and vote at general meetings are the shareholders of record on a date to be decided by the board of directors, which may generally be between four and 21 days prior to the date of the meeting, and in certain circumstances, between four and 40 days prior to the date of the meeting. Furthermore, the Companies Law requires that resolutions regarding the following matters must be passed at a general meeting of our shareholders:

- amendments to our articles of association;
- appointment or termination of our auditors;
- appointment of external directors;
- approval of certain related party transactions;
- increases or reductions of our authorized share capital;
- a merger; and
- the exercise of our board of director's powers by a general meeting, if our board of directors is unable to exercise its powers and the exercise of any of its powers is required for our proper management.

The Companies Law requires that a notice of any annual general meeting or special general meeting be provided to shareholders at least 21 days prior to the meeting and if the agenda of the meeting includes the appointment or removal of directors, the approval of transactions with office holders or interested or related parties, or an approval of a merger, notice must be provided at least 35 days prior to the meeting. Under the Companies Law and our amended and restated articles of association, shareholders are not permitted to take action by way of written consent in lieu of a meeting.

Quorum

Pursuant to our amended and restated articles of association, holders of our ordinary shares have one vote for each ordinary share held on all matters submitted to a vote before the shareholders at a general meeting. The quorum required for our general meetings of shareholders consists of at least two shareholders (not in default in payment of any sum) present in person, by proxy or written ballot who hold or represent between or among them at least 25% of the total our issued share capital. If within thirty (30) minutes from the time appointed for the general meeting the requisite quorum is not present, the meeting shall be dissolved, but shall stand adjourned to the same day in the next week at the same time the following week and at the same place or to a later date, if so specified in advance in the notice of the general meeting. All matters for which the general meeting was summoned shall be discussed at the adjourned meeting, provided that if the requisite quorum is not present at the adjourned meeting within thirty (30) minutes from the time appointed for such meeting, subject to the provisions of applicable law, one or more shareholders present in person or by proxy, shall constitute a quorum, unless the meeting was called pursuant to a request by our shareholders in accordance with the Companies Law, in which case the quorum required shall be one or more shareholders, present in person or by proxy, and holding the number of shares required for making such request. No business shall be transacted at any adjourned meeting except business that might lawfully have been transacted at the meeting as originally called.

Vote Requirements

Our amended and restated articles of association provide that all resolutions of our shareholders require a simple majority vote, unless otherwise required by the Companies Law or by our amended and restated articles of association. For special majority requirements under the Companies Law see “Item 6 C. — Board Practices”. Under our amended and restated articles of association, the alteration of the rights, privileges, preferences or obligations of any class of our shares requires a simple majority of the class so affected (or such other percentage of the relevant class that may be set forth in the governing documents relevant to such class), in addition to the ordinary majority vote of all classes of shares voting together as a single class at a shareholder meeting. Our amended and restated articles of association also provide that a change to the provisions related to the committees of our board of directors, number of directors, the election or removal of any director from office, our board of directors proceedings and mergers and business combinations, requires the vote of at least 60% of our outstanding share capital having the right to vote, voting in person or by proxy at such general meeting. Another exception to the simple majority vote requirement is a resolution for the voluntary winding up, or an approval of a scheme of arrangement or reorganization, of the company pursuant to Section 350 of the Companies Law.

Access to corporate records

Under the Companies Law, all shareholders generally have the right to review minutes of our general meetings, our shareholder register, including with respect to material shareholders, our articles of association, our financial statements, other documents as provided in the Companies Law, and any document we are required by law to file publicly with the Israeli Companies Registrar or the Israeli Securities Authority. Any shareholder who specifies the purpose of its request may request to review any document in our possession that relates to any action or transaction with a related party which requires shareholder approval under the Companies Law. We may deny a request to review a document if we determine that the request was not made in good faith, that the document contains a commercial secret or a patent or that the document’s disclosure may otherwise impair our interests.

Acquisitions under Israeli law

Merger

The Companies Law permits merger transactions if approved by each party’s board of directors and, unless certain requirements described under the Companies Law are met, a majority of each party’s shareholders and, in the case of the target company, a majority vote of each class of its shares, voted on the proposed merger at a shareholders meeting. The board of directors of a merging company is required pursuant to the Companies Law to discuss and determine whether in its opinion there exists a reasonable concern that as a result of a proposed merger, the surviving company will not be able to satisfy its obligations towards its creditors, such determination taking into account the financial status of the merging companies. If the board of directors has determined that such a concern exists, it may not approve a proposed merger. Following the approval of the board of directors of each of the merging companies, the boards of directors must jointly prepare a merger proposal for submission to the Israeli Registrar of Companies.

For purposes of the shareholder vote, unless a court rules otherwise, the merger will not be deemed approved if a majority of the shares represented at the shareholders meeting that are held by parties other than the other party to the merger, or by any person who holds 25% or more of the outstanding shares or the right to appoint 25% or more of the directors of the other party, vote against the merger. In addition, if the non-surviving entity of the merger has more than one class of shares, the merger must be approved by each class of shareholders. If the transaction would have been approved but for the separate approval of each class or the exclusion of the votes of certain shareholders as provided above, a court may still approve the merger upon the request of holders of at least 25% of the voting rights of a company, if the court holds that the merger is fair and reasonable, taking into account the value of the parties to the merger and the consideration offered to the shareholders. Pursuant to the Companies Law, if a merger is with a company’s controlling shareholder or if the controlling shareholder has a personal interest in the merger, then the merger is instead subject to the same special majority approval that governs all extraordinary transactions with controlling shareholders (as described above under “Board Practices — Fiduciary duties and approval of specified related party transactions under Israeli law.”). In addition, the Company shall not engage in any Business Combination with any Interested Shareholder for a period of three years following the time that such shareholder became an Interested Shareholder, unless either prior to such time the Board of Directors approved either the Business Combination or the transaction which resulted in the shareholder becoming an Interested Shareholder; or upon consummation of the transaction which resulted in the shareholder becoming an Interested Shareholder, the Interested Shareholder owned at least 85% of the Voting Shares of the Company outstanding at the time the transaction commenced.

Under the Companies Law, each merging company must send a copy of the proposed merger plan to its secured creditors. Unsecured creditors are entitled to receive notice of the merger pursuant to regulations promulgated under the Companies Law. Upon the request of a creditor of either party to the proposed merger, the court may delay or prevent the merger if it concludes that there exists a reasonable concern that, as a result of the merger, the surviving company will be unable to satisfy the obligations the target company. The court may further give instructions to secure the rights of creditors.

In addition, a merger may not be completed unless at least fifty (50) days have passed from the date that a proposal for approval of the merger was filed with the Israeli Registrar of Companies and thirty (30) days from the date that shareholder approval of both merging companies was obtained.

Full tender offer

A person wishing to acquire shares of a public Israeli company and who would as a result hold over 90% of the target company's issued and outstanding share capital or that of a certain class of shares is required by the Companies Law to make a tender offer to all of the company's shareholders or the shareholders who holds shares of the same class for the purchase of all of the issued and outstanding shares of the company or of the same class, as applicable.

If the shareholders who do not respond to or accept the offer hold less than 5% of the issued and outstanding share capital of the company or of the applicable class of the shares, all of the shares that the acquirer offered to purchase will be transferred to the acquirer by operation of law (provided that a majority of the offerees that do not have a personal interest in such tender offer shall have approved it, which condition shall not apply if offerees holding less than 2% of the company's issued and outstanding share capital failed to approve such tender offer).

Upon a successful completion of such a full tender offer, any shareholder that was an offeree in such tender offer, whether the shareholder accepted the tender offer or not, may, within six months from the date of acceptance of the tender offer, petition the Israeli court to determine whether the tender offer was for less than fair value and that the fair value should be paid as determined by the court unless the acquirer stipulated that a shareholder that accepts the offer may not seek appraisal rights. If the shareholders who did not respond or accept the tender offer hold at least 5% of the issued and outstanding share capital of the company or of the applicable class, or the shareholders who did not accept the tender offer hold 2% or more of the issued and outstanding share capital of the company (or of the applicable class), the acquirer may not acquire shares of the company that will increase its holdings to more than 90% of the company's issued and outstanding share capital or of the applicable class from shareholders who accepted the tender offer.

Special tender offer

The Companies Law provides that an acquisition of shares of a public Israeli company must be made by means of a special tender offer if as a result of the acquisition the purchaser would become a holder of at least 25% of the voting rights in the company. This rule does not apply if there is already another holder of at least 25% of the voting rights in the company. Similarly, the Companies Law provides that an acquisition of shares in a public company must be made by means of a tender offer if as a result of the acquisition the purchaser would become a holder of more than 45% of the voting rights in the company, if there is no other shareholder of the company who holds more than 45% of the voting rights in the company.

These requirements do not apply if the acquisition (i) occurs in the context of a private placement, provided that the general meeting approved the acquisition as a private offering whose purpose is to give the acquirer at least 25% of the voting rights in the company if there is no person who holds at least 25% of the voting rights in the company, or as a private offering whose purpose is to give the acquirer 45% of the voting rights in the company, if there is no person who holds 45% of the voting rights in the company, (ii) was from a shareholder holding at least 25% of the voting rights in the company and resulted in the acquirer becoming a holder of at least 25% of the voting rights in the company, or (iii) was from a holder of more than 45% of the voting rights in the company and resulted in the acquirer becoming a holder of more than 45% of the voting rights in the company.

The special tender offer may be consummated only if (i) at least 5% of the voting power attached to the company's outstanding shares will be acquired by the offeror and (ii) the special tender offer is accepted by a majority of the votes of those offerees who gave notice of their position in respect of the offer, excluding the votes of a holder of control in the offeror, a person who has personal interest in acceptance of the special tender offer, holders of 25% or more of the voting rights in the company or anyone on their behalf, including their relatives and entities controlled by them.

In the event that a special tender offer is made, a company's board of directors is required to express its opinion on the advisability of the offer, or shall abstain from expressing any opinion if it is unable to do so, provided that it gives the reasons for its abstention. In addition, the board of directors must disclose any personal interest each member of the board of directors has in the offer or stems therefrom. An office holder in a target company who, in his or her capacity as an office holder, performs an action the purpose of which is to cause the failure of an existing or foreseeable special tender offer or is to impair the chances of its acceptance, is liable to the potential purchaser and shareholders for damages resulting from his or her acts, unless such office holder acted in good faith and had reasonable grounds to believe he or she was acting for the benefit of the company. However, office holders of the target company may negotiate with the potential purchaser in order to improve the terms of the special tender offer, and may further negotiate with third parties in order to obtain a competing offer.

If a special tender offer was accepted by a majority of the shareholders who announced their stand on such offer, then shareholders who did not respond to the special tender offer or had objected to the offer may accept the offer within four days of the last day set for the acceptance of the offer.

In the event that a special tender offer is accepted, then the purchaser or any person or entity controlling it or under common control with the purchaser or such controlling person or entity shall refrain from making a subsequent tender offer for the purchase of shares of the target company and cannot execute a merger with the target company for a period of one year from the date of the offer, unless the purchaser or such person or entity undertook to effect such an offer or merger in the initial special tender offer.

Borrowing Powers

Pursuant to the Companies Law and our amended and restated articles of association, our Board of Directors may, from time to time, raise or borrow or secure the payment of any sum or sums of money for the purposes of the Company. The Company, by resolution of the Board of Directors, may also raise or secure the payment or repayment of such sum or sums in such manner and upon such terms and conditions in all respects as it deems fit, and in particular by the issue of debentures or debenture stock of the Company charged upon all or any part of the property of the Company (both present and future) including its unissued and/or its uncalled authorized capital for the time being.

The Company may, from time to time, by resolution of the Board of Directors, borrow funds or guarantee and/or provide securities for the payment of any sum by Company or by any other third party. Furthermore, the Company may, by resolution of the Board of Directors, borrow or secure the payment of such sums in the manner and under the conditions as it deems fit, whether by means of issuing debt Securities, whether against a floating charge on all or a portion of the Company's assets, whether owned at such time or in the future, including capital not yet called, against liens or other security interests of any kind. Any debt Securities may be issued at a discount or a premium or in any other matter and on such terms and conditions that the Board of Directors deems appropriate, including with conversion, redemption or allotment rights.

Changes in Capital

Our amended and restated articles of association enable us to increase or reduce our share capital. Any such changes are subject to Israeli law and must be approved by a resolution duly passed by our shareholders at a general meeting by voting on such change in the capital. In addition, transactions that have the effect of reducing capital, such as the declaration and payment of dividends in the absence of sufficient retained earnings or profits, require the approval of both our board of directors and an Israeli court.

Transfer Agent and Registrar

The transfer agent and registrar for our ordinary shares is Vstock Transfer, LLC. Its address is 18 Lafayette Place Woodmere, New York 11598, and its telephone number is (212) 828-8436.

C. Material Contracts

The following are summary descriptions of certain material agreements to which we are a party. The descriptions provided below do not purport to be complete and are qualified in their entirety by the complete agreements, which are attached as exhibits to this annual report on Form 20-F.

For a description of our material agreements relating to our strategic collaborations and research arrangements and other material agreements, please refer to "Item 4 B. — Business Overview — Research and Development Agreements, License Agreements and Material Contracts".

Employment Agreements

See “Item 6 B. — Compensation — Employment Agreements and Arrangements with Directors and Related Parties.”

Loans, Convertible Loans and Private Placements

Please refer to Note 8 and Note 11 to our consolidated financial statements appear elsewhere in this annual report on Form 20-F for information regarding our loans and convertible loans and sale of equity, respectively.

Share Exchange Agreement with Digiflex

On December 3, 2017, we entered into a Share Exchange Agreement with Digiflex according to which the Digiflex shareholders, representing the entire share capital of Digiflex on a fully diluted basis, sold to and exchanged with us all shares of Digiflex which they held in consideration for our ordinary shares, par value NIS 0.01 (approximately \$0.003) per share at a conversion rate of 33.698 shares of Digiflex for each share of the Company.

Digiflex offers a number of key printer technologies and inks which we believe may allow us to expand our “Complete Solution Approach” for our customers. As a result, we would have the unique ability to support additive digital printing design, prototyping and mass production of electronic devices, such as PCBs, all in one. We believe this approach will be very attractive to customers, especially when coupling it with our cost-efficient and mass production compatible line of Sicrys™ silver and copper conductive inks. Historically, Digiflex printers have been used for low volume printing. We are in the process of adapting these printers to serve the electronics market and to be compatible with our Sicrys™ inks, as well as adapting the non-conductive polymeric inks developed by Digiflex so that they could be utilized in the printing of full PCBs.

Share Exchange Agreement with Jet CU

On July 26, 2020, we consummated the acquisition of 100% of the shares of Jet CU, a company that was incorporated in Israel in May 2014 and was inactive on the purchase date since its operational assets were sold a few years before. The main balance sheet items as of the purchase date were cash and liability to the Authority of approximately \$0.8 million and approximately \$1.0 million, respectively. We issued 2,000,000 ordinary shares and warrants to purchase 8,000,000 ordinary shares, at an exercise price of \$0.26 per share as a consideration for the purchase. The warrants exercisable until the date which is the earlier of (i) 24 months as of the purchase date or (ii) Merger/Acquisition transaction or an IPO.

D. Exchange Controls.

There are no Israeli government laws, decrees or regulations that restrict or that affect our export or import of capital or the remittance of dividends, interest or other payments to non-resident holders of our securities, including the availability of cash and cash equivalents for use by us and our wholly-owned subsidiaries, except for ownership by nationals of certain countries that are, or have been, declared as enemies of Israel or otherwise as set forth under “Item 10 E. — Taxation.”

E. Taxation

Certain Israeli Tax Considerations

The following is a brief summary of the material Israeli income tax laws applicable to us. This summary does not discuss all the aspects of Israeli tax law that may be relevant to a particular investor in light of his or her personal investment circumstances or to some types of investors subject to special treatment under Israeli law. Examples of this kind of investor include residents of Israel or investors in securities who are subject to special tax regimes not covered in this discussion. To the extent that the discussion is based on new tax legislation that has not yet been subject to judicial or administrative interpretation, we cannot assure you that the appropriate tax authorities or the courts will accept the views expressed in this discussion. This summary is based on laws and regulations in effect as of the date hereof and does not take into account possible future amendments which may be under consideration.

General Corporate Tax Structure in Israel

Israeli resident companies are generally subject to corporate tax. In 2018 and thereafter the corporate tax rate is 23% of their taxable income. The corporate tax rate for 2017 was 24%. However, the effective tax rate payable by a company that derives income from an Approved Enterprise, a Preferred Enterprise, a Beneficiary Enterprise or a Technology Enterprise (as discussed below) may be considerably less.

Capital gains derived by an Israeli resident company are generally subject to corporate tax rate.

Law for the Encouragement of Industry (Taxes), 5729-1969

The Law for the Encouragement of Industry (Taxes), 5729-1969, which we refer to as the Industry Encouragement Law, provides several tax benefits for “Industrial Company,” which is defined as Israeli resident-company incorporated in Israel, of which 90% or more of its income in any tax year, other than income from certain government loans, is derived from an “Industrial Enterprise” that it owns and located in Israel or in the “Area”, in accordance with the definition in section 3a of the Ordinance. An “Industrial Enterprise” is defined as an enterprise which is held by an Industrial Company whose principal activity in a given tax year is industrial production. Eligibility for benefits under the Industry Encouragement Law is not contingent upon approval of any governmental authority.

The following corporate tax benefits, among others, are available to Industrial Companies:

- amortization over an eight-year period of the cost of purchased patent, rights to use a patent and rights to know-how, which are used for the development or advancement of the Industrial Enterprise, commencing in the year in which such rights were first exercised;
- under limited conditions, an election to file consolidated tax returns with related Industrial Companies; and
- expenses related to a public offering are deductible in equal amounts over three years commencing on the year of the offering.

We believe that we currently qualify as an “Industrial Company” within the meaning of the Industry Encouragement Law. There can be no assurance that we will qualify as an industrial company or that the benefits described above will be available in the future.

Law for the Encouragement of Capital Investments, 5719-1959

The Law for the Encouragement of Capital Investments, 5719-1959, generally referred to as the Investment Law, provides certain incentives for capital investments in production facilities (or other eligible assets). Generally, an investment program that is implemented in accordance with the provisions of the Investment Law, is entitled to benefits. These benefits may include cash grants from the Israeli government and tax benefits, based upon, among other things, the geographic location in Israel of the facility in which the investment and manufacture activity are made. In order to qualify for these incentives, an Approved Enterprise, a Beneficiary Enterprise, a Preferred Enterprise or a Technology Enterprise is required to comply with the requirements of the Investment Law.

The Investment Law was significantly amended effective as of April 1, 2005 (the “2005 Amendment”), as of January 1, 2011 (the “2011 Amendment”) and as of January 1, 2017 (the “2017 Amendment”). Pursuant to the 2005 Amendment, tax benefits granted in accordance with the provisions of the Investment Law prior to its revision by the 2005 Amendment remain in force but any benefits granted subsequently are subject to the provisions of the amended Investment Law. Similarly, the 2011 Amendment introduced new benefits to replace those granted in accordance with the provisions of the Investment Law in effect prior to the 2011 Amendment. However, companies entitled to benefits under the Investment Law as in effect prior to January 1, 2011 were entitled to choose to continue to enjoy such benefits, provided that certain conditions are met, or elect instead, irrevocably, to forego such benefits and have the benefits of the 2011 Amendment apply. The 2017 Amendment introduces new benefits for Technological Enterprises, alongside the existing tax benefits.

The following discussion is a summary of the Investment Law following its recent amendments:

Tax Benefits under the 2011 Amendment

The 2011 Amendment canceled the availability of the benefits granted to Industrial Companies under the Investment Law prior to 2011 and, instead, introduced new benefits for income generated by a “Preferred Company” through its “Preferred Enterprise” (as such terms are defined in the Investment Law) as of January 1, 2011. The definition of a Preferred Company includes a company incorporated in Israel that is not fully owned by a governmental entity, and that has, among other things, Preferred Enterprise status and is controlled and managed from Israel. Pursuant to the 2011 Amendment, a Preferred Company is entitled to a reduced corporate tax rate of 15% with respect to its income derived by its Preferred Enterprise in 2011 and 2012, unless the Preferred Enterprise is located in a specified development zone, in which case the rate will be 10%. Under the 2011 Amendment, such corporate tax rate was reduced from 15% and 10%, respectively, to 12.5% and 7%, respectively, in 2013, 16% and 9% respectively, in 2014, 2015 and 2016, and 16% and 7.5%, respectively, in 2017 and thereafter. Income derived by a Preferred Company from a “Special Preferred Enterprise” (as such term is defined in the Investment Law) would be entitled, during a benefits period of 10 years, to further reduced tax rates of 8%, or 5% if the Special Preferred Enterprise is located in a certain development zone. As of January 1, 2017, the definition for ‘Special Preferred Enterprise’ includes less stringent conditions. The tax benefits under the 2011 Amendment also include accelerated depreciation and amortization for tax purposes.

As of January 1, 2014, dividends distributed from income which is attributed to a “Preferred Enterprise” or to a Special Preferred Enterprise will be subject to withholding tax at source at the following rates: (i) Israeli resident corporations – 0%, (although, if such dividends are subsequently distributed to individuals or a non-Israeli company, withholding tax at a rate of 20% or such lower rate as may be provided in an applicable tax treaty will apply (subject to the receipt in advance of a valid certificate from the Israel Tax Authority allowing for a reduced tax rate)) (ii) Israeli resident individuals – 20% (iii) non-Israeli residents (individuals and corporations) – 20%, subject to a reduced tax rate under the provisions of an applicable double tax treaty (subject to the receipt in advance of a valid certificate from the Israel Tax Authority allowing for a reduced tax rate). In 2017-2019 dividends paid out of preferred income attributed to a Special Preferred Enterprise, directly to a foreign parent company, are subject to withholding tax at source at the rate of 5% (temporary provisions).

Currently, we are not entitled to receive the tax benefits described above and there can be no assurance that we will be entitled to receive such benefits at any time in the future. Furthermore, there can be no assurance that even if in the future we meet the relevant requirements for such tax benefits, that such tax benefits will be available to us at all.

New Tax benefits under the 2017 Amendment that became effective on January 1, 2017

The 2017 Amendment was enacted as part of the Economic Efficiency Law that was published on December 29, 2016, and is effective as of January 1, 2017. The 2017 Amendment provides new tax benefits for two types of “Technology Enterprises”, as described below, and is in addition to the other existing tax beneficial programs under the Investment Law.

The 2017 Amendment provides that a technology company satisfying certain conditions will qualify as a “Preferred Technology Enterprise” and will thereby enjoy a reduced corporate tax rate of 12% on income that qualifies as “Preferred Technology Income”, as defined in the Investment Law. The tax rate is further reduced to 7.5% for a Preferred Technology Enterprise located in development zone “A”. In addition, a Preferred Technology Company will enjoy a reduced corporate tax rate of 12% on capital gain derived from the sale of certain “Benefitted Intangible Assets” (as defined in the Investment Law) to a related foreign company if the Benefitted Intangible Assets were acquired from a foreign company on or after January 1, 2017 for at least NIS 200 million (approximately \$53 million), and the sale receives prior approval from the National Authority for Technological Authority (previously known as the Israeli Office of the Chief Scientist), referred to as the IIA.

The 2017 Amendment further provides that a technology company satisfying certain conditions will qualify as a “Special Preferred Technology Enterprise” and will thereby enjoy a reduced corporate tax rate of 6% on “Preferred Technology Income” regardless of the company’s geographic location within Israel. In addition, a Special Preferred Technology Enterprise will enjoy a reduced corporate tax rate of 6% on capital gain derived from the sale of certain “Benefitted Intangible Assets” to a related foreign company if the Benefitted Intangible Assets were either developed by the Special Preferred Technology Enterprise or acquired from a foreign company on or after January 1, 2017, and the sale received prior approval from IIA. A Special Preferred Technology Enterprise that acquires Benefitted Intangible Assets from a foreign company for more than NIS 500 million (approximately \$144 million) will be eligible for these benefits for at least ten years, subject to certain approvals as specified in the Investment Law.

Dividends distributed by a Preferred Technology Enterprise or a Special Preferred Technology Enterprise, paid out of Preferred Technology Income, are generally subject to withholding tax at source at the rate of 20% or such lower rate as may be provided in an applicable tax treaty (subject to the receipt in advance of a valid certificate from the Israel Tax Authority allowing for a reduced tax rate). However, if such dividends are paid to an Israeli company, no tax is required to be withheld (although, if such dividends are subsequently distributed from such Israeli company to individuals or a non-Israeli company, withholding tax at a rate of 20% or such lower rate as may be provided in an applicable tax treaty will apply). If such dividends are distributed to a foreign company and other conditions are met, the withholding tax rate will be 4% (or a lower rate under a tax treaty, if applicable, subject to the receipt in advance of a valid certificate from the Israel Tax Authority allowing for a reduced tax rate).

Currently, we are not entitled to receive the tax benefits described above and there can be no assurance that we will be entitled to receive such benefits at any time in the future. Furthermore, there can be no assurance that even if in the future we meet the relevant requirements for such tax benefits, that such tax benefits will be available to us at all

Capital Gains Taxes Applicable to Non-Israeli Resident Shareholders.

Israeli capital gains tax is imposed on the disposal of capital assets by a non-Israeli resident if such assets are either (i) located in Israel; (ii) shares or rights to shares in an Israeli resident company, or (iii) represent, directly or indirectly, rights to assets located in Israel, unless a specific exemption is available or unless a tax treaty between Israel and the seller's country of residence provides otherwise. Capital gain is generally subject to tax at the corporate tax rate (23% in 2018 and thereafter), if generated by a company, or at the rate of 25% if generated by an individual, or 30% in the case of sale of shares by a Substantial Shareholder (i.e., a person who holds, directly or indirectly, alone or together with such person's relative or another person who collaborates with such person on a permanent basis, 10% or more of any of the company's "means of control" (including, among other things, the right to receive profits of the company, voting rights, the right to receive proceeds upon liquidation and the right to appoint a director)) at the time of sale or at any time during the preceding 12-month period. Individual and corporate shareholders dealing in securities in Israel are taxed at the tax rates applicable to business income (a corporate tax rate for a corporation and a marginal tax rate of up to 47% for an individual in 2019) unless the benefiting provisions of an applicable treaty applies.

Notwithstanding the foregoing, a non-Israeli resident (individual or corporation) who derives capital gains from the sale of shares in an Israeli resident company that were purchased after the company was listed for trading on a recognized stock exchange in Israel or outside of Israel will generally be exempt from Israeli tax so long as the shares were not held through a permanent establishment that the non-resident maintains in Israel (and with respect to shares listed on a recognized stock exchange outside of Israel, so long as neither the shareholder nor the particular capital gain is otherwise subject to the Israeli Income Tax Law (Inflationary Adjustments) 5745-1985). However, non-Israeli corporations will not be entitled to the foregoing exemption if Israeli residents: (i) have a controlling interest of more than 25% in such non-Israeli corporation or (ii) are the beneficiaries of, or are entitled to, 25% or more of the revenues or profits of such non-Israeli corporation, whether directly or indirectly. These provisions dealing with capital gain are not applicable to a person whose gains from selling or otherwise disposing of the shares are deemed to be business income.

Additionally, a sale of shares by a non-Israeli resident may be exempt from Israeli capital gains tax under the provisions of an applicable tax treaty. For example, under the United States-Israel Tax Treaty, the sale, exchange or other disposition of shares of an Israeli company by a shareholder who (i) is a U.S. resident (for purposes of the treaty), (ii) holds the shares as a capital asset, and (iii) is entitled to claim the benefits afforded to such person by the treaty, is generally exempt from Israeli capital gains tax. Such exemption will not apply if: (i) the capital gain arising from such sale, exchange or disposition is attributed to real estate located in Israel; (ii) the capital gain arising from such sale, exchange or disposition is attributed to royalties; (iii) the capital gain arising from the sale, exchange or disposition that can be attributed to a permanent establishment of the shareholder that is maintained in Israel under certain terms; (iv) the shareholder holds, directly or indirectly, shares representing 10% or more of the voting rights during any part of the 12-month period preceding such sale exchange or other disposition, subject to certain conditions; or (v) such U.S. resident is an individual and was present in Israel for a period or periods aggregating to 183 days or more during the relevant taxable year. In any such case, the sale, exchange or disposition of our ordinary shares would be subject to Israeli tax, to the extent applicable; however, under the United States-Israel Tax Treaty, a U.S. resident would be permitted to claim a credit for such taxes against the U.S. federal income tax imposed with respect to such sale, exchange or disposition, subject to the limitations under U.S. law applicable to foreign tax credits. The United States-Israel Tax Treaty does not relate to U.S. state or local taxes.

In some instances where our shareholders may be liable for Israeli tax on the sale of their ordinary shares, the payment of the consideration may be subject to the withholding of Israeli tax at source. Shareholders may be required to demonstrate that they are exempt from tax on their capital gains in order to avoid withholding at source at the time of sale. Specifically, in transactions involving a sale of all of the shares of an Israeli resident company, such as a merger or other transaction, the Israel Tax Authority may require from shareholders who are not liable for Israeli tax to sign declarations in forms specified by that authority or obtain a specific exemption from the Israel Tax Authority to confirm their status as non-Israeli residents, and, in the absence of such declarations or exemptions, may require the purchaser of the shares to withhold taxes at source.

Taxation of Non-Israeli Shareholders on Receipt of Dividends.

Non-Israeli residents (whether individuals or corporations) are generally subject to Israeli income tax on the receipt of dividends paid on our ordinary shares at the rate of 25% or 30% (if the recipient is a Substantial Shareholder at the time of receiving the dividend or at any time during the preceding 12 months) or 15% if the dividend is distributed from income attributed to a Benefited Enterprise and 20% with respect to a Preferred Enterprise, subject to certain conditions. Such dividends are generally subject to Israeli withholding tax at a rate of 25% so long as the shares are registered with a nominee company (whether the recipient is a Substantial Shareholder or not) and 15% if the dividend is distributed from income attributed to a Benefited Enterprise or 20% if the dividend is distributed from income attributed to a Preferred Enterprise, unless a reduced rate is provided under an applicable tax treaty (subject to the receipt of a valid certificate from the Israel Tax Authority allowing for a reduced tax rate).

For example, under the United States-Israel Tax Treaty, the maximum rate of tax withheld at source in Israel on dividends paid to a holder of our ordinary shares who is a U.S. resident (for purposes of the United States-Israel Tax Treaty) is 25%. However, generally, the maximum rate of withholding tax for dividends not generated by a Benefited Enterprise and paid to a U.S. corporation holding 10% or more of the outstanding voting rights from the start of the tax year preceding the distribution of the dividend through (and including) the distribution of the dividend, is 12.5%, provided that not more than 25% of the gross income for such preceding year consists of certain types of dividends and interest. Notwithstanding the foregoing, a distribution of dividends to non-Israeli residents is subject to withholding tax at source at a rate of 15% if the dividend is distributed from income attributed to a Benefited Enterprise for such U.S. corporation shareholder, provided that the condition related to our gross income for the previous year (as set forth in the previous sentence) is met. U.S. residents who are subject to Israeli withholding tax on a dividend may be entitled to a credit or deduction for United States federal income tax purposes in the amount of the taxes withheld, subject to detailed rules contained in U.S. tax legislation.

If the dividend is attributable partly to income derived from a Benefited Enterprise or a Preferred Enterprise, and partly from other sources of income, the withholding rate will be a blended rate reflecting the relative portions of the two types of income.

Estate and Gift Tax.

Israeli law presently does not impose estate or gift taxes.

Excess Tax.

Beginning on January 1, 2013, an additional tax liability at the rate of 2% was added to the applicable tax rate on the annual taxable income of individuals (whether any such individual is an Israeli resident or non-Israeli resident) exceeding a certain level, including, but not limited to, dividends, interest and capital gain. Pursuant to new legislation enacted recently, such tax rate was increased to 3% on annual income exceeding NIS 641,880 in 2018 and NIS 649,560 in 2019 (which amounts are linked to the annual change in the Israeli consumer price index).

U.S. Federal Income Taxation

The following is a description of the material U.S. federal income tax consequences to U.S. Holders (as defined below) of the acquisition, ownership and disposition of our ordinary shares. This description addresses only the U.S. federal income tax consequences to purchasers of our ordinary shares and that will hold such ordinary shares as capital assets. This description does not address tax considerations applicable to holders that may be subject to special tax rules, including, without limitation:

- banks, financial institutions or insurance companies;
- real estate investment trusts, regulated investment companies or grantor trusts;
- dealers or traders in securities, commodities or currencies;

- tax-exempt entities;
- certain former citizens or long-term residents of the United States;
- persons that received our ordinary shares as compensation for the performance of services;
- persons that will hold our ordinary shares as part of a “hedging,” “integrated” or “conversion” transaction or as a position in a “straddle” for U.S. federal income tax purposes;
- partnerships (including entities classified as partnerships for U.S. federal income tax purposes) or other pass-through entities, or holders that will hold our ordinary shares through such an entity;
- U.S. Holders (as defined below) whose “functional currency” is not the U.S. dollar; or
- holders that own directly, indirectly or through attribution 10.0% or more of the voting power or value of our ordinary shares.

Moreover, this description does not address the United States federal estate, gift, alternative minimum tax or net investment income tax consequences, or any state, local or non-U.S. tax consequences, of the acquisition, ownership and disposition of our ordinary shares.

This description is based on the U.S. Internal Revenue Code of 1986, as amended, or the Code, existing, proposed and temporary U.S. Treasury Regulations and judicial and administrative interpretations thereof, in each case as in effect and available on the date hereof. Each of the foregoing is subject to change, which change could apply retroactively and could affect the tax consequences described below. There can be no assurances that the U.S. Internal Revenue Service will not take a different position concerning the tax consequences of the acquisition, ownership and disposition of our ordinary shares or that such a position would not be sustained.

For purposes of this description, a “U.S. Holder” is a beneficial owner of our ordinary shares that, for U.S. federal income tax purposes, is:

- a citizen or resident of the United States;
- a corporation (or other entity treated as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the United States or any state thereof, including the District of Columbia;
- an estate the income of which is subject to U.S. federal income taxation regardless of its source; or
- a trust if such trust has validly elected to be treated as a U.S. person for U.S. federal income tax purposes or if (1) a court within the United States is able to exercise primary supervision over its administration and (2) one or more U.S. persons have the authority to control all of the substantial decisions of such trust.

If a partnership (or any other entity treated as a partnership for U.S. federal income tax purposes) holds ordinary shares, the tax treatment of a partner in such partnership will generally depend on the status of the partner and the activities of the partnership. Such a partner or partnership should consult its tax advisor as to its tax consequences.

You should consult your tax advisor with respect to the U.S. federal, state, local and foreign tax consequences of acquiring, owning and disposing of our ordinary shares.

Distributions

Subject to the discussion below under “— Passive Foreign Investment Company Considerations,” if you are a U.S. Holder, the gross amount of any distribution that we pay you with respect to our ordinary shares before reduction for any non-U.S. taxes withheld therefrom generally will be includable in your income as dividend income to the extent such distribution is paid out of our current or accumulated earnings and profits as determined under U.S. federal income tax principles. To the extent that the amount of any cash distribution exceeds our current and accumulated earnings and profits as determined under U.S. federal income tax principles, it will be treated first as a tax free return of your adjusted tax basis in our ordinary shares and thereafter as capital gain. We do not expect to maintain calculations of our earnings and profits under U.S. federal income tax principles. Therefore, if you are a U.S. Holder, you should expect that the entire amount of any cash distribution generally will be reported as dividend income to you; provided, however, that distributions of ordinary shares to U.S. Holders that are part of a pro rata distribution to all of our shareholders generally will not be subject to U.S. federal income tax. Non-corporate U.S. Holders may qualify for the lower rates of taxation with respect to dividends on ordinary shares applicable to long term capital gains (i.e., gains from the sale of capital assets held for more than one year), provided that certain conditions are met, including certain holding period requirements and the absence of certain risk reduction transactions. Moreover, such reduced rate shall not apply if we are a PFIC for the taxable year in which it pays a dividend or were a PFIC for the preceding taxable year. Dividends will not be eligible for the dividends received deduction generally allowed to corporate U.S. Holders.

If you are a U.S. Holder, subject to the discussion below, dividends that we pay you with respect to our ordinary shares will be treated as foreign source income, which may be relevant in calculating your foreign tax credit limitation. Subject to certain conditions and limitations, non-U.S. tax withheld on dividends may be deducted from your taxable income or credited against your U.S. federal income tax liability. The limitation on foreign taxes eligible for credit is calculated separately with respect to specific classes of income. For this purpose, dividends that we distribute generally should constitute “passive category income,” or, in the case of certain U.S. Holders, “general category income.” A foreign tax credit for foreign taxes imposed on distributions may be denied if you do not satisfy certain minimum holding period requirements. The rules relating to the determination of the foreign tax credit are complex, and you should consult your tax advisor to determine whether and to what extent you will be entitled to this credit.

Although, as discussed above, dividends that we pay to a U.S. Holder will generally be treated as foreign source income, for periods in which we are a “United States-owned foreign corporation,” a portion of dividends paid by us may be treated as U.S. source income solely for purposes of the foreign tax credit. We would be treated as a United States-owned foreign corporation if 50% or more of the total value or total voting power of our stock is owned, directly, indirectly or by attribution, by United States persons. To the extent any portion of our dividends is treated as U.S. source income pursuant to this rule, the ability of a U.S. Holder to claim a foreign tax credit for any Israeli withholding taxes payable in respect of our dividends may be limited. A U.S. Holder entitled to benefits under the United States-Israel Tax Treaty may, however, elect to treat any dividends as foreign source income for foreign tax credit purposes if the dividend income is separated from other income items for purposes of calculating the U.S. Holder’s foreign tax credit. U.S. Holders should consult their own tax advisors about the impact of, and any exception available to, the special sourcing rule described in this paragraph, and the desirability of making, and the method of making, such an election.

The amount of any dividend income paid in NIS will be the U.S. dollar amount calculated by reference to the exchange rate in effect on the date of receipt, regardless of whether the payment is in fact converted into U.S. dollars. If the dividend is converted into U.S. dollars on the date of receipt, you should not be required to recognize exchange gain or loss in respect of the dividend income. You may have exchange gain or loss if the dividend is converted into U.S. dollars after the date of receipt. Exchange gain or loss will be treated as U.S.-source ordinary income or loss.

Sale, Exchange or Other Disposition of Ordinary Shares

Subject to the discussion below under “— Passive Foreign Investment Company Considerations,” if you are a U.S. Holder, you generally will recognize an amount of gain or loss on the sale, exchange or other disposition of our ordinary shares equal to the difference between the amount realized on such sale, exchange or other disposition and your tax basis in our ordinary shares, and such gain or loss will be capital gain or loss. The tax basis in an ordinary share generally will equal the U.S. dollar cost of such ordinary share. If you are a non-corporate U.S. Holder, capital gain from the sale, exchange or other disposition of ordinary shares generally will be eligible for a preferential rate of taxation applicable to capital gains, if your holding period for such ordinary shares exceeds one year. The deductibility of capital losses for U.S. federal income tax purposes is subject to limitations under the Code. Any such gain or loss that a U.S. Holder recognizes generally will be treated as U.S. source income or loss for foreign tax credit limitation purposes.

If an Israeli tax is imposed on the sale or other disposition of our ordinary shares, your amount realized will include the gross amount of the proceeds of the sale or other disposition before deduction of the Israeli tax. Because your gain from the sale or other disposition of our ordinary shares will generally be U.S.-source gain, and you may use foreign tax credits to offset only the portion of U.S. federal income tax liability that is attributable to foreign source income, you may be unable to claim a foreign tax credit with respect to the Israeli tax, if any, on gains. You should consult your tax adviser as to whether the Israeli tax on gains may be creditable against your U.S. federal income tax on foreign-source income from other sources.

Passive Foreign Investment Company

In general, a non-U.S. corporation will be treated as a PFIC for U.S. federal income tax purposes in any taxable year in which either (i) at least 75% of its gross income is “passive income,” or (ii) on average at least 50% of its assets by value produce passive income or are held for the production of passive income. Passive income for this purpose generally includes, among other things, certain dividends, interest, royalties, rents and gains from commodities and securities transactions and from the sale or exchange of property that gives rise to passive income. Passive income also includes amounts derived by reason of the temporary investment of funds, including those raised in a public offering. Assets that produce or are held for the production of passive income include cash, even if held as working capital or raised in a public offering, marketable securities and other assets that may produce passive income. In determining whether a non-U.S. corporation is a PFIC, a proportionate share of the income and assets of each corporation in which it owns, directly or indirectly, at least a 25% interest (by value) is taken into account.

A foreign corporation’s PFIC status is an annual determination that is based on tests that are factual in nature, and our status for any year will depend on the corporation’s income, assets, and activities for such year. We have not determined whether we have been a PFIC for any previous year prior to 2019. Also we cannot assure that we will not be considered a PFIC for 2019, based on our estimation, we do not expect to be a PFIC for the 2019 tax year. We did not conduct an analysis whether we will be a PFIC in 2020 or in any future years.

U.S. Holders should be aware of certain tax consequences of investing directly or indirectly in us due to our classification as a PFIC. A U.S. Holder is subject to different rules depending on whether the U.S. Holder makes an election to treat us as a “qualified electing fund,” referred to herein as a “QEF election,” for the first taxable year that the U.S. Holder holds ordinary shares makes a “mark-to-market” election with respect to the ordinary shares, or makes neither election.

QEF Election. One way in which certain of the adverse consequences of PFIC status can be mitigated is for a U.S. Holder make a QEF election. Generally, a shareholder making the QEF election is required for each taxable year to include in income a pro rata share of the ordinary earnings and net capital gain of the QEF, subject to a separate election to defer payment of taxes, which deferral is subject to an interest charge. An election to treat us as a QEF will not be available if we do not provide the information necessary to make such an election. It is not expected that a U.S. Holder will be able to make a QEF election because we do not intend to provide U.S. Holders with the information necessary to make a QEF election.

Mark-to-Market Election. Alternatively, if our ordinary shares are treated as “marketable stock,” a U.S. Holder would be allowed to make a “mark-to-market” election with respect to our ordinary shares, provided the U.S. Holder completes and files IRS Form 8621 in accordance with the relevant instructions and related Treasury Regulations. If that election is made, the U.S. Holder generally would include as ordinary income in each taxable year the excess, if any, of the fair market value of our ordinary shares at the end of the taxable year over such holder’s adjusted tax basis in such ordinary shares. The U.S. Holder would also be permitted an ordinary loss in respect of the excess, if any, of the U.S. Holder’s adjusted tax basis in our ordinary shares over their fair market value at the end of the taxable year, but only to the extent of the net amount previously included in income as a result of the mark-to-market election. A U.S. Holder’s tax basis in our ordinary shares would be adjusted to reflect any such income or loss amount. Gain realized on the sale, exchange or other disposition of our ordinary shares would be treated as ordinary income, and any loss realized on the sale, exchange or other disposition of our ordinary shares would be treated as ordinary loss to the extent that such loss does not exceed the net mark-to-market gains previously included in income by the U.S. Holder, and any loss in excess of such amount will be treated as capital loss. Amounts treated as ordinary income will not be eligible for the favorable tax rates applicable to qualified dividend income or long-term capital gains.

A mark-to-market election will not apply to our ordinary shares held by a U.S. Holder for any taxable year during which we are not a PFIC, but will remain in effect with respect to any subsequent taxable year in which we become a PFIC. Such election will not apply to any PFIC subsidiary that we own.

Generally, stock will be considered marketable stock if it is “regularly traded” on a “qualified exchange” within the meaning of applicable Treasury Regulations. A class of stock is regularly traded on an exchange during any calendar year during which such class of stock is traded, other than in de minimis quantities, on at least 15 days during each calendar quarter. To be marketable stock, our ordinary shares must be regularly traded on a qualifying exchange (i) in the United States that is registered with the SEC or a national market system established pursuant to the Exchange Act or (ii) outside the United States that is properly regulated and meets certain trading, listing, financial disclosure and other requirements. Since our ordinary shares are quoted only on the OTC Pink, they may not currently qualify as marketable stock for purposes of the election and therefore the election may not be available to a U.S. Holder. U.S. Holders should consult their own tax advisors regarding the availability and tax consequences of a mark-to-market election in respect to our ordinary shares under their particular circumstances.

Each U.S. Holder should consult its own tax adviser with respect to the applicability of the “net investment income tax” (discussed below) where a mark-to-market election is in effect.

Default PFIC Rules. A U.S. Holder who does not make a timely QEF election (we do not currently intend to prepare or provide the information that would enable a U.S. Holder to make a QEF election) or a mark-to-market election, referred to in this summary as a “Non-Electing U.S. Holder,” will be subject to special rules with respect to (i) any “excess distribution” (generally, the portion of any distributions received by the Non-Electing U.S. Holder on the ordinary shares in a taxable year in excess of 125% of the average annual distributions received by the Non-Electing U.S. Holder in the three preceding taxable years, or, if shorter, the Non-Electing U.S. Holder’s holding period for the ordinary shares), and (ii) any gain realized on the sale or other disposition of such ordinary shares. Under these rules:

- the excess distribution or gain would be allocated ratably over the Non-Electing U.S. Holder’s holding period for such ordinary shares;
- the amount allocated to the current taxable year and any year prior to us becoming a PFIC would be taxed as ordinary income; and
- the amount allocated to each of the other taxable years would be subject to tax at the highest rate of tax in effect for the applicable class of taxpayer for that year, and an interest charge for the deemed deferral benefit would be imposed with respect to the resulting tax attributable to each such other taxable year.

If a Non-Electing U.S. Holder who is an individual dies while owning our ordinary shares, the Non-Electing U.S. Holder’s successor would be ineligible to receive a step-up in tax basis of such ordinary shares. Non-Electing U.S. Holders should consult their tax advisors regarding the application of the “net investment income tax” (described below) to their specific situation.

To the extent a distribution on our ordinary shares does not constitute an excess distribution to a Non-Electing U.S. Holder, such Non-Electing U.S. Holder generally will be required to include the amount of such distribution in gross income as a dividend to the extent of our current or accumulated earnings and profits (as determined for U.S. federal income tax purposes) that are not allocated to excess distributions. The tax consequences of such distributions are discussed above under “Item 10 E. — Taxation — Taxation of U.S. Holders — Distributions”. Each U.S. Holder is encouraged to consult its own tax advisor with respect to the appropriate U.S. federal income tax treatment of any distribution on our ordinary shares.

If we are treated as a PFIC for any taxable year during the holding period of a Non-Electing U.S. Holder, we will continue to be treated as a PFIC for all succeeding years during which the Non-Electing U.S. Holder is treated as a direct or indirect Non-Electing U.S. Holder even if we are not a PFIC for such years. A U.S. Holder is encouraged to consult its tax advisor with respect to any available elections that may be applicable in such a situation, including the “deemed sale” election of Code Section 1298(b)(1) (which will be taxed under the adverse tax rules described above).

We may invest in the equity of foreign corporations that are PFICs or may own subsidiaries that own PFICs. If we are classified as a PFIC, under attribution rules, U.S. Holders will be subject to the PFIC rules with respect to their indirect ownership interests in such PFICs, such that a disposition of the ordinary shares of the PFIC or receipt by us of a distribution from the PFIC generally will be treated as a deemed disposition of such ordinary shares or the deemed receipt of such distribution by the U.S. Holder, subject to taxation under the PFIC rules. There can be no assurance that a U.S. Holder will be able to make a QEF election, and a U.S. Holder may not make a mark-to-market election, with respect to PFICs in which we invest. Each U.S. Holder is encouraged to consult its own tax advisor with respect to tax consequences of an investment by us in a corporation that is a PFIC.

In addition, U.S. Holders should consult their tax advisors regarding the IRS information reporting and filing obligations that may arise as a result of the ownership of ordinary shares in a PFIC, including IRS Form 8621, Information Return by a Shareholder of a Passive Foreign Investment Company or Qualified Electing Fund.

The U.S. federal income tax rules relating to PFICs elections are complex. U.S. Holders are urged to consult their own tax advisors with respect to the purchase, ownership and disposition of our ordinary shares, any elections available with respect to such ordinary shares and the IRS information reporting obligations with respect to the purchase, ownership and disposition of our ordinary shares.

Certain Reporting Requirements

Certain U.S. Investors are required to file IRS Form 926, Return by U.S. Transferor of Property to a Foreign Corporation, and certain U.S. Investors may be required to file IRS Form 5471, Information Return of U.S. Persons With Respect to Certain Foreign Corporations, reporting transfers of cash or other property to us and information relating to the U.S. Investor and us. Substantial penalties may be imposed upon a U.S. Investor that fails to comply.

In addition, certain U.S. Investors are required to report information on IRS Form 8938 with respect to their investments in certain “foreign financial assets,” which would include an investment in our ordinary shares, to the IRS.

Investors who fail to report required information could become subject to substantial civil and criminal penalties. U.S. Investors should consult their tax advisors regarding the possible implications of these reporting requirements and any other applicable reporting requirement with respect to their investment in and ownership of our ordinary shares.

Disclosure of Reportable Transactions

If a U.S. Investor sells or disposes of the ordinary shares at a loss or otherwise incurs certain losses that meet certain thresholds, such U.S. Investor may be required to file a disclosure statement with the IRS. Failure to comply with these and other reporting requirements could result in the imposition of significant penalties.

Backup Withholding Tax and Information Reporting Requirements

Generally, information reporting requirements will apply to distributions on our ordinary shares or proceeds on the disposition of our ordinary shares paid within the United States (and, in certain cases, outside the United States) to U.S. Investors other than certain exempt recipients, such as corporations. Furthermore, backup withholding (currently at 28%) may apply to such amounts if the U.S. Investor fails to (i) provide a correct taxpayer identification number, (ii) report interest and dividends required to be shown on its U.S. federal income tax return, or (iii) make other appropriate certifications in the required manner. U.S. Investors who are required to establish their exempt status generally must provide such certification on IRS Form W-9.

Backup withholding is not an additional tax. Amounts withheld as backup withholding from a payment may be credited against a U.S. Investor’s U.S. federal income tax liability and such U.S. Investor may obtain a refund of any excess amounts withheld by filing the appropriate claim for refund with the IRS and furnishing any required information in a timely manner.

Medicare Tax on Investment Income

Certain U.S. persons, including individuals, estates and trusts, will be subject to an additional 3.8% Medicare tax, or “net investment income tax,” on unearned income. For individuals, the additional net investment income tax applies to the lesser of (i) “net investment income” or (ii) the excess of “modified adjusted gross income” over \$200,000 (\$250,000 if married and filing jointly or \$125,000 if married and filing separately). “Net investment income” generally equals the taxpayer’s gross investment income reduced by the deductions that are allocable to such income. Investment income generally includes passive income such as interest, dividends, annuities, royalties, rents, and capital gains. U.S. Investors are urged to consult their own tax advisors regarding the implications of the additional net investment income tax resulting from their ownership and disposition of our ordinary shares.

THIS SUMMARY OF MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES IS NOT TAX ADVICE. THE DETERMINATION OF THE ACTUAL TAX CONSEQUENCES FOR A U.S. HOLDER WILL DEPEND ON THE U.S. HOLDER’S SPECIFIC SITUATION. U.S. HOLDERS OF ORDINARY SHARES SHOULD CONSULT THEIR OWN TAX ADVISORS AS TO THE TAX CONSEQUENCES OF ACQUIRING, OWNING AND DISPOSING OF OUR ORDINARY SHARES, INCLUDING THE APPLICABILITY AND EFFECT OF THE ALTERNATIVE MINIMUM TAX AND ANY STATE, LOCAL, FOREIGN OR OTHER TAX LAWS AND OF CHANGES IN THOSE LAWS.

F. Dividends and Paying Agents.

Not applicable.

G. Statements by Experts.

Not applicable.

H. Documents on Display.

You may read and copy this annual report on Form 20-F, including the related exhibits and schedules, and any document we file with the SEC through the SEC's website at <http://www.sec.gov>.

As a foreign private issuer, we are exempt from the rules under the Exchange Act related to the furnishing and content of proxy statements, and our officers, directors and principal shareholders are exempt from the reporting and short-swing profit recovery provisions contained in Section 16 of the Exchange Act. Furthermore, as a foreign private issuer, we are also not subject to the requirements of Regulation FD (Fair Disclosure) promulgated under the Exchange Act. In addition, we are not required under the Exchange Act to file annual or other reports and consolidated financial statements with the SEC as frequently or as promptly as U.S. companies whose securities are registered under the Exchange Act. Instead, we must file with the SEC, within 120 days after the end of each fiscal year, or such other applicable time as required by the SEC, an annual report on Form 20-F containing consolidated financial statements audited by an independent registered public accounting firm. We also intend to furnish certain other material information to the SEC under cover of Form 6-K.

We maintain a corporate website at www.pvnanocell.com. Information contained on, or that can be accessed through, our website does not constitute a part of this annual report on Form 20-F. We have included our website address in this annual report on Form 20-F solely as an inactive textual reference.

I. Subsidiary Information.

We have three (3) wholly owned subsidiaries, Nano Size Ltd., a private company organized under the laws of the state of Israel which we acquired on December 31, 2009, Digiflex Ltd. (including its two wholly owned subsidiaries, one was dissolved in March 2019), which we acquired on December 3, 2017 and Jet CU, a private company organized under the laws of the state of Israel which we acquired on July 26, 2020.

ITEM 11. Quantitative and Qualitative Disclosures about Market Risk.***Quantitative and Qualitative Disclosure about Market Risk***

We are exposed to market risks in the ordinary course of our business. Market risk represents the risk of loss that may impact our financial position, results of operations or cash flows due to adverse changes in financial market prices and rates, including interest rates and foreign exchange rates, of financial instruments.

Foreign Currency Exchange Risk

Our foreign currency exposures give rise to market risk associated with exchange rate movements of the NIS mainly against the U.S. dollar because a large portion of our expenses are denominated in NIS. Our NIS expenses consist principally of payments made to employees, sub-contractors, professional services, other research and development activities and general and administrative activities. We anticipate that a large portion of our expenses will continue to be denominated in currencies other than the U.S. dollar. Our financial position, results of operations and cash flow are subject to fluctuations due to changes in foreign currency exchange rates. Our results of operations and cash flow are, therefore, subject to fluctuations due to changes in foreign currency exchange rates and may be adversely affected in the future due to changes in foreign exchange rates. Approximately 75% of our expenses are denominated in NIS. Changes of 5% and 10% in the U.S. dollar to NIS exchange rate will increase/decrease our operation expenses by less than 3.8% and 7.5%, respectively. To date, fluctuations in the exchange rates have not materially affected our results of operations or financial condition for the periods under review.

To date, we have not engaged in hedging our foreign currency exchange risk. In the future, we may enter into formal currency hedging transactions to decrease the risk of financial exposure from fluctuations in the exchange rates of our principal operating currencies. These measures, however, may not adequately protect us from the material adverse effects of such fluctuations.

Interest Rate Risk

Our exposure to interest rate risk for changes in interest rates relates primarily to the interest income generated by excess cash invested in bank deposits. We have not used any derivative financial instruments in our investment portfolio or for cash management purposes. Interest-earning instruments carry a degree of interest rate risk. We have not been exposed nor do we anticipate being exposed to material risks due to changes in interest rates. However, our future interest income may fall short of expectations due to changes in interest rates.

ITEM 12. Description of Securities Other Than Equity Securities

A. Debt Securities.

Not applicable.

B. Warrants and Rights.

Not applicable.

C. Other Securities.

Not applicable.

D. American Depositary Shares.

Not applicable.

PART II

ITEM 13. Defaults, Dividend Arrearages and Delinquencies.

All of the convertible loans received from GTRIMG and few from other lenders were required to be repaid by October 2020. GTRIMG and the other lenders did not exercise their conversion right under the convertible loans prior to their repayment date and therefore became repayable in cash as such time. We did not timely repay such loans due to financial difficulties and therefore we are currently in default under those agreements. For information with respect to those defaults, see Note 8 to the audited consolidated financial statements for the year ended December 31, 2019 included elsewhere in this annual report on Form 20-F.

ITEM 14. Material Modifications to the Rights of Security Holders and Use of Proceeds.

Not applicable.

ITEM 15. Controls and Procedures

(a) **Disclosure Controls and Procedures.** Our disclosure controls and procedures are designed to provide reasonable assurance that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate, to allow for timely decisions regarding required disclosure, and that such information is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms.

Our management, under the supervision and with the participation of our Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2019, pursuant to Rule 13a-15 under the Exchange Act. Based upon this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were not effective as of December 31, 2019 as a result of the material weaknesses identified in our internal control over financial reporting. These material weaknesses are discussed in "Report of Management on Internal Control over Financial Reporting" below. Our management considers our internal control over financial reporting to be an integral part of our disclosure controls and procedures.

(b) **Report of Management on Internal Control over Financial Reporting.** Our management is responsible for establishing and maintaining adequate internal control over our financial reporting. Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2019. In making our assessment, our management used the criteria established in Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). A material weakness, as defined by SEC rules, is a control deficiency, or combination of control deficiencies, such that there is a reasonable possibility that a material misstatement of the annual or interim financial statements will not be prevented or detected on a timely basis.

The material weaknesses in internal control over financial reporting that were identified (among other things) were: (i) significant parts of entity level controls are missing, (ii) lack of segregation of duties, (iii) controls' effectiveness testing were predominantly not performed, inter alia, due to nonperformance of controls or absence of evidence for controls' performance, and (iv) non-remediation of material weaknesses identified in prior years. Based on such assessment, management has concluded that, as of December 31, 2019, our internal control over financial reporting is ineffective based on those criteria.

Due to lack of resources, during 2019, as in previous years, we were unable to implement in any material respect our remediation plans for the material weaknesses identified in prior years. We intend to take appropriate and reasonable steps (beyond few already taken such as (i) hiring an outsourced chief financial officer with significant U.S. GAAP and SEC reporting experience and (ii) establishing an Audit Committee and Compensation Committee. Ms. Orly Solomon, a member of each of these committees, serves as the Chairperson of each and has relevant U.S. GAAP accounting, SEC reporting and internal control experience) to make the necessary improvements to remediate these deficiencies, provided that we have the resources to implement them.

(c) **Attestation Report of the Registered Public Accounting Firm.** This annual report on Form 20-F does not include an attestation report of our independent registered public accounting firm regarding internal control over financial reporting because as long as we qualify as an "emerging growth company" filer under the Exchange Act.

(d) **Changes in Internal Control over Financial Reporting.** There were no changes in our internal control over financial reporting, other than as described above, that occurred during the year ended December 31, 2019 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 16. [RESERVED]

ITEM 16A. Audit Committee Financial Expert.

Our board has determined that Ms. Orly Solomon, who serves as the chairperson of our audit committee is an audit committee financial expert as defined by the SEC rules and has the requisite financial sophistication as defined by the Nasdaq Rules. Ms. Solomon is independent as such term is defined in Rule 10A-3(b)(1) under the Exchange Act and under the Nasdaq Rules. For Ms. Solomon's relevant experience, see "Item 6 A. — Directors and Senior Management".

ITEM 16B. Code of Ethics.

We have adopted a Code of Business Conduct and Ethics applicable to all of our directors and employees, including our Chief Executive Officer, Chief Financial Officer, controller or principal accounting officer or other persons performing similar functions, which is a "code of ethics" as defined in Item 16B of Form 20-F promulgated by the SEC. Section 406(c) of the Sarbanes-Oxley Act provides that a "code of ethics" means such standards as are reasonably necessary to promote (i) honest and ethical conduct, including the ethical handling of actual or apparent conflicts of interest between personal and professional relationships; (ii) full, fair, accurate, timely and understandable disclosure in the periodic reports required to be filed by the issuer; and (iii) compliance with applicable governmental rules and regulation.

The full text of the Code of Business Conduct and Ethics is posted on our website at www.pvnanocell.com. Information contained on, or that can be accessed through, our website does not constitute a part of this annual report on Form 20-F and is not incorporated by reference herein. We will provide a copy of such Code of Business Conduct and Ethics without charge upon request by mail or by telephone. If we make any amendment to the Code of Business Conduct and Ethics or grant any waivers, including any implicit waiver, from a provision of the Code of Business Conduct and Ethics, we will disclose the nature of such amendment or waiver on our website to the extent required by the rules and regulations of the SEC.

ITEM 16C. Principal Accountant Fees and Services.

Kost Forer Gabbay & Kasierer, a member of Ernst & Young Global, an independent registered public accounting firm, served as our independent public accountants for the fiscal years ended December 31, 2019 and 2018, for which audited consolidated financial statements appear in this annual report on Form 20-F.

The following table presents the aggregate fees for professional services rendered by such accountants to us during their respective term as our principal accountants in 2019 and 2018.

	Year ended December 31,	
	2019	2018
Audit Fees	\$ 140,000	\$ 115,000
Audit-related fees	8,500	-
Tax fees	15,000	15,000
All other fees	12,000	-
Total	<u>\$ 175,500</u>	<u>\$ 130,000</u>

Audit fees. Consist of aggregate fees billed for the audit of our annual consolidated financial statements. This category also includes services that the independent accountant generally provides, such as consents, assistance with, and review of documents filed with the SEC.

Audit-related fees. Consist of aggregate fees billed for assurance and related services that are reasonably related to the performance of the audit and are not reported under audit fees. These fees primarily include accounting consultations regarding the accounting treatment of matters that occur in the regular course of business, implications of new accounting pronouncements and other accounting issues that occur from time to time.

Tax fees. Consist of aggregate fees for professional services rendered by our independent registered public accounting firm for tax compliance and tax advice on actual or contemplated transactions.

All other fees. Consist of aggregate fees billed for services rendered by our independent registered public accounting firm with respect to government incentives and other matters.

Audit Committee Pre-Approval Policies and Procedures

Our audit committee, established in February 2018, provides assistance to our board of directors in fulfilling its legal and fiduciary obligations in matters involving our accounting, auditing, financial reporting, internal control and legal compliance functions by pre-approving the services performed by our independent accountants and reviewing their reports regarding our accounting practices and systems of internal control over financial reporting. Our audit committee also oversees the audit efforts of our independent accountants and takes those actions that it deems necessary to satisfy itself that the accountants are independent of management. Our audit committee has authorized all auditing and non-auditing services provided by Kost Forer Gabbay & Kasierer during 2019 and 2018 and the fees paid for such services.

ITEM 16D. Exemptions from the Listing Standards for Audit Committees.

Not applicable.

ITEM 16E. Purchases of Equity Securities by the Issuer and Affiliated Purchasers.

Not applicable.

ITEM 16F. Change in Registrant's Certifying Accountant.

Not applicable.

ITEM 16G. Corporate Governance.

Not applicable.

ITEM 16H. Mine Safety Disclosure.

Not applicable.

PART III

ITEM 17. Financial Statements

Not Applicable.

ITEM 18. Financial Statements.

Please refer to the consolidated financial statements beginning on page F-1. The following consolidated financial statements, its schedules and related notes are filed as part of this annual report on Form 20-F, together with the report of the independent registered public accounting firm.

P.V. NANO CELL LTD. AND ITS SUBSIDIARIES
CONSOLIDATED FINANCIAL STATEMENTS
AS OF DECEMBER 31, 2019
IN U.S. DOLLARS
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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of

P.V. NANO CELL LTD.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of P.V. Nano Cell Ltd. and its subsidiaries (the Company) as of December 31, 2019 and 2018, the related consolidated statements of comprehensive loss, shareholders' equity (deficit), and cash flows, for each of the three years in the period ended December 31, 2019, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, in conformity with U.S. generally accepted accounting principles.

The Company's Ability to Continue as a Going Concern

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1b to the financial statements, the Company has suffered recurring losses from operations, has a working capital deficiency, and has stated that substantial doubt exists about the Company's ability to continue as a going concern. Management's evaluation of the events and conditions and management's plans regarding these matters are also described in Note 1b. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

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

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

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

/S/ KOST FORER GABBAY & KASIERER

A Member of Ernst & Young Global

We have served as the Company's auditor since 2009.

Tel-Aviv, Israel

April 29, 2021

CONSOLIDATED BALANCE SHEETS

U.S. dollars

	December 31,	
	2019	2018
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	\$ 34,382	\$ 144,948
Restricted cash	15,915	14,674
Accounts receivable, net	86,494	200,776
Other current assets	194,173	65,011
Inventory, net	102,782	53,344
Total current assets	433,746	478,753
NON-CURRENT ASSETS:		
Property and equipment, net	248,316	300,702
Intangible asset, net	3,393,413	3,821,844
Goodwill	3,026,036	3,026,036
Total non-current assets	6,667,765	7,148,582
Total assets	7,101,511	7,627,335
LIABILITIES AND SHAREHOLDERS' EQUITY (DEFICIT)		
CURRENT LIABILITIES:		
Short term bank credit	92,230	—
Short-term loans	14,489	—
Trade payables	783,592	709,269
Employees and payroll accruals	680,290	359,273
Accrued expenses and other current liabilities	790,097	842,142
Convertible loans	3,899,516	226,661
Warrants presented at fair value	158,112	-
Total current liabilities	6,418,326	2,137,345
NON-CURRENT LIABILITIES:		
Capital note	40,000	32,000
Convertible loans	291,474	1,809,816
Warrants presented at fair value	1,346,000	945,025
Total non-current liabilities	1,677,474	2,786,841
Total liabilities	8,095,800	4,924,186
SHAREHOLDERS' EQUITY (DEFICIT):		
Ordinary shares of NIS 0.01 par value - Authorized: 200,000,000 as of December 31, 2019 and 2018; Issued and outstanding: 24,393,218 and 23,491,948 ordinary shares as of December 31, 2019 and 2018, respectively	65,842	63,301
Additional paid in capital	19,951,632	19,698,606
Accumulated deficit	(21,011,763)	(17,058,758)
Total shareholders' equity (deficit)	(994,289)	2,703,149
Total liabilities and shareholders' equity (deficit)	\$ 7,101,511	\$ 7,627,335

The accompanying notes are an integral part of the consolidated financial statements.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS

U.S. dollars

	Year ended December 31,		
	2019	2018	2017
Revenues	\$ 478,520	\$ 460,739	\$ 88,691
Cost of revenues	236,493	388,265	94,238
Amortization of intangible assets	428,431	470,773	37,694
Gross loss	186,404	398,299	43,241
Operating expenses:			
Research and development	987,444	1,090,295	787,025
Less - research and development grants	(256,423)	(314,652)	(382,134)
Research and development, net	731,021	775,643	404,891
Sales and marketing	673,983	550,008	480,963
General and administrative	1,319,239	1,297,711	1,227,632
Goodwill impairment	—	161,381	—
Acquisition related costs	—	—	750,956
Total operating expenses	2,724,243	2,784,743	2,864,442
Operating loss	2,910,647	3,183,042	2,907,683
Financial expenses (income), net	1,042,358	(1,210,484)	(63,778)
Net loss	\$ 3,953,005	\$ 1,972,558	\$ 2,843,905
Net loss per ordinary share:			
Basic and diluted net loss per ordinary share	\$ 0.16	\$ 0.09	\$ 0.19
Weighted average number of ordinary shares used in computing basic and diluted net loss per ordinary share	24,071,186	23,142,850	15,249,947

The accompanying notes are an integral part of the consolidated financial statements.

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY (DEFICIT)

U.S. dollars

	Ordinary shares		Additional paid-in Capital	Accumulated deficit	Total
	Number of ordinary shares	Amount			
Balance as of January 1, 2017	14,505,126	37,648	10,300,428	(12,242,295)	(1,904,219)
Issuance of ordinary shares, net of issuance cost*	6,947,137	20,090	7,096,020	—	7,116,110
Issuance of ordinary shares in connection with Professional service rendered*	285,000	821	297,779	-	298,600
Stock based compensation	—	—	136,134	—	136,134
Net loss	—	—	—	(2,843,905)	(2,843,905)
Balance as of December 31, 2017	21,737,263	\$ 58,559	\$ 17,830,361	(15,086,200)	\$ 2,802,720
Issuance of ordinary shares	1,167,615	3,116	958,654	—	961,770
Issuance of ordinary shares in connection with conversion of convertible loans	178,689	477	58,730	—	59,207
Issuance of ordinary shares in connection with Professional service rendered	343,750	968	220,508	—	221,476
Beneficial conversion feature related to convertible loans	—	—	338,266	—	338,266
Issuance of warrants	—	—	137,284	—	137,284
Exercise of options	64,631	181	813	—	994
Stock based compensation	—	—	153,990	—	153,990
Net loss	—	—	—	(1,972,558)	(1,972,558)
Balance as of December 31, 2018	23,491,948	\$ 63,301	\$ 19,698,606	\$ (17,058,758)	\$ 2,703,149
Issuance of ordinary shares in connection with conversion of convertible loans	576,270	1,630	97,235	—	98,865
Issuance of ordinary shares in connection with Professional service rendered	325,000	911	24,733	—	25,644
Beneficial conversion feature related to convertible loans	—	—	21,445	—	21,445
Stock based compensation	—	—	109,613	—	109,613
Net loss	—	—	—	(3,953,005)	(3,953,005)
Balance as of December 31, 2019	24,393,218	65,842	19,951,632	(21,011,763)	(994,289)

* Reclassed

The accompanying notes are an integral part of the consolidated financial statements.

CONSOLIDATED STATEMENTS OF CASH FLOWS

U.S. dollars

	Year ended December 31,		
	2019	2018	2017
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net loss	\$ (3,953,005)	\$ (1,972,558)	\$ (2,843,905)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation	73,714	149,307	88,289
Amortization	428,431	470,773	37,694
Warrants issued in exchange of services	—	119,779	738,091
Financial expenses in connection with convertible loans	950,292	1,019,402	(282,015)
Financial expenses in connection with a short-term loan	—	—	13,289
Share-based compensation	109,613	153,990	136,134
Restricted shares issued for services	25,644	221,476	298,600
Goodwill impairment	—	161,381	—
Change in operating assets and liabilities:			
Change in accounts receivable	114,282	(119,431)	28,087
Change in other current assets	20,838	(9,713)	274,179
Change in inventories	(49,438)	47,539	(11,311)
Change in trade payables	64,901	(296,783)	(153,892)
Change in employees and payroll accruals	321,017	(73,872)	90,028
Change in accrued expenses and other current liabilities	(52,045)	(183,019)	(91,273)
Change in fair value of warrants and capital note	(33,382)	(2,280,318)	(491,884)
Net cash used in operating activities	(1,979,138)	(2,592,047)	(2,169,889)
CASH FLOWS FROM INVESTING ACTIVITIES:			
Net cash acquired in acquisition of Digiflex (see also Note 3)	-	-	15,380
Purchase of property and equipment	(11,906)	(18,237)	(2,185)
Net cash provided by (used in) investing activities	(11,906)	(18,237)	13,195
CASH FLOWS FROM FINANCING ACTIVITIES:			
Proceeds from convertible loans, net of issuance costs	1,775,000	1,898,130	774,400
Proceeds from issuance of ordinary shares, net of issuance costs	—	567,615	388,019
Proceeds from issuance of warrants	—	—	684,015
Receipt on account of ordinary shares and warrants	—	—	600,000
Proceeds from stock options exercise	—	994	—
Change in in short term bank credit	92,230	(64,900)	37,723
Proceeds in connection with a promissory note	—	—	162,000
Repayment of the promissory note principal	—	(25,510)	(150,000)
Proceeds (repayment) of short-term bank loan	14,489	(72,108)	—
Net cash provided by financing activities	1,881,719	2,304,221	2,496,157
Increase (decrease) in cash and cash equivalents and restricted cash	(109,325)	(306,063)	339,463
CASH AND CASH EQUIVALENTS AND RESTRICTED CASH AT THE BEGINNING OF THE YEAR	159,622	465,685	126,222
CASH AND CASH EQUIVALENTS AND RESTRICTED CASH AT THE END OF THE YEAR	\$ 50,297	\$ 159,622	\$ 465,685
SUPPLEMENTAL INFORMATION AND DISCLOSURE OF NON-CASH FINANCING ACTIVITIES			
Issuance of ordinary shares in connection with acquisition (see also Note 3)	\$ —	\$ —	\$ 6,728,091
Receivable for Convertible loan (See also Note 4)	\$ 150,000	\$ -	\$ -
Conversion of convertible loans including interest to ordinary shares	\$ 98,865	\$ 59,207	\$ -
Purchase of property and equipment that were not paid as of the balance sheet date	\$ 9,422	\$ -	\$ -
	December 31,		
	2019	2018	2017
<u>Cash and cash equivalents</u>	\$ 34,382	\$ 144,948	\$ 450,305
Restricted cash	15,915	14,674	15,380
	\$ 50,297	\$ 159,622	\$ 465,685

The accompanying notes are an integral part of the consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 1:- GENERAL

- a. P.V. Nano Cell Ltd. (the “Company”) was incorporated in June 2009 under the laws of Israel. The Company along with its two fully owned Israeli subsidiaries: Nano Size Ltd. (“Nano Size”) and Digiflex Ltd. (“Digiflex”) are mainly engaged in developing, manufacturing, marketing and commercializing conductive inks for digital inkjet conductive printing applications and manufacturing printing machines, which offer solutions for inkjet print-quality technologies. Refer to Note 3 for additional information regarding the acquisition of Digiflex and its fully owned subsidiaries that were acquired on December 3, 2017. The Company, Nano Size, Digiflex and Digiflex’s fully owned subsidiaries are jointly defined as the “Group”.

During 2013, the Company formed a Chinese joint venture (“JV”) together with three shareholders. The Company owned 40% of the outstanding equity securities of the JV. The JV was inactive and dissolved during 2018.

- b. Since its inception, the Group has incurred operating losses and has used cash in its operations. During the year ended December 31, 2019, the Group used cash in operating activities of approximately \$1.9 million, incurred a net loss of approximately \$3.9 million and had a total accumulated deficit of approximately \$21.0 million as of December 31, 2019. In addition, the Company is currently in default under certain loan agreements. The Group requires additional financing in order to continue to fund its current operations and to pay existing and future liabilities.

The Group intends to finance operating costs over the next twelve (12) months through issuance of equity securities or debts and by increasing its inflow from revenue. The Group is currently negotiating with third parties in an attempt to obtain additional sources of funds, which in management’s opinion, would provide adequate cash flows to finance the Group’s operations. The satisfactory completion of these negotiations is essential to provide sufficient cash flow to meet current operating requirements. However, the Group cannot give any assurance that it will be able to achieve a level of profitability from the sale of its products to sustain its operations in the future. These conditions raise substantial doubt about the Group’s ability to continue as a going concern.

The accompanying consolidated financial statements do not include any adjustments to reflect the possible future effects on recoverability and reclassification of assets or the amounts and classification of liabilities that may result from the outcome of this uncertainty.

NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES

a. **Basis of presentation:**

The consolidated financial statements are prepared according to United States generally accepted accounting principles (“U.S. GAAP”).

b. **Use of estimates:**

The preparation of the consolidated financial statements in conformity with U.S. GAAP requires management to make estimates, judgments and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the period. The Company’s management believes that the estimates, judgments and assumptions used are reasonable based upon information available at the time they are made. Actual results could differ from those estimates.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES (Cont.)**b. Use of estimates (cont.):**

On an ongoing basis, the Company's management evaluates estimates, including those related to fair values of stock-based awards, warrants to purchase the Company's ordinary shares, capital note and inventories write-offs. Such estimates are based on historical experience and on various other assumptions that are believed to be reasonable, the results of which form the basis for making judgments about the carrying values of assets and liabilities.

c. Consolidated financial statements in U.S. dollars:

The accompanying consolidated financial statements have been prepared in U.S. dollars ("dollar" or "dollars").

A substantial portion of the Group's costs are incurred in New Israeli Shekels ("NIS"). However, the Group finances its operations mainly in dollars and a majority of the Group's revenues are denominated in dollars. As such, the Company's management believes that the U.S. dollar is the currency of the primary economic environment in which the Group operates. Thus, the functional and reporting currency of the Group is the U.S. dollar.

Transactions and balances that are denominated in dollars are presented at their original amounts. Non-dollar transactions and balances have been re-measured to dollars in accordance with Accounting Standards Codification ("ASC") No. 830, "Foreign Currency Matters". All foreign currency transaction gains and losses are reflected in the consolidated statements of operations as financial income or expenses, as appropriate.

d. Principles of consolidation:

The consolidated financial statements include the accounts of the Company and its subsidiaries, intercompany transactions and balances have been eliminated upon consolidation.

e. Inventory, net:

Inventories are stated at the lower of cost or net realizable value. Net realizable value is the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. Inventory write-offs are provided to cover risks arising from slow-moving items, excess inventories, discontinued products, new products introduction and for market prices lower than cost. Any write-off is recognized in the consolidated statements of comprehensive loss as cost of revenues.

f. Property and equipment:

Property and equipment are stated at cost net of accumulated depreciation. Depreciation is calculated by the straight-line method, over the estimated useful lives of the assets, at the following annual rates:

	<u>%</u>
Computers	15 – 33
Equipment	7 – 33
Office furniture	7 – 15
Leasehold improvements	(*)

(*) Leasehold improvements are amortized on a straight-line basis over the shorter of the lease term (including the extension option held by the Group and intended to be exercised) and the expected life of the improvement.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES (Cont.)**f. Property and equipment (cont.):**

Long-lived assets of the Group are reviewed for impairment in accordance with ASC No. 360, "Property, Plant and Equipment", whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to the future undiscounted cash flows expected to be generated by the assets. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets. The Group did not record any impairment losses during the years ended December 31, 2019, 2018 and 2017.

g. Goodwill:

Goodwill reflects the excess of the consideration transferred plus the fair value of any non-controlling interest in the acquiree at the business combination date over the fair values of the identifiable net assets acquired. Goodwill is not amortized but rather is tested for impairment annually at the reporting unit level, or whenever events or circumstances present an indication of impairment. Goodwill is an asset representing the future economic benefits arising from other assets acquired in a business combination that are not individually identified and separately recognized.

The primary items that generate goodwill include the value of the synergies between the acquired companies and the Company and the acquired assembled workforce, neither of which qualifies for recognition as an intangible asset.

Goodwill is tested for impairment on an annual basis in the fourth quarter and whenever indicators of potential impairment require an interim goodwill impairment analysis. The Company may first assess qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If the Company performs a qualitative assessment and concludes that it is more likely than not that the fair value of a reporting unit exceeds its carrying value, goodwill is not considered impaired and the quantitative impairment test is not required. However, if the Company concludes otherwise, it is then required to perform a quantitative assessment for goodwill impairment.

In January 1, 2017, the Company has adopted ASU 2017-04 which simplifies the test for goodwill impairment. Under the new guidance, the Company performs its quantitative goodwill impairment test by comparing the fair value of its reporting unit with its carrying value. If the reporting unit's carrying value is determined to be greater than its fair value, an impairment charge is recognized for the amount by which the carrying value exceeds the reporting unit's fair value. If the fair value of the reporting unit is determined to be greater than its carrying amount, the applicable goodwill is not impaired and no further testing is required.

The evaluation of goodwill impairment requires the Company to make assumptions associated with its reporting unit fair value. These assumptions require significant judgment and actual results may differ from assumed and estimated amounts.

The Company applied the quantitative goodwill impairment test as mentioned above. The results of such test as of December 31, 2017 were that the fair value was greater than the reporting unit's carrying value and therefore no goodwill impairment was recorded as of this date.

As of December 31, 2018 the reporting unit's carrying value was greater than its fair value and as a result, the Company recorded a goodwill impairment charge of \$161,381 and presented such charge as a separate line item within its statement of operations for the year ended December 31, 2018.

As of December 31, 2019, the Company has early adopted the ASU 2017-04 FASB revised guidance of goodwill impairment. Under this guidance, entities that have reporting units with zero or negative carrying amount are no longer required to perform the qualitative assessment. The results of such test as of December 31, 2019, were that the fair value was greater than the reporting unit's negative carrying value and therefore no goodwill impairment was recorded as of this date.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES (Cont.)**h. Intangible assets:**

Intangible assets and their useful lives are as follows:

	Estimated useful life
Technology	Ten (10) years
Backlog	One (1) year

Intangible assets represent acquired technology and backlog. Definite life intangible assets are amortized using the straight-line method over their estimated period of useful life, which is determined by identifying the period over which most of the cash flows are expected to be generated.

For definite life intangible assets, the Company reviews the carrying amounts for potential impairment when events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. In evaluating recoverability, the Company groups assets and liabilities at the lowest level such that the identifiable cash flows relating to the group are largely independent of the cash flows of other assets and liabilities. The Company then compares the carrying amounts of the asset or asset groups with their respective estimated undiscounted future cash flows. If the definite life intangible asset or asset group are determined to be impaired, an impairment charge is recorded at the amount by which the carrying amount of the asset or asset group exceeds their fair value.

The Group did not record any intangible assets impairment during the years ended December 31, 2019, 2018 and 2017.

i. Revenue Recognition:

Revenues from ink, services and maintenance are recognized in accordance with ASC No. 605-15, "Revenue Recognition" when delivery has occurred, persuasive evidence of an agreement exists, the fee is fixed or determinable and collectability is reasonably assured.

j. Research and development, net:

Research and development expenses are charged to the consolidated statements of operations as incurred, net of grants received, as described in section k. below.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES (Cont.)**k. Government grants:**

The Group receives participation funds and grants, which represents participation of the government of Israel and European grants. These amounts are recognized on the accrual basis as a reduction of research and development costs as such costs are incurred.

l. Income taxes:

The Group accounts for income taxes in accordance with ASC No. 740, "Income Taxes". This Statement prescribes the use of the liability method whereby deferred tax assets and liability account balances are determined based on differences between financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The Group provides a valuation allowance, if necessary, to reduce deferred tax assets to amounts that more likely than not to be realized.

ASC 740 contains a two-step approach to recognizing and measuring a liability for uncertain tax positions. The first step is to evaluate the tax position taken or expected to be taken in a tax return by determining if the weight of available evidence indicates that it is more likely than not that, on an evaluation of the technical merits, the tax position will be sustained on audit, including resolution of any related appeals or litigation processes. The second step is to measure the tax benefit as the largest amount that is more than 50% likely to be realized upon ultimate settlement.

m. Accounting for stock-based compensation:

The Company accounts for share based compensation in accordance with ASC No. 718, "Compensation - Stock Compensation" that requires companies to estimate the fair value of equity-based payment awards on the date of grant using an option-pricing model. The Company recognizes compensation expenses for the value of its awards granted based on the straight-line attribution method over the requisite service period of each of the awards. The Company recognizes forfeitures of awards as they occur.

The Company selected the Black-Scholes option pricing model as the most appropriate fair value method for its stock-options awards. The Black-Scholes option-pricing model requires a number of assumptions, of which the most significant are the expected stock volatility and the expected option term. Expected volatility was calculated based upon similar traded companies' historical stock price movements. The Company uses the simplified method until such time as there is sufficient historical exercise data to allow the Company to make and rely upon assumptions as to the expected life of outstanding options. The risk-free interest rate is based on the yield from U.S. treasury bonds with an equivalent term to the expected life of the options. Historically, the Company has not paid dividends and in addition has no foreseeable plans to pay dividends, and therefore uses an expected dividend yield of zero in the option pricing model.

The Company accounts for non-employee share-based awards pursuant to ASC 505-50, "Equity-Based Payments to Non-Employees." ASC 505-50 requires the costs of goods and services received in exchange for an award of equity instruments to be recognized using the fair value of the goods and services or the fair value of the equity award, whichever is more reliably measurable. The fair value of the equity award is determined on the measurement date, which is the earlier of the date that a performance commitment is reached or the date that performance is complete. Generally, our awards do not entail performance commitments. When an award vests over time such that performance occurs over multiple reporting periods, we estimate the fair value of the award as of the end of each reporting period and recognize an appropriate portion of the cost based on the fair value on that date. When the award vests, we adjust the cost previously recognized so that the cost ultimately recognized is equivalent to the fair value on the date the performance is complete.

The fair value for options granted is estimated at the date of grant using the Black-Scholes option-pricing model with the following assumptions:

	Year ended December 31,		
	2019	2018	2017
Dividend yield	0%	0%	0%
Expected volatility	60%	60%	64%-70%
Risk-free interest	2.33%-2.71%	2.15%-2.91%	1.78%-2.28%
Expected life (in years)	4.15-7.00	3.50-4.37	4.50-7.00

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES (Cont.)**n. Concentrations of credit risks:**

Financial instruments that potentially subject the Group to concentrations of credit risk consist principally of cash and cash equivalents and accounts receivables. The Group's cash and cash equivalents balances are managed in major banks in Israel.

The majority of the Group's cash and cash equivalents are deposited in major banks in Israel. Deposits in Israel are not insured. Generally, these deposits may be withdrawn upon demand and therefore bear low risk.

The Group's accounts receivables are derived from sales mainly in Israel, Europe and the US. Concentration of credit risk with respect to accounts receivables is limited by ongoing credit evaluation and account monitoring procedures. The Group performs ongoing credit evaluations and establishes an allowance for doubtful accounts based on factors that may affect a customers' ability to pay, such as known disputes, age of the receivable balance and past experience. There was no allowance for doubtful accounts as of December 31, 2019 and 2018. The Group writes off receivables when they are deemed uncollectible, having exhausted all collection efforts. Actual collection experience may not meet expectations and may result in increased bad debt expense.

o. Severance pay:

Pursuant to Section 14 of Israel's Severance Pay Law, 5723-1963 ("Section 14"), the Group's Israeli employees, covered by this section, are entitled only to monthly deposits, at a rate of 8.33% of their monthly salary, made on their behalf by the Group to an Israeli insurance company. Payments in accordance with Section 14 release the Group from any future severance liabilities in respect of those employees. Neither severance pay liability nor severance pay fund under Section 14 for such employees is recorded on the Group's consolidated balance sheets.

Severance expenses for the years ended December 31, 2019, 2018 and 2017 amounted to \$64,080, \$64,261 and \$40,568, respectively.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES (Cont.)

p. Fair value of financial instruments:

The Group applies ASC 820, "Fair Value Measurements and Disclosures". Under this standard, fair value is defined as the price that would be received to sell an asset or paid to transfer a liability (i.e., the "exit price") in an orderly transaction between market participants at the measurement date.

In determining fair value, the Group uses various valuation approaches. ASC 820 establishes a hierarchy for inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that the most observable inputs be used when available. Observable inputs are inputs that market participants would use in pricing the asset or liability developed based on market data obtained from sources independent from the Group. Unobservable inputs are inputs that reflect the Group's assumptions about the assumptions market participants would use in pricing the asset or liability developed based on the best information available in the circumstances.

The following methods and assumptions were used by the Company in estimating the fair value of their financial instruments:

The carrying values of cash and cash equivalents, short-term bank deposits, trade receivables, prepaid expenses and other current assets, trade payables, employees and payroll accruals and accrued expenses and other current liabilities approximate their fair values due to the short-term maturities of these instruments.

The Company applies ASC No. 820, "Fair Value Measurements and Disclosures" ("ASC No. 820"), with respect to fair value measurements of all financial assets and liabilities.

The hierarchy is broken down into three levels based on the inputs as follows:

Level 1 Valuations based on quoted prices in active markets for identical assets or liabilities that the Group has the ability to access at the measurement date.

Level 2 Valuations based on one or more quoted prices in markets that are not active or for which all significant inputs are observable, either directly or indirectly.

Level 3 Valuations based on inputs that are unobservable and significant to the overall fair value measurement.

The Group measures its warrants to purchase the Company's ordinary shares classified as liability and the capital note at fair value. The carrying amounts of cash and cash equivalents, accounts receivables, other current assets, trade payables and other accounts liabilities approximate their fair value due to the short-term maturity of such instruments.

The following table presents liabilities measured at fair value on a recurring basis as of December 31, 2019:

	Fair value measurements using input type			Total
	Level 1	Level 2	Level 3	
Warrants	-	-	\$ 1,504,112	\$ 1,504,112
Capital note	-	-	40,000	40,000
Total financial liabilities	-	-	\$ 1,544,112	\$ 1,544,112

The following table presents liabilities measured at fair value on a recurring basis as of December 31, 2018:

	Fair value measurements using input type			Total
	Level 1	Level 2	Level 3	
Warrants	-	-	\$ 945,025	\$ 945,025
Capital note	-	-	32,000	32,000
Total financial liabilities	-	-	\$ 977,025	\$ 977,025

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES (Cont.)**p. Fair value of financial instruments (cont.):**

The following table presents reconciliations for the Company's liabilities measured and recorded at fair value on a recurring basis, using significant unobservable inputs (Level 3):

	<u>Level 3</u>
Balance as of January 1, 2017	\$ 1,162,814
Fair value of warrants issued	684,015
Fair value of warrants granted for services	738,091
Changes in Fair value of warrants and capital note	<u>(491,884)</u>
Balance as of December 31, 2017	2,093,036
Fair value of warrants issued	1,044,528
Fair value of warrants granted for services	119,779
Changes in Fair value of warrants and capital note	<u>(2,280,318)</u>
Balance as of December 31, 2018	\$ 977,025
Fair value of warrants issued	600,469
Changes in Fair value of warrants and capital note	<u>(33,382)</u>
Balance as of December 31, 2019	<u>\$ 1,544,112</u>

q. Basic and diluted net loss per ordinary share:

Basic net loss per ordinary share is computed based on the weighted average number of ordinary shares outstanding during each year.

The total number of ordinary shares related to the outstanding stock options, warrants and conversion of the outstanding convertible loans aggregated to 3,175,279, 109,142,318 and 27,543,907, respectively, were excluded from the calculations of diluted loss per ordinary share, since it would have an anti-dilutive effect.

r. Business combination:

The Company accounted for business combination in accordance with ASC 805, "Business Combinations". ASC 805 requires recognition of assets acquired, liabilities assumed, and any non-controlling interest at the acquisition date, measured at their fair values as of that date. Any excess of the fair value of net assets acquired over purchase price and any subsequent changes in estimated contingencies are to be recorded in earnings.

Acquisition related costs are recorded within the statement of operations in the period it was incurred.

s. Contingencies:

The Group is involved in various commercial, government investigation and other legal proceedings that arise from time to time. The Group records accruals for these types of contingencies to the extent that the Group concludes their occurrence is probable and that the related liabilities are estimable. When accruing these costs, the Group will recognize an accrual in the amount within a range of loss that is the best estimate within the range. When no amount within the range is a better estimate than any other amount, the Group accrues for the minimum amount within the range. The Group records anticipated recoveries under existing insurance contracts that are virtually certain of occurring at the gross amount that is expected to be collected. Legal costs are expensed as incurred.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES (Cont.)**t. Recently issued accounting standards:****Which were Adopted:**

- In November 2016, the FASB issued ASU 2016-18, "Statement of Cash Flows (Topic 230): Restricted Cash", which requires companies to include amounts generally described as restricted cash and restricted cash equivalents in cash and cash equivalents when reconciling beginning-of-period and end-of-period total amounts shown on the statement of cash flows. This ASU is effective for annual and interim periods beginning after December 15, 2017. The adoption of this standard will not have a material impact on the Company's consolidated financial statements of cash flows.

As a result of the adoption of ASU 2016-18, the Company adjusted the previously reported consolidated statement of cash flows for the years ended December 31, 2018 and 2017 as follows:

	Year ended December 31, 2018		
	As previously reported	Adjustments	As adjusted
Changes in restricted cash	\$ 706	\$ (706)	\$ -
Net cash used in operating activities	2,591,341	706	2,592,047
Decrease in cash and cash equivalents	(305,357)	(706)	(306,063)
Cash and cash equivalent at the beginning of the year	450,305	15,380	465,685
Cash and cash equivalents at the end of the year	\$ 144,948	\$ 14,674	\$ 159,622

	Year ended December 31, 2017		
	As previously reported	Adjustments	As adjusted
Net cash acquired in acquisition of Digiflex	\$ -	\$ 15,380	\$ 15,380
Increase in cash and cash equivalents	324,083	15,380	339,463
Cash and cash equivalents at the end of the year	\$ 450,305	\$ 15,380	\$ 465,685

Not yet adopted in the current year:

- As an "emerging growth company," the Jumpstart Our Business Startups Act ("JOBS Act") allows the Company to delay adoption of new or revised accounting pronouncements applicable to public companies until such pronouncements are made applicable to private companies. The Company has elected to use this extended transition period under the JOBS Act. The adoption dates discussed below reflects this election.
- In May 2014, the Financial Accounting Standards Board (the "FASB") issued Accounting Standards Update ("ASU") 2014-09, Revenue from Contracts with Customers (Topic 606). ASU 2014-09 supersedes the revenue recognition requirements in Accounting Standards Codification ("ASC 605"), Revenue Recognition, and requires entities to recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled to in exchange for those goods or services. The new revenue standard permits companies to either apply the requirements retrospectively to all prior periods presented or apply the requirements in the year of adoption through a modified retrospective approach with a cumulative adjustment. Due to the Company's emerging growth company status, this new standard will become effective for the Company starting the first quarter of 2020. The Company intends to adopt the modified retrospective approach starting the first quarter of 2020. The adoption of ASU 2014-09 is not expected to have a material impact on the Company's consolidated financial statements.
 - In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842), which will require lessees to recognize assets and liabilities for leases with lease terms of more than 12 months. Consistent with current GAAP, the recognition, measurement, and presentation of expenses and cash flows arising from a lease by a lessee primarily will depend on its classification as a financial or operating lease. However, unlike current GAAP, which requires lessees to recognize only capital leases on the balance sheet, the new guidance will require both types of leases to be recognized on the balance sheet. For public entities, this ASU is effective for the Company for fiscal years beginning after December 15, 2019 and effective as of January 1, 2020. The adoption of ASU 2016-02 is not expected to have a material impact on the Company's consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES (Cont.)**t. Recently issued accounting standards (cont.):****Not yet adopted in current year (cont.):**

4. In June 2018, the FASB issued Accounting Standards Update (ASU) No. 2018-07. This ASU supersedes ASC 505-50, Equity - Equity-Based Payments to Non-Employees, and expands the scope of ASC 718 to include all share-based payment arrangements related to the acquisition of goods and services from both nonemployees and employees. As a result, most of the guidance in Topic 718 associated with employee share-based payments, including most of its requirements related to classification and measurement, applies to nonemployee share-based payment arrangements. Entities should apply the amendments on a modified retrospective basis, through a cumulative-effect adjustment to retained earnings as of the beginning of the fiscal year in which the ASU is adopted, for all:

- (i) Liability-classified nonemployee awards that have not been settled as of the adoption date and
- (ii) Equity-classified nonemployee awards for which a measurement date has not been established.

The amendments are effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. Early adoption is permitted for periods in which financial statements have not yet been issued. Due to the Company's emerging growth company status, these new standards will become effective for the Company for fiscal years beginning after 15 December 2019. The adoption of ASU 2018-07 is not expected to have a material impact on the Company's consolidated financial statements.

5. In June 2016, the FASB Issued ASU 2016-13, Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments. The new standard requires financial assets measured at amortized cost to be presented at the net amount expected to be collected, through an allowance for credit losses that is deducted from the amortized cost basis. The standard is effective for fiscal years beginning after December 15, 2019, with early adoption permitted and will be applied on a modified retrospective basis. The adoption of ASU 2016-13 is not expected to have a material impact on the Company's consolidated financial statements.
6. In August 2018, the FASB issued ASU 2018-13, "Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement" (ASU 2018-13). The amendments in ASU 2018-13 remove, modify and add disclosures for companies required to make disclosures about recurring or nonrecurring fair value measurements under Topic 820. The amendments in this update are effective for all entities for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. Early adoption of this guidance is permitted. Certain amendments in this guidance are required to be applied prospectively, and others are to be applied retrospectively. The amendments in ASU 2018-13 are disclosure-related only and as such, the adoption of ASU 2018-13 is not expected to have a significant impact on the Company's consolidated financial statements.
7. In August 2020, the FASB issued ASU No. 2020-06, Accounting for Convertible Instruments and Contracts in an Entity's Own Equity (ASU 2020-06), which simplifies the accounting for certain financial instruments with characteristics of liabilities and equity, including convertible instruments and contracts in an entity's own equity. Among other changes, ASU 2020-06 removes from GAAP the liability and equity separation model for convertible instruments with a cash conversion feature and a beneficial conversion feature, and as a result, after adoption, entities will no longer separately present in equity an embedded conversion feature for such debt. Similarly, the embedded conversion feature will no longer be amortized into income as interest expense over the life of the instrument. Instead, entities will account for a convertible debt instrument wholly as debt unless (1) a convertible instrument contains features that require bifurcation as a derivative under ASC Topic 815, Derivatives and Hedging, or (2) a convertible debt instrument was issued at a substantial premium. Additionally, ASU 2020-06 requires the application of the if-converted method to calculate the impact of convertible instruments on diluted earnings per share (EPS). ASU 2020-06 is effective for fiscal years beginning after December 15, 2021, with early adoption permitted for fiscal years beginning after December 15, 2020 and can be adopted on either a fully retrospective or modified retrospective basis. The Company is currently evaluating the impact of the new guidance on its consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 3:- ACQUISITION

a. Digiflex:

On December 3, 2017 (“Transaction Date”), the Company consummated the acquisition of 100% of the shares of Digiflex and its two wholly-owned subsidiaries: Digiflex Inc. and Digiflex HK Limited in an all-stock transaction. Digiflex was incorporated in Israel in March 2008, it manufactures printing machines, which offers solutions for inkjet print-quality technologies. Digiflex develops a unique bi-component ink, which enables the use of ink-jet technology in various industrial procedures. Digiflex Inc. was incorporated in the United States and is engaged in sales and marketing of the Digiflex’s products. Digiflex HK Limited which was incorporated in Hong-Kong was inactive since inception and materially dissolved during March 2019. The Company issued 6,560,471 ordinary shares and 198,788 stock options to Digiflex former shareholders and option holders. Upon closing, the Company was owned 25% by the pre closing Digiflex shareholders and option holders and 75% by the pre closing shareholders and option holders of the Company on a fully diluted basis as defined in the agreement.

In addition, as part of the purchase agreement, Digiflex former shareholders’ also invested \$200,000 in Digiflex prior to the transaction to satisfy some of its liabilities.

The Company incurred acquisition related costs totaling \$75,000 in cash and also granted 675,926 warrants to the Company’s consultants at an exercise price of NIS 0.01 (\$0.003 based on the exchange rate of \$1.00 / NIS 3.456 in effect as of December 31, 2019) per ordinary share. The fair value of the warrants amounted to \$675,926 and was recorded as part of the acquisition related costs within the statement of operations. The issued 675,926 warrants are exercisable on a cashless basis under certain circumstances among other things and as a result were classified as liabilities. As of December 31, 2019 and 2018, the fair value of the warrants amounted to \$68,275 and \$70,968, respectively.

The main reason for the acquisition was to get the special technologies developed by Digiflex, a special cost efficient printer based on a commercial printing platform, very high accuracy (ten (10) inks in parallel printing) and special polymeric inks.

The Digiflex transaction is reflected in accordance with ASC Topic 805, “Business Combinations”, using the acquisition method of accounting. The total purchase price was allocated to Digiflex’s net tangible and intangible assets based on their estimated fair values as set forth below. The excess of the purchase price over the net tangible assets and intangible assets was recorded as goodwill. The goodwill is attributable primarily to the fact the technology has been developed and proven in the market, thereby hopefully reducing its risks. The related goodwill and intangible assets are not deductible for tax purposes.

The allocation of the purchase price to assets acquired and liabilities assumed is as follows:

Restricted cash	\$ 15,380
Accounts receivable	90,825
Prepaid expenses and other current assets	195,580
Inventory	32,500
Property and equipment	116,884
Short-term bank loan	(80,829)
Trade payable	(486,407)
Employees and payroll accruals	(171,319)
Accrued expenses and other current liabilities	(502,251)
Intangible assets	4,330,311
Goodwill	3,187,417
Total purchase price	<u>\$ 6,728,091</u>

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 3:- ACQUISITION (Cont.)**b. Intangible assets:**

The fair value of the intangible assets was based on the market participant approach to valuation, performed by a reputable third-party valuation firm using estimates and assumptions provided by management. The following table sets forth the components of intangible assets associated with the Digiflex acquisition:

	<u>Purchase price</u>	<u>Estimated useful life</u>
Technology	\$ 4,284,315	Ten (10) years
Backlog	45,996	One (1) year
Total amount allocated to intangible assets	<u>\$ 4,330,311</u>	

NOTE 4:- OTHER CURRENT ASSETS

	<u>December 31,</u>	
	<u>2019</u>	<u>2018</u>
Receivable for Convertible loan*	\$ 150,000	\$ -
Government authorities	20,894	48,335
Other	23,279	16,676
	<u>\$ 194,173</u>	<u>\$ 65,011</u>

* Such amount was collected in January 2020, see Note 8.e. for additional information.

NOTE 5:- PROPERTY AND EQUIPMENT, NET

	<u>December 31,</u>	
	<u>2019</u>	<u>2018</u>
Cost:		
Equipment	\$ 594,740	\$ 575,432
Computers	34,087	33,122
Office furniture	27,961	26,906
Leasehold improvements	23,461	23,461
	680,249	658,921
Accumulated depreciation:	431,933	358,219
Property and equipment, net	<u>\$ 248,316</u>	<u>\$ 300,702</u>

Depreciation expenses for the years ended December 31, 2019, 2018 and 2017 were \$73,714, \$149,307 and \$88,289, respectively.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 6:- INTANGIBLE ASSETS, NET

	December 31,	
	2019	2018
Cost:		
Technology	\$ 4,284,315	\$ 4,284,315
Backlog	45,996	45,996
	4,330,311	4,330,311
Accumulated amortization (the Backlog was fully amortized):	936,898	508,467
Intangible assets, net	<u>\$ 3,393,413</u>	<u>\$ 3,821,844</u>

Amortization expenses for the years ended December 31, 2019, 2018 and 2017 were \$428,431, \$470,773 and \$37,694, respectively. The amortization for each of the next five (5) years should be \$428,431.

NOTE 7:- ACCRUED EXPENSES AND OTHER CURRENT LIABILITIES

	December 31,	
	2019	2018
Provision for professional fees	\$ 573,667	\$ 603,038
Government authorities	34,830	33,902
Grants received in advance	-	66,339
Provision for legal claims	44,269	8,083
Other	137,331	130,780
	<u>\$ 790,097</u>	<u>\$ 842,142</u>

NOTE 8:- LOANS AND CONVERTIBLE BRIDGE FINANCING

- a. On March 22, 2017, the Company received a loan for a principal amount of \$162,000 from a lender according to a promissory note executed between the parties. In connection with the loan, commitment fees in the total amount of \$12,000 were deducted from the consideration received. The loan bears an interest rate of 12% annually, which must be repaid in five (5) equal monthly installments, commencing on May 31, 2017 and ending on September 30, 2017, subject to any early repayment in accordance with the terms set forth in the promissory note. In addition, pursuant to the loan agreement, the lender received a five-year warrant to purchase 50,000 ordinary shares, at an exercise price of \$1.50 per share. The Company classified the warrants as liabilities in the amount of \$24,573 (the Company used the following assumptions: 0% dividend yield, 71% expected volatility, 2.12% risk free rate and 4.22 expected life in years). As of December 31, 2019 and 2018 the fair value of the warrants amounted to \$3 and \$72, respectively. The loan was fully repaid by the Company on January 2, 2018.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 8:- LOANS AND CONVERTIBLE BRIDGE FINANCING (Cont.)

- b. In August 2017, the Company entered into several Securities Purchase Agreements with new investors and additional existing shareholders (all together "CLA August 2017"), whereby the Company issued and sold to such holders senior secured convertible notes in an aggregate principal amount of \$905,555 in consideration for an aggregate subscription amount of \$774,400 net of issuance costs of \$40,600 and five-year warrants to purchase 33,332 ordinary shares, at an exercise price of \$1.20 and additional five-year warrants to purchase 33,332 ordinary shares, at an exercise price of \$1.00 that were granted as additional issuance costs. The Company classified the warrants as liabilities in the amount of \$37,592 (the Company used the following assumptions: 0% dividend yield, 69% expected volatility, 2.16% risk free rate and 4.63 expected life in years). As of December 31, 2019 and 2018, the fair value of the warrants amounted to \$32 and \$266, respectively. Additional principal loan of \$22,322 was provided during the year ended December 31, 2019.

As part of the secured convertible notes, the Company also issued a five-year warrant to purchase 905,555 ordinary shares, at an exercise price of \$1.20 per ordinary share. The Company classified the warrants as in the amount of \$492,034 (the Company used the following assumptions: 0% dividend yield, 69% expected volatility, 2.16% risk free rate and 4.64 expected life in years). As of December 31, 2019 and 2018, the fair value of the warrants amounted to \$22,027 and \$35,802, respectively.

The notes include a 10% original issue discount on the consideration paid and bear interest at 6% per annum. The notes mature after 14-24 months and may be converted into ordinary shares, subject to the terms of such notes. The initial conversion price of the notes was \$1.00, but it was adjusted in January 2018 to \$0.50 and further adjusted in October 2018 to \$0.17. The Company accounted for the convertible loan in accordance with ASC 470-20, Debt with conversion and other Options. According to ASC 470-20-30-8, since the intrinsic value of the beneficial conversion feature ("BCF") exceeds the entire proceeds of the convertible loan, The Company allocated the entire proceeds to the BCF as additional paid in capital. During 2019 and 2018, \$98,865 and \$59,207 of the convertible notes were converted into 576,270 and 178,689 ordinary shares, respectively. In June 2020, \$35,145 of the convertible notes were converted into 206,735 ordinary shares and in January and February 2021, \$84,758 of the convertible notes were converted into 498,578 ordinary shares. The Company may require mandatory conversion of the notes in certain circumstances and pay the convertible note in cash upon event of fundamental transaction and change of control transaction as described in the convertible note agreement.

In connection with the convertible loan agreement signed in October 2018 as described in section d. below, the holders of CLA August 2017 agreed to extend the original maturity date in additional 24 months. In addition, the Company issued to certain holders of CLA August 2017 four-year warrants to purchase 1,659,971 ordinary shares at an exercise price of \$0.17. The Company classified the warrants as liabilities in the amount of \$42,591 (the Company used the following assumptions: 0% dividend yield, 59.69% expected volatility, 2.96% risk free rate and 3.75 expected life in years). As of December 31, 2019 and 2018, the fair value of the warrants amounted to \$11,522 and \$66,004, respectively.

The CLA August 2017 was required to be repaid by October 2020. This lender did not exercise its conversion right under the convertible loans prior to the repayment date and therefore became repayable in cash as such time. The Company did not timely repay such loan due to financial difficulties and therefore the Company is currently in default under this agreement.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 8:- LOANS AND CONVERTIBLE BRIDGE FINANCING (Cont.)

- c. On March 8, 2018, the Company entered into a Share Purchase Agreement with existing shareholders (“CLA March 2018”), pursuant to which the shareholders provided the Company an 18 month convertible loan in an aggregate principal amount of \$150,000 and received from the Company warrants to purchase 400,000 ordinary shares at an exercise price of \$0.50 per ordinary share. The loan amount is convertible into ordinary shares at a conversion price of \$1.00 per ordinary share. The loan amount bears interest of 5% per annum. The warrants may be exercised, in whole or in part, for a period of five (5) years. Such warrants were classified as equity due to their nature, their fair value upon issuance date was \$214,996 (the Company used the following assumptions: 0% dividend yield, 59.69% expected volatility, 2.65% risk free rate and 5 expected life in years). In connection with the loan agreement, both parties also agreed that in case the ordinary share fair value will be lower than \$1.00 as of December 31, 2018, the Company will compensate the shareholders with additional warrants to purchase 200,000 ordinary shares with the same terms, such additional grant was realized and on December 31, 2018 the Company issued such warrants. Those additional warrants were recorded as liability as of March 8, 2018 in the amount of \$82,748 (the Company used the following assumptions: 0% dividend yield, 59.69% expected volatility, 2.51% risk free rate and 5 expected life in years), upon their issuance date. As of December 31, 2018 the fair value of the warrants amounted to \$4,314 (the Company used the following assumptions: 0% dividend yield, 59.69% expected volatility, 2.51% risk free rate and 5 expected life in years) and were reclassified to equity due to their nature.

The CLA March 2018 was required to be repaid by September 2019. This lender did not exercise its conversion right under the convertible loans prior to the repayment date and therefore became repayable in cash as such time. The Company did not timely repay such loan due to financial difficulties and therefore the Company is currently in default under this agreement.

- d. On May 8, 2018, the Company entered into a Share Purchase Agreement with existing shareholders (“CLA May 2018”), pursuant to which the shareholders provided the Company with an 18 month convertible loan in an aggregate principal amount of \$170,000 and received from the Company warrants to purchase 170,000 ordinary shares at an exercise price of \$0.50 per ordinary share. The loan amount is convertible into ordinary shares at a conversion price of \$1.00 per ordinary share. The loan includes a 10% original issue discount and bears interest of 6% per annum. In accordance with the accounting guidance on convertible instruments, the BCF of \$15,300 was recognized in additional paid in capital. The warrants may be exercised, in whole or in part, for a period of five (5) years. Such warrants were classified as equity due to their nature, their fair value upon issuance date amounted to \$65,718 (the Company used the following assumptions: 0% dividend yield, 59.69% expected volatility, 2.80% risk free rate and 5 expected life in years).

The CLA May 2018 was required to be repaid by November 2019. This lender did not exercise its conversion right under the convertible loans prior to the repayment date and therefore became repayable in cash as such time. The Company did not timely repay such loan due to financial difficulties and therefore the Company is currently in default under this agreement.

- e. On October 10, 2018, the Company entered into a Convertible Loan Agreement with an existing investor who invested relatively low amounts previously (“CLA October 2018”). Pursuant to this Agreement, the investor provided the Company with a convertible loan in an aggregate principal amount of \$1,000,000 at an exercise price as defined in the convertible loan agreement but no less than \$0.17. The convertible loan bears an interest rate at Israeli prime plus 4% per annum. Under the terms of the CLA October 2018, the investor was granted an option to lend the Company an additional amount up to \$2,000,000, (“Additional Loan Amount”) and also issued the investor a warrant to purchase ordinary shares for an aggregate purchase price of \$5,000,000, and an additional warrant conditioned upon the investment of an additional Loan Amount to purchase ordinary shares for an aggregate purchase price of up to \$5,000,000 calculated pro-rata to the amount out of the Additional Loan Amount provided.

In March, April, August and December 2019 such investor invested additional amounts of \$500,000, \$500,000, \$100,000 and \$150,000, respectively on the account of the account of the Additional Loan Amount (“CLA March-December 2019”). The Company determined that the \$100,000 CLA received in August 2019 contained a BCF of \$21,445 and recorded such BCF in the additional paid in capital in the year ended December 31, 2019. The Company also issued the investor for the entire \$1,250,000 additional investments mentioned above a warrant to purchase ordinary shares for an aggregate purchase price of \$3,125,000. Such convertible loans bears same terms as the CLA October 2018.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 8:- LOANS AND CONVERTIBLE BRIDGE FINANCING (Cont.)

The CLA October 2018 and the CLA March-December 2019 were required to be repaid by October 2020. This lender did not exercise its conversion right under the convertible loans prior to their repayment date and therefore became repayable in cash as such time. The Company did not timely repay such loans due to financial difficulties and therefore the Company is currently in default under those agreements.

The option to lend the Additional Loan Amount, the warrants and the additional warrants classified as liability. The fair value of all those instruments aggregated to \$500,741 as of October 10, 2018 (the Company used the following assumptions: 0% dividend yield, 59.69% expected volatility, 2.82% risk free rate and 2 expected life in years). As of December 31, 2019 and 2018, the fair value of all the warrants amounted to \$916,403 and \$490,000, respectively.

In July 2020, this investor invested additional \$16,748 on the account of the Additional Loan Amount and the Company granted the investor warrants to purchase ordinary shares for an aggregate purchase price of \$83,740. The terms of that convertible loan and the associated warrants are the same as provided to the CLA November 2018.

On December 31, 2019, the Company and GTRIMG entered into a memorandum of understanding, or the MOU, pursuant to which GTRIMG agreed to provide additional loans to the Company and GTRIMG would receive additional Warrants. The MOU also provided for certain amendments to the existing Convertible Loan Agreement. The Company agreed to adopt a forecast, providing that, during 2020 grants, plus revenues, plus convertible loans (other than those received from GTRIMG) less liabilities on the balance sheet as of December 31, 2019 should not be less than \$2,500,000, or the Management Minimum Forecast, out of which \$1,250,000 shall be available in our bank account as of March 31, 2020, or the Target. Under the MOU, GTRIMG agreed to provide an additional loan as of the execution of the MOU in the amount of \$150,000 under the existing Convertible Loan Agreement, or the Initial MOU Loan.

In addition, the MOU provides that if the C fail to meet the Target, then: (a) the Company's valuation for purposes of all investments after January 1, 2018 shall be \$2.0 million pre-money as of such date, thereby reflecting a price per share of \$0.068, and (b) GTRIMG shall make loans to the Company of \$100,000 per month for a period of 12 months commencing April 1, 2020, and under the same terms as the Convertible Loan Agreement, as adjusted under (a) above, or the Additional MOU Loans; provided, that following each six month period, GTRIMG may review whether the Company has complied with the Management Minimum Forecast as defined therein, and if it was not met for any six month period (beginning with the six month period ended June 30, 2020), then, three months after such review, GTRIMG may determine not to fund additional amounts.

Furthermore, under the MOU, the Company agreed to call a meeting of shareholders within 15 days of the date of the MOU in order to approve (i) the transactions contemplated by the MOU, (ii) an amendment to the articles of association of the Company to provide that GTRIMG may appoint a number of directors as shall reflect its holding should the Target not be met (assuming all convertible loans are converted) and (iii) an increase in authorized share capital as necessary. The Company also agreed to immediately appoint a representative of GTRIMG as chairman of the board of directors.

In January 2020, GTRIMG made the Initial MOU Loan.

In March 2021, the Company directors received a notice before legal action letter from GTRIMG's lawyer associated with their previous agreements (including the MOU mentioned above). The main request derives from this letter is to convert all the CLA so far at a price per share of \$0.068. Due to the early stage of this letter, we are in a process of assessing its consequences.

- f. On November 10, 2018, the Company entered into several convertible loan agreements with existing shareholders ("CLA November 2018"), whereby they provided the Company with a convertible loan in an aggregate principal amount of \$225,000. The convertible loans bear an interest rate at Israeli prime plus 4% per annum. Under those agreements, the Company issued the lenders warrants to purchase ordinary shares for an aggregate purchase price of \$1,125,000. The conversion price for both the loan amount and the warrants is defined in the convertible loan agreement but no less than \$0.17.

The granted warrants classified as liability at the issuance date, their fair value aggregated to \$79,227 (the Company used the following assumptions: 0% dividend yield, 59.69% expected volatility, 2.87% risk free rate and 2 expected life in years). As of December 31, 2019 and 2018, the fair value of the warrants amounted to \$50,510 and \$78,796, respectively.

The CLA November 2018 was required to be repaid by November 2020. This lender did not exercise its conversion right under the convertible loans prior to the repayment date and therefore became repayable in cash as such time. The Company did not timely repay such loan due to financial difficulties and therefore the Company is currently in default under this agreement.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 8:- LOANS AND CONVERTIBLE BRIDGE FINANCING (Cont.)

- g. On December 29, 2018, the Company entered into a convertible loan agreement with a new investor (“CLA December 2018”), whereby they provided the Company with a convertible loan in an aggregate principal loan amount of \$400,000. The convertible loan bears an interest rate at Israeli prime plus 4% per annum. Under this agreement, the Company issued the lender warrants to purchase ordinary shares for an aggregate purchase price of \$2,000,000.

As part of the CLA December 2018 the Company paid a finder’s fee of \$40,000 and issued a five-year warrant commencing February 2019 to purchase ordinary shares for an aggregate purchase price of \$240,000. The conversion price for both the loan amount and the warrants is defined in the convertible loan agreement but no less than \$0.17.

The warrants issued to the new investor were classified as a liability. At the issuance date their fair value aggregated to \$180,281, (the Company used the following assumptions: 0% dividend yield, 59.69% expected volatility, 2.48% risk free rate and 2 expected life in years). As of December 31, 2019 and 2018, the fair value of the warrants amounted to \$107,602 and \$151,858, respectively.

The warrants issued as a finder’s fee compensation were classified as a liability. At the issuance date their fair value aggregated to \$45,327, (the Company used the following assumptions: 0% dividend yield, 59.69% expected volatility, 2.51% risk free rate and 5 expected life in years). As of December 31, 2019 and 2018, the fair value of the warrants amounted to \$49,100 and \$45,342, respectively.

The CLA December 2018 was required to be repaid by December 2020. This lender did not exercise its conversion right under the convertible loans prior to the repayment date and therefore became repayable in cash as such time. The Company did not timely repay such loan due to financial difficulties and therefore the Company is currently in default under this agreement.

- h. In January, February and April 2019, the Company entered into several convertible loan agreements with existing shareholders (“CLA January-April 2019”), whereby they provided the Company with a convertible loan in an aggregate principal amount of \$200,000. The convertible loans bear interest at Israeli prime plus 4% per annum. Under those agreements, the Company issued to lenders warrants to purchase ordinary shares for an aggregate purchase price of \$1,000,000. The conversion price for all the loan amount and the warrants is defined in the convertible loan agreement but no less than \$0.17.

The granted warrants classified as liability. At the issuance date, their fair value aggregated to \$98,377 (the Company used the following assumptions: 0% dividend yield, 59.69% expected volatility, 2.11% risk free rate and 2 expected life in years) and \$61,541 as of December 31, 2019.

The CLA January-April 2019 were required to be repaid by CLA January-April 2021. This lender did not exercise its conversion right under the convertible loans prior to the repayment date and therefore became repayable in cash as such time. The Company did not timely repay such loan due to financial difficulties and therefore the Company is currently in default under those agreements.

- i. In August, September and December 2019, the Company entered into several convertible loan agreements with a new investor and existing shareholders (“CLA August-December 2019”), whereby they provided the Company with a convertible loan in an aggregate principal amount of \$475,000. The convertible loans bear an interest rate at Israeli prime plus 4% per annum. Under those agreements, the Company issued the lenders warrants to purchase ordinary shares for an aggregate purchase price of \$2,375,000. The conversion price for all the loan amount and the warrants is defined in the convertible loan agreement but no less than \$0.17.

The granted warrants classified as liability at the issuance date, their fair value aggregated to \$409,668 (the Company used the following assumptions: 0% dividend yield, 54.50% expected volatility, 1.60% risk free rate and 2 expected life in years) and \$227,998 as of December 31, 2019.

- j. The fair value of the warrants issued as part of the convertible loan agreements (“CLA”) along with finder’s fees as applicable were bifurcated out of the principal loans. Commencing with the grant dates the Company is calculating the accretion back to the principal amount during the CLA period along with the related interest and record them financial expenses in connection with convertible loans’ as part of the financial expenses (income), net line item within the statement of operations.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 8:- LOANS AND CONVERTIBLE BRIDGE FINANCING (Cont.)

The Company's CLA's presented as part of its current and non-current liabilities as of December 31, 2019 as follows:

Type of CLA	Original principal loans amounts	Additional principal loans provided	Loans already converted	Remaining principal loans amount	Converted through	Loans presented as of December 31, 2019
CLA August 2017(*)	\$ 905,555	\$ 22,322	\$ (141,211)	\$ 786,666	2020	\$ 896,799 Refer to Note 8b
CLA March 2018(*)	150,000	-	-	150,000	2019	163,406 Refer to Note 8c
CLA May 2018(*)	170,000	-	-	170,000	2019	204,118 Refer to Note 8d
CLA October 2018(*)	1,000,000	-	-	1,000,000	2020(***)	875,630 Refer to Note 8e
CLA November 2018(*)	225,000	-	-	225,000	2020(***)	205,636 Refer to Note 8f
CLA December 2018(*)	400,000	-	-	400,000	2020(***)	310,188 Refer to Note 8g
CLA January-April 2019(**)	200,000	-	-	200,000	2021(***)	155,062 Refer to Note 8h
CLA March-December 2019(**)	1,250,000	-	-	1,250,000	2020(****)	1,243,739 Refer to Note 8e
CLA August-December 2019(**)	475,000	-	-	475,000	2021(***)	136,412 Refer to Note 8i
	<u>\$ 4,775,555</u>	<u>\$ 22,322</u>	<u>\$ (141,211)</u>	<u>\$ 4,656,666</u>		<u>\$ 4,190,990</u>

(*) Aggregated to \$3,899,516 and presented within the current liabilities

(**) Aggregated to \$291,474 and presented within the non-current liabilities

(***) Structured as a 24 month- convertible loan or less in case of a Public Offering ("PO") event

(****) The due date for those convertible loans is October 2020 or earlier in case of a PO event

NOTE 9:- COMMITMENTS AND CONTINGENT LIABILITIES

a. Royalties commitments:

- The Company was engaged in research and development programs with the National Technological Innovation Authority, or the "Authority" (formerly operating as Office of the Chief Scientist of the Ministry of Economy of the State of Israel, or the OCS). The Company is committed to pay royalties to the Authority at the rate of 3.0% of sales of products resulting from research and development partially financed by the Authority. The amount shall not exceed the grant amount received, linked to the dollar, including accrued interest at the LIBOR rate. The obligation to pay these royalties is contingent on actual sales of the products and in the absence of such sales, no payment is required.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 9:- COMMITMENTS AND CONTINGENT LIABILITIES (Cont.)**a. Royalties commitments (cont.):**

During 2019, 2018 and 2017, the Company paid royalties to the Authority in the amount of \$2,091, \$2,551 and \$305, respectively.

The total grants received by the Company and Nano Size as of December 31, 2019 aggregated to \$1,150,559. The Company's total contingent liability (including interest) as of December 31, 2019 with respect to royalty-bearing participation received, net of royalties paid, amounted to \$1,472,856.

As of December 31, 2019 and 2018, Digiflex, received grants for research and development efforts from the Authority in an aggregate amount of approximately \$2.2 million, out of which an amount of approximately \$1.1 million was repaid to the Authority by Jet CU PCB Ltd ("Jet CU") as a result of their technology and know-how sale to a foreign company which was authorized by the Authority and resulted in such payment in January 2018. The contingent remaining liability (after additional payments) was reduced to approximately \$1.0 million.

2. On December 15, 2011, the Company signed a research and development agreement with the Israeli ministry of energy (formerly Israeli Ministry of National Infrastructures, Energy and Water Resources). Pursuant to the agreement, the ministry will fund up to 62.5% of the Company's expenses related to the approved program up to a maximum amount of NIS 625,000 (\$180,063 based on the exchange rate of \$1.00 / NIS 3.471 in effect as of December 31, 2013), out of which the Company received NIS 585,119 (\$168,574 based on the exchange rate of \$1.00 / NIS 3.471 in effect as of December 31, 2013) so far and do not expect to receive more, in exchange for the Company's agreement to pay royalties of 5% plus interest as detailed in the agreement of any revenues generated from the intellectual property generated under the program.

No grants were received during the three (3) years ended December 31, 2019. During the years ended December 31, 2019, 2018 and 2017, the Company accrued royalties in the amount of \$1,080, \$112 and \$148, respectively.

As of December 31, 2019, the aggregate contingent liability to the Israeli Ministry of National Infrastructures, Energy and Water Resources amounted to NIS 580,963 (\$168,103 based on the exchange rate of \$1.00 / NIS 3.456 in effect as of December 31, 2019).

3. In October 2010, the Company entered into a Convertible Bridge Financing Agreement with Israel Electric Corporation ("IEC") and, as part of the agreement, the Company committed to pay IEC royalties equal to 2% of the total net sales of the Company's products and service revenues from the product developed and manufactured through this agreement, up to a cap of NIS 8,000,000 (\$2,314,815 based on the exchange rate of \$1.00 / NIS 3.456 in effect as of December 31, 2019).

During the years ended December 31, 2019, 2018 and 2017, the Company accrued royalties in the amount of \$6,791, \$4,020 and \$1,558, respectively.

4. In connection with previously made acquisition of Nano Size, the Company is obligated to pay 3% from future sales and 10% of sublicense fees derived from Nano Size's intellectual property, until the aggregate consideration amounts to \$1,400,000. The consideration included a minimum consideration of \$180,000 which was paid during 2011, and will be off set against future royalty payments which will be payable by the Company from sales of products and services. The accrued royalties as of December 31, 2019 aggregated to \$37,455 and recorded within the Accrued expenses and other current liabilities.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 9:- COMMITMENTS AND CONTINGENT LIABILITIES (Cont.)**a. Royalties commitments (cont.):**

5. In September 2012, the Company entered into a Know-How License Agreement with Fraunhofer Institute for Ceramic Technologies and Systems IKTS ("IKTS"), pursuant to which the Company purchased from IKTS certain additives (the agreement is still active). The Company has the right to receive the production file and knowhow to its chosen manufacturer, in consideration for payment to IKTS of royalties of €25 (\$28 based on the exchange rate of \$1.00 / €0.89 in effect as of December 31, 2019) per kilogram of the ingredients not manufactured by IKTS. In addition, as of December 31, 2019, the Company is obligated to pay IKTS a minimum annual royalty of €2,000 (\$2,247 based on the exchange rate of \$1.00 / €0.89 in effect as of December 31, 2019) deductible against royalties.

During the year ended December 31, 2019, 2018 and 2017, the Company recorded royalty expenses in the amount of \$2,247, \$2,290 and \$2,396, respectively.

b. Legal proceedings:

1. On December 31, 2017, a lawsuit against the Company was filed by Eshed Consulting and Financial Management Ltd., or Eshed. The complaint alleges that the Company owes Eshed a total amount of NIS 120,000 (\$32,017 based on the exchange rate of \$1.00 / NIS 3.748 in effect as of December 31, 2018) in fees for professional financial services Eshed allegedly provided to the Company. On December 13, 2018, the Company signed a settlement agreement with Eshed under which the Company will pay Eshed a total of NIS 52,650 (\$14,047 based on the exchange rate of \$1.00 / NIS 3.748 in effect as of December 31, 2018). The liability was recorded as a provision for legal claims, net of deposit associated with that litigation, within the accrued expenses and other current liabilities as of December 31, 2018 an amount of NIS 52,650 (\$14,047 based on the exchange rate of \$1.00 / NIS 3.748 in effect as of December 31, 2018) and was fully paid by the Company during 2019.
2. On March 11, 2018, a lawsuit captioned Reinhold Cohn & Co. vs. (i) Digiflex Ltd., and (ii) P.V. Nano Cell Ltd., was filed in the Magistrate Court in Kfar Saba in Israel. The complaint alleges that Digiflex owes Reinhold Cohn NIS 80,298 (\$21,424 based on the exchange rate of \$1.00 / NIS 3.748 in effect as of December 31, 2018) in fees for various services involving the protection of the Company's intellectual property rights by way of registration of patents worldwide, including in the United States, Canada and Europe. In June 2018, the Company settled this claim for a total of NIS 82,798 (\$22,091 based on the exchange rate of \$1.00 / NIS 3.748 in effect as of December 31, 2018). such amount was paid in 2018 and 2019. The remaining liability was recorded as a provision for legal claims within the accrued expenses and other current liabilities as of December 31, 2018 and was fully paid by the Company during 2019.
3. On March 11, 2018, a lawsuit captioned I.T.S Industrial Technologic Ltd. vs. (i) Digiflex Ltd., and (ii) Dan Vilenski., a former director of Digiflex, was filed in the Magistrate Court in Rishon Letzion in Israel. On March 11, 2019, the Company settled this claim for a total of NIS 400,000 (\$106,724 based on the exchange rate of \$1.00 / NIS 3.748 in effect as of December 31, 2018), paid in 12 monthly installments commencing April 2019. The remaining liability was recorded within the Trade payables as of December 31, 2019 and was fully paid by the Company during 2020.
4. On May 16, 2019, a lawsuit captioned Yaskawa Europe Technology Ltd. vs. (i) Digiflex Ltd., and (ii) P.V. Nano Cell Ltd., was filed in the Magistrate Court in Kfar Saba in Israel. On January 19, 2020, the Company settled this claim for a total of NIS 179,006 (\$51,795 based on the exchange rate of \$1.00 / NIS 3.456 in effect as of December 31, 2019), paid in 12 monthly installments commencing May 2020. The liability was recorded as a provision for legal claims within the accrued expenses and other current liabilities as of December 31, 2019.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 9:- COMMITMENTS AND CONTINGENT LIABILITIES (Cont.)**c. Lease commitments:**

1. The Company currently leases, through Nano Size, approximately 7,300 square feet of space in Migdal Ha'Emek, Israel for its principal offices and manufacturing facilities at a monthly cost of approximately NIS 15,493 (\$4,483 based on the exchange rate of \$1.00 / NIS 3.456 in effect as of December 31, 2019). Those current lease agreements expire on June 30, 2022.

Additionally, Digiflex leased approximately 2,900 square feet of space at 6 Yad Haruzim, Kfar Saba, Israel for its principal office and laboratory at a monthly cost of approximately NIS 12,500 (\$3,617 based on the exchange rate of \$1.00 / NIS 3.456 in effect as of December 31, 2019). This lease was mutually ended on March 15, 2020. Digiflex currently leases approximately 1,200 square feet of space in Migdal Ha'Emek, Israel for its principal office and laboratory at a monthly cost of approximately NIS 5,000 (\$1,447 based on the exchange rate of \$1.00 / NIS 3.456 in effect as of December 31, 2019). This lease agreement expires on September 14, 2021.

As of December 31, 2019, the future minimum aggregate office space commitment under non-cancelable agreements are as follows:

2020	\$	76,581
2021		66,092
2022		26,898
	\$	<u>169,571</u>

NOTE 10:- TAXES ON INCOME**a. Corporate Tax rates:**

The Israeli corporate tax rates applicable to the Company, Nano Size and Digiflex are as follows:

2017 – 24%

2018 and thereafter – 23%

Non-Israeli subsidiaries are taxed according to the tax laws in their respective countries of residence.

b. Net operating losses carryforwards:

As of December 31, 2019, the Company and its Israeli subsidiaries have accumulated losses for tax purposes in the amount of \$39.0 million which may be carried forward and offset against taxable income for an indefinite period.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 10:- TAXES ON INCOME (Cont.)**c. Accounting for uncertainty in income taxes:**

For the years ended December 31, 2019, 2018 and 2017, the Company did not have any unrecognized tax benefits and no interest and penalties related to unrecognized tax benefits had been accrued. The Company does not expect that the amount of unrecognized tax benefits will change significantly within the next 12 months.

d. Tax assessments:

Tax reports filed by the Company and its Israeli subsidiaries through the year ended December 31, 2013 are considered final.

e. Deferred taxes on income:

Significant components of the Company's deferred tax assets are as follows:

	December 31,	
	2019	2018
Deferred tax assets		
Operating loss carry forward	\$ 8,963,906	\$ 8,291,967
Temporary differences	186,789	280,126
	<u>9,150,695</u>	<u>8,572,093</u>
Deferred tax liability		
Beneficial conversion feature	(99,790)	(94,858)
Total deferred tax, net	<u>9,050,905</u>	<u>8,477,235</u>
Valuation allowance	<u>(9,050,905)</u>	<u>(8,477,235)</u>
Net deferred tax assets	<u>\$ —</u>	<u>\$ —</u>

The net change in the total valuation allowance for the year ended December 31, 2019 related primarily to an increase in deferred taxes calculated on the operating loss carry forward. In assessing the likelihood that deferred tax assets will be realized, management considers whether it is more likely than not that some or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets depends on the generation of future taxable income during the periods in which those temporary differences and tax loss carry forwards are deductible.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 10:- TAXES ON INCOME (Cont.)

f. Reconciliation of the theoretical tax benefit and the actual tax expense:

	Year ended December 31,		
	2019	2018	2017
Loss before tax benefit	\$ (3,953,005)	\$ (1,972,558)	\$ (2,843,905)
Statutory tax rate	23%	23%	24%
Income tax benefit	909,191	453,688	682,537
Effect of:			
Losses and timing differences for which valuation allowance was provided, net	(478,812)	(514,287)	(457,643)
Non-deductible expenses and other permanent differences	(332,799)	146,315	(159,580)
Beneficial conversion feature	(99,790)	(94,858)	(17,057)
Other	2,210	9,142	(48,257)
Income tax expense recognized in profit or loss	\$ —	\$ —	\$ —

NOTE 11:- SHARE CAPITAL

a. Ordinary shares:

The share capital as of December 31, 2019 and 2018 is composed of ordinary shares of NIS 0.01 (\$0.003 based on the exchange rate of \$1.00 / NIS 3.456 in effect as of December 31, 2019) par value as follows:

	Number of ordinary shares		Number of ordinary shares	
	Authorized	Issued and outstanding	Authorized	Issued and outstanding
	December 31, 2019		December 31, 2018	
Ordinary shares	200,000,000	24,393,218	200,000,000	23,491,948

On December 28, 2020, as part of the annual general meeting of the shareholders', the authorized ordinary shares were increased by an additional 1,000,000,000 ordinary shares of NIS 0.01 (\$0.003 based on the exchange rate of \$1.00 / NIS 3.456 in effect as of December 31, 2019) par value.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 11:- SHARE CAPITAL (Cont.)**b. Issuance of ordinary shares:**

1. In February 2017, the Company issued 53,333 units at a price of \$1.50 per unit. Each unit consists of (i) one ordinary share and (ii) a five-year warrant to purchase one ordinary share at an exercise price of \$1.50 per ordinary share. The Company received aggregate net proceeds of \$80,000 from the sale of such units. The warrants may be redeemed by their holders, without the control of the Company, upon the occurrence of certain fundamental transactions such as "change in control" as defined in the warrant agreement. The warrants are exercisable on a cashless basis under certain circumstances.

In accordance with ASC 815, warrants in the amount of \$26,296 (the Company used the following assumptions: 0% dividend yield, 71.39% expected volatility, 2.10% risk free rate and 4.1 expected life in years) were recorded as a liability. The Company measures the warrants at fair value by using the Black-Scholes option pricing model in each reporting period until they are exercised or expired, with changes in the fair values being recognized in the Company's statement of operations as financial expenses (income), net. As of December 31, 2019 and 2018, the fair value of the warrants amounted to \$2 and \$66, respectively.

2. During 2017 the Company issued 60,000 ordinary shares and 50,000 ordinary shares under several consulting agreements. The value of the ordinary shares of \$110,810 was recognized as expense over the service period.

According to the first agreement, additional 60,000 ordinary shares were to be issued in August 2017 but were issued in January 2018, the proportional ordinary share of the service in the amount of \$50,000 was recorded as expense against additional paid in capital during 2017 and the remainder during 2018.

3. In December 2017 the Company issued 75,000 ordinary shares to service provider of the Company. 37,500 ordinary shares vested immediately, the remaining ordinary shares shall vest during 2018 every 60 days according to the vesting schedule set forth in the agreements. The value of the ordinary shares of \$75,000 was recognized as expense over the service period, half of it during 2017 and the remainder during 2018.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 11:- SHARE CAPITAL (Cont.)**b. Issuance of ordinary shares (cont.):**

4. In December 2017 the Company issued 6,560,471 ordinary shares to the former owners of Digiflex as part of the merger agreement, refer to Note 3.
5. In addition, in December 2017, the Company issued to new investor and some of the former owners of Digiflex 333,333 units at a price of \$1.50 per unit. Each unit consists of (i) one ordinary share and (ii) a five-year warrant to purchase one ordinary share at an exercise price of \$1.50 per ordinary share. The Company received aggregate net proceeds of \$500,000 from the sale of such units. In accordance with ASC 815, warrants in the amount of \$165,685 (the Company used the following assumptions: 0% dividend yield, 68.59% expected volatility, 2.19% risk free rate and 4.92 expected life in years) were recorded as a liability. The Company measures the warrants at fair value by using the Black-Scholes option pricing model in each reporting period until they are exercised or expired, with changes in the fair values being recognized in the Company's statement of operations as financial expense (income), net. As of December 31, 2019 and 2018, the fair value of the warrants amounted to \$96 and \$944, respectively.
6. On December 27, 2017, the Company entered into a Share Purchase Agreement with Jet CU as supplemented by that certain Supplement to Share Purchase Agreement dated January 3, 2018, pursuant to which the Company received aggregate gross proceeds of \$992,615 from Jet CU (\$600,000 out of this amount was received during December 2017 and was recorded as receipt on account of ordinary shares and warrants within the non-current liabilities as of December 31, 2017) in exchange for 992,615 ordinary shares and 300,000 warrants to purchase 300,000 Ordinary Shares at an exercise price of \$0.50 per ordinary share. The warrants may be exercised, in whole or in part, for a period of five (5) years.

The warrants may be redeemed by their holders, without the control of the Company, upon the occurrence of certain fundamental transactions such as "change in control" as defined in the warrant agreement. In accordance with ASC 815, warrants in the amount of \$205,845 (the Company used the following assumptions: 0% dividend yield, 59.69% expected volatility, 2.25% risk free rate and 5 expected life in years) were recorded as a liability. The Company measures the warrants at fair value by using the Black-Scholes option pricing model in each reporting period until they are exercised or expired, with changes in the fair values being recognized in the Company's statement of operations as financial expense (income), net. As of December 31, 2019 and 2018, the fair value of the warrants amounted to \$1,560 and \$4,626, respectively.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 11:- SHARE CAPITAL (Cont.)**b. Issuance of ordinary shares (cont.):**

7. In January 2018 the Company issued a five-year warrant commencing August 2017 to purchase 11,111 ordinary shares to a vendor as a finders' fee compensation at an exercise price of \$1.20 per ordinary share. In accordance with ASC 815, those warrants in the amount of \$5,100 (the Company used the following assumptions: 0% dividend yield, 59.69% expected volatility, 2.13% risk free rate and 4.75 expected life in years) were recorded as a liability. The Company measures the warrants at fair value by using the Black-Scholes option pricing model in each reporting period until they are exercised or expired, with changes in the fair values being recognized in the Company's statement of operations as financial expense (income), net. As of December 31, 2019 and 2018, the fair value of the warrants amounted to \$4 and \$18, respectively.
8. In January 2018 the Company issued 65,000 ordinary shares to one of the Company's service providers. The company recorded an expense of \$65,000 during the year ended December 31, 2018 in connection with the issuance of those ordinary shares.
9. Between February and November 2018, the Company issued 68,750 ordinary shares to one of the Company's service providers. The company recorded an expense of \$45,338 during the year ended December 31, 2018 in connection with the issuance of those ordinary shares.
10. In June 2018 the Company entered into Share Purchase Agreements with existing shareholders, pursuant to which the Company received aggregate gross proceeds of \$175,000 in exchange for the issuance of an aggregate of 175,000 ordinary shares and warrants to purchase an aggregate amount of 466,667 ordinary shares at an exercise price of \$0.50 per ordinary share. The warrants may be exercised, in whole or in part, for a period of five (5) years. Those warrants were classified as equity.
11. In July 2018 the Company entered into a one-year consulting agreement with one of its service providers for a compensation of issuance 200,000 ordinary shares. The Company issued 100,000 ordinary shares in July 2018, additional 50,000 in October 2018 and the remainder 50,000 in January 2019. The Company records the expense over the service period and recorded \$63,638 as an expense for the year ended December 31, 2018.
12. Between January and July 2019, the Company issued 250,000 ordinary shares to one of the Company's service providers (the first 50,000 issued shares were mentioned on section 11. above). The Company recorded an expense of \$16,738 during the year ended December 31, 2019 in connection with the issuance of those restricted ordinary shares.
13. Between February and May 2019, the Company issued 25,000 ordinary shares to one of the Company's service providers. The Company recorded an expense of \$2,881 during the year ended December 31, 2019 in connection with the issuance of those restricted ordinary shares.
14. In April 2019 the Company issued 50,000 ordinary shares to one of the Company's service providers. The Company recorded an expense of \$6,025 during the year ended December 31, 2019 in connection with the issuance of those restricted ordinary shares.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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NOTE 11:- SHARE CAPITAL (Cont.)**c. Rights of ordinary shares:**

Ordinary shares confer upon their holders the rights to elect all of the directors of the Company, to participate and vote in the general meetings of the Company, to receive dividends, if and when declared, subject to the payment in full of all preferential dividends to which the holders of the Preferred Shares (if any) are entitled under the Company's articles of association and to participate in the distribution of the surplus assets and funds of the Company in the event of liquidation, subject to the liquidation preference of the Preferred Shares (if any). Each ordinary share entitles its holder to one vote on all matters submitted to a vote of the Company's shareholders.

d. Stock option plan:

Under the Company's 2010 option plan, options may be granted to officers, directors, employees, consultants and service providers of the Company.

The vesting period of the options is subject for Board approval and can vary from grant to grant. Options vest over a period of zero to three years from date of grant. Any options that are cancelled or forfeited before expiration become available for future grants. The options may be exercised for a period of seven years from grant.

The total number of ordinary shares available for future grants as of December 31, 2019 was 1,360,898. During 2020 the options pool was increased and the Company granted additional options, refer to Note 16.b. and 16.e. for additional information.

A summary of the Company's stock option activities and related information for the year ended December 31, 2019, is as follows:

	<u>Number of options</u>	<u>Weighted average exercise price</u>	<u>Weighted average remaining contractual life (years)</u>	<u>Aggregate intrinsic-value</u>
Outstanding as of January 1, 2019	1,714,039	\$ 0.63		
Granted	207,500	0.27		
Options forfeited	<u>(107,158)</u>	<u>\$ 0.88</u>		
Outstanding as of December 31, 2019	<u>1,814,381</u>	<u>\$ 0.58</u>	<u>6.66</u>	<u>\$ 24,538</u>
Exercisable as of December 31, 2019	<u>1,209,464</u>	<u>\$ 0.68</u>	<u>5.72</u>	<u>\$ 24,538</u>

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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NOTE 11:- SHARE CAPITAL (Cont.)

d. Stock option plan (cont.):

The options granted to officers, directors, employees, consultants and service providers of the Company which were outstanding as of December 31, 2019 have been classified into exercise prices as follows:

Exercise price	Outstanding		Exercisable	
	Number of options	Weighted average remaining contractual life (years)	Number of options	Weighted average remaining contractual life (years)
(*)	230,425	3.4	230,425	3.4
\$0.03	19,597	5.8	19,597	5.8
0.27	809,000	8.6	291,125	8.4
0.34	8,020	3.9	8,020	3.9
0.45	63,097	0.7	63,097	0.7
0.92	650,424	6.2	563,382	6.0
4.72	1,068	2.2	1,068	2.2
5.05	2,769	2.2	2,769	2.2
\$5.73	29,981	3.8	29,981	3.8
	<u>1,814,381</u>		<u>1,209,464</u>	

(*) Represents an amount lower than \$0.01.

As of December 31, 2019, the total compensation cost related to options granted to employees, consultants and service providers, not yet recognized, amounted to \$84,186 and is expected to be recognized over a weighted average period of 0.65 years.

e. Stock based compensation were recorded as follows:

	Year Ended December 31,		
	2019	2018	2017
Research and Development	\$ 16,295	\$ 36,723	\$ 17,956
Sales and Marketing	7,209	14,837	9,747
General and Administrative	86,109	102,430	108,431
	<u>\$ 109,613</u>	<u>\$ 153,990</u>	<u>\$ 136,134</u>

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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NOTE 11:- SHARE CAPITAL (Cont.)

f. The Company's outstanding warrants classified as equity as of December 31, 2019 are as follows:

<u>Outstanding</u>	<u>Issuance year</u>	<u>Exercise price</u>	<u>Exercisable through</u>	
117,209	2009	\$ (*)	Exit event	(**)
59,384	2013	0.92	2023	(**)
600,000	2018	0.50	2023	Refer to Note 8c
170,000	2018	0.50	2023	Refer to Note 8d
466,667	2018	\$ 0.50	2023	Refer to Note 11b10
<u>1,413,260</u>				

(*) Represents an amount lower than \$0.01

(**) Issued in connection with the 2013 and 2009 arrangements

All warrants are exercisable to ordinary shares. The exercise price of the warrants and the number of ordinary shares issuable thereunder is subject to standard anti-dilution features, including dividends, stock splits, combinations and reclassifications of the Company's capital stock. In accordance with ASC 815, "Derivatives and Hedging", the warrants were classified as equity instruments.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 12:- WARRANTS PRESENTED AT FAIR VALUE

The Company's outstanding warrants classified as a liability as of December 31, 2019 are as follows:

Outstanding	Exercise price	Issuance year	Exercisable through	Fair value	
120,000	\$ 0.92(*)	2014	(*****)	6	(*****)
296,813	1.50	2015	2020	-	(*****)
374,001	1.50	2016	2021	2	(*****)
905,555	0.17	2017	2022	22,027	Refer to Note 8b
333,333	1.50	2017	2022	96	Refer to Note 11b5
53,333	1.50	2017	2022	2	Refer to Note 11b1
50,000	1.50	2017	2022	3	Refer to Note 8a
33,332	1.20	2017	2022	16	Refer to Note 8b
33,332	1.00	2017	2022	16	Refer to Note 8b
675,926	(**)	2017	2022	68,275	Refer to Note 3
11,111	1.20	2017	2022	4	Refer to Note 11b7
300,000	0.50	2018	2023	1,560	Refer to Note 11b6
1,659,971	0.17	2018	2022	11,522	Refer to Note 8b
29,411,765	0.17(***)	2018	2021(*****)	420,386	Refer to Note 8e
15,441,177	(****)	(****)	(****)	220,704	Refer to Note 8e
6,617,647	0.17(***)	2018	2020(*****)	50,510	Refer to Note 8f
11,764,706	0.17(***)	2018	2020(*****)	107,602	Refer to Note 8g
1,411,765	0.17(***)	2019	2024	\$ 49,100	Refer to Note 8g
5,882,352	0.17(***)	2019	2021(*****)	61,541	Refer to Note 8h
18,382,352	0.17(***)	2019	2021(*****)	262,742	Refer to Note 8e
13,970,587	\$ 0.17(***)	2019	2021(*****)	227,998	Refer to Note 8i
<u>107,729,058</u>				<u>\$ 1,504,112</u>	(*****)

(*) Subject to changes as describe in the agreement.

(**) Less than \$0.01.

(***) Subject to a mechanism described in the agreement but not less than \$0.17, therefore, the outstanding amounts were calculated based on an exercise price of \$0.17, which results in the maximum potential amount of warrants.

(****) Since the actual number of warrants cannot be determined as of December 31, 2019, the outstanding amounts were calculated based on an exercise price of \$0.17, which results in the maximum potential amount of warrants.

(*****) M&A or qualified PO as described in the agreement.

(*****) Two years from the registration statement or a PO, the earlier

(*****) Two years or a PO, the earlier.

(*****) Issued in connection with the 2016, 2015 and 2014 financing rounds.

(*****) Contains warrants presented at fair value within current liabilities of \$158,112 and within non-current liabilities of \$1,346,000.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 13:- RELATED PARTIES**a. Employment or Service Agreements with Dr. Fernando de la Vega, the Company's Chief Executive Officer:**

On September 9, 2009, the Company entered into a services agreement, or the DBG Services Agreement, as amended, with Dr. de la Vega's wholly-owned service company, Dolev Bar-Guy Consulting and Management Ltd., or DBG, as amended, or the DBG Services Agreement, pursuant to which Dr. de la Vega provides the Company management services as the Company's chief executive officer. Pursuant to the terms of the DBG Services Agreement, as amended, Dr. de la Vega is entitled to a monthly consultancy fee in the amount of NIS 51,750 (\$14,974 based on the exchange rate of \$1.00 / NIS 3.456 in effect as of December 31, 2019) plus value added tax and car allowance in the amount of NIS 2,500 (\$723 based on the exchange rate of \$1.00 / NIS 3.456 in effect as of December 31, 2019) plus value added tax per month plus reimbursement for fuel expenses and tolls. The consultancy monthly fee shall be updated to NIS 65,000 (\$18,807 based on the exchange rate of \$1.00 / NIS 3.456 in effect as of December 31, 2019) plus value added tax per month, if the Company will secure an additional investment of \$1,000,000 (such update commenced in April 2019). Dr. de la Vega may terminate the DBG Services Agreement at any time for any reason upon a three (3) months' prior written notice. If the Company wish to terminate the engagement with Dr. de la Vega, not as a result of Dr. de la Vega's breach of his terms of office, the Company shall be required to provide a six (6) months' prior written notice.

In addition, our chief executive office may receive (none of which received so far):

1. An annual cash bonus in an amount equivalent to up to four (4) times his monthly service fee, plus VAT, based on achievement of certain performance targets which are determined by our compensation committee and the board of directors on an annual basis.
2. A special one-time bonus in an amount equivalent to six times his monthly service fee, plus VAT upon the occurrence of an Exit Event (as described below), provided that our pre-money valuation shall be at least \$50,000,000 at the closing of such transaction or within 12 months following such closing.
3. An Equity Based Award:

Upon the occurrence of an Exit Event, an equity-based award, in accordance with the following calculation:

(i) 0.5% of the Company's ordinary share capital on a fully diluted basis, if the Company's pre-money valuation shall be equal to or higher than \$30,000,000 but less than \$40,000,000;

(ii) 1.25% of the Company's ordinary share capital on a fully diluted basis, if the Company's pre-money valuation shall be equal to or higher than \$40,000,000 but less than \$50,000,000;

(iii) 2.0% of the Company's ordinary share capital on a fully diluted basis, if the Company's pre-money valuation shall be equal to or higher than \$50,000,000.

An 'Exit Event' is defined as: (i) the consummation of an initial public offering of ordinary shares of the Company on a recognized stock exchange; or (ii) a sale of all or substantially all of the share capital of the Company to any individual, firm, corporation, partnership, trust, incorporated or unincorporated association, joint venture, joint stock company, governmental authority or other entity of any kind, and shall include any successor (by merger or otherwise) of such entity, or a Person; (iii) a sale, lease, conveyance or disposition of all or substantially all of the assets of the Company; (iv) a merger of the Company with or into another entity in which the shareholders of the Company immediately prior to such merger do not hold a majority of the share capital and voting rights of the surviving entity held by them by virtue of their holdings in the Company prior to the consummation of the transaction or a transaction or series of transactions in which a Person or group of Persons acquire more than 50% of the issued and outstanding share capital of the Company (other than an acquisition of such share capital from the Company); or (v) an up-listing to a higher exchange.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 13:- RELATED PARTIES (Cont.)**b. Consultancy Agreement with Ram Zeevi:**

On May 15, 2018, the Company entered into a consultancy agreement with RINC Green Ltd., or RINC Green, as amended on April 30, 2019, or the Ram Zeevi Consultancy Agreement, pursuant to which Mr. Zeevi provides the Company with services in the field of business development in accordance with pre-approved monthly work plans, which includes introduction of potential business partners and investors as well as assistance in negotiations of business and investments terms. Pursuant to the terms of the Ram Zeevi Consultancy Agreement, RINC Green is currently entitled to a gross monthly fee in the amount of \$5,000 (25 hours per month at \$200 per hour rate) plus value added tax and to reimbursement of out-of-pocket expenses related directly to the provision of the consultancy services subject to prior written approval of the chief executive officer, to reimbursement of travel international travel and board expenses at the same standard as our chief executive officer and to an additional per-day fee equivalent to four hours per day abroad plus value added tax. Either the Company or RINC Green may terminate the agreement at any time for any reason by providing a 30-day prior written notice. RINC Green ceased providing the above monthly service in January 2019.

In addition to the foregoing, RINC Green is entitled to receive (none of which received so far):

1. A one-time payment in the amount of \$25,000 (plus value added tax) upon an equity investment exceeding \$500,000 by an investor that was introduced to the Company by Mr. Zeevi;
2. \$150,000 in cash (plus value added tax) and options to purchase the Company's ordinary shares upon an equity investment or execution of business contract resulting in at least \$2,000,000 in proceeds (or revenues) by an entity introduced to the Company by Mr. Zeevi, whereby the number of options will be calculated by dividing \$150,000 by the average common ordinary share price during the period of 90 days prior to the date upon which the Investment is actually made with an exercise price per share of NIS 0.01 (\$0.003 based on the exchange rate of \$1.00 / NIS 3.456 in effect as of December 31, 2019);
3. Options to purchase up to 120,000 of the Company's ordinary shares, at an exercise price per share of \$0.27. The options vest over a period of three years with one third of the options vesting on September 30, 2019, and the remaining two thirds will vest on a quarterly basis over the remaining two years. The options were issued on October 2, 2018; and
4. An equity based award to be granted upon of an Exit Event, in accordance with the following calculation:(i) 0.4% of the Company's share capital on a fully diluted basis, if the Company's pre-money valuation shall be equal to or higher than US \$30,000,000 but less than US \$50,000,000 or (ii) 1.0% of the Company's share capital on a fully diluted basis, if the Company's pre-money valuation shall be equal to or higher than US \$50,000,000.

An 'Exit Event' is defined the same as mentioned in section a. above.

In the event that the Company terminate the Consultancy Agreement other than for Cause, and the Exit Event occurs within a period of 6 months of said termination, RINC Green will be entitled to the foregoing equity-based award.

Ram Zeevi is the son of Gadi Zeevi, who beneficially owns more than 20% of our ordinary shares.

- c. Refer to note 8e for additional related party transactions.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 14:- FINANCIAL EXPENSES (INCOME), NET

	Year ended December 31,		
	2019	2018	2017
Financial (income):			
Change in fair value of warrants and capital note presented at fair value	\$ (33,382)	\$ (2,280,318)	\$ (491,884)
Foreign exchange income, net	-	(95,659)	-
Financial expenses:			
Interest and accretion back in connection with convertible loans	950,292	1,019,402	282,015
Foreign exchange loss, net	107,902	-	127,328
Other	17,546	146,091	18,763
	<u>\$ 1,042,358</u>	<u>\$ (1,210,484)</u>	<u>\$ (63,778)</u>

NOTE 15:- ADDITIONAL INFORMATION TO THE STATEMENTS OF OPERATIONS

Geographic information:

Revenues reported in the consolidated financial statements derived from the Company's country of domicile (Israel) and foreign countries based on the location of the customers, are as follows:

	Year ended December 31,		
	2019	2018	2017
Israel	\$ 272,668	\$ 228,966	\$ 28,058
United states	139,016	141,542	21,105
Germany	9,876	6,342	5,169
Holland	11,113	2,341	7,082
Austria	2,170	4,115	633
France	-	947	782
Other	43,677	76,486	25,862
	<u>\$ 478,520</u>	<u>\$ 460,739</u>	<u>\$ 88,691</u>

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars

NOTE 16:- SUBSEQUENT EVENTS

- a. During 2020, due to the Coronavirus pandemic (“COVID-19”) constraints, the Company has had to adjust its working mode (mainly changing working hours and make sure the Company complies with the government guidelines which have included full and partial lockdowns). While the Company business grew in 2020, the growth has been limited (sales grew less than expected) due to slow down of the customers and partners, and also due to traveling constrains imposed by governments due to COVID-19. Two of the Company’s main customers have purchased inks and services much less than forecasted and expected. the Company’s plans to upgrade its DemonJet printers, develop the inks and technologies to print passive components have been slowed down due to the reduction of activities of the Company’s partners in Europe and reduced available resources. The Company has placed one of its employees on an unpaid leave and reduced the team by two team members. Furthermore, due to the influence of COVID-19 on the world economy, the price of silvers (the Company’s main raw material) have increased by almost 50% from January 2019 through December 2020. Given the continued uncertainty around the extent and timing of the future spread or mitigation of the Coronavirus outbreak and around the imposition or relaxation of protective measures, the Company cannot reasonably estimate the impact to its future results of operations, cash flows or financial condition. The extent of the impact of the COVID-19 pandemic on the Company operational and financial performance, including its ability to execute its business strategies and initiatives in the expected time frame, will depend on future developments, including, but not limited to, the duration and continued spread of the pandemic, its severity, the actions to contain the disease or treat its impact, further related restrictions on travel, and the duration, timing and severity of the impact on customer spending, including any recession resulting from the pandemic, all of which are uncertain and cannot be predicted. An extended period of global supply chain and economic disruption as a result of the COVID-19 pandemic could have a material adverse effect on the Company business, results of operations, access to sources of liquidity and financial condition, though the full extent and duration is uncertain; infections may become more widespread and the limitation on the Company’s ability to work, travel and timely sell and distribute its products, as well as any closures or supply disruptions, may be extended for longer periods of time and to other locations, all of which would have a negative impact on its business, financial condition and operating results. In addition, as the scale and duration of these developments remain uncertain, they may have, or continue to have, macro and micro negative effects on the financial markets and global economy, which could result in an economic downturn that could affect demand for our products and have a material adverse effect on our operations and financial results, earnings, cash flow, financial condition and share price. These effects could be material and long-term in duration.
- b. On January 7, 2020, the Company’s Board of Directors increased the options pool by additional 15,607,995 options, reached to 18,783,274 options following such increase. On the same date the Company also granted 13,739,570 options to employees and service providers with a three (3) years vesting and an exercise price of \$0.068 per share.
- c. On January 19, 2020, the Company settled one of its legal claims, see Note 9.b.4. for additional information.
- d. In June 2020 and January and February 2021 few of the CLA August 2017 notes were converted, see Note 8.b. for additional information.
- e. On June 22, 2020, the Company granted 939,164 options to its new active chairman with a three (3) years vesting and an exercise price of \$0.068 per share.
- f. In July 2020 one investor provided the Company convertible loan in an amount aggregated to \$16,748, see Note 8.e. for additional information.
- g. On July 26, 2020 the Company consummated the acquisition of 100% of the shares of Jet CU, a company that was incorporated in Israel in May 2014 and was inactive on the purchase date since its operational assets were sold few years before. The main balance sheet items as of the purchase date were cash and liability to the Authority of approximately \$0.8 million and approximately \$1.0 million, respectively. The Company issued 2,000,000 ordinary shares and warrants to purchase 8,000,000 ordinary shares, at an exercise price of \$0.26 per share as a consideration for the purchase. The warrants exercisable until the date which is the earlier of (i) 24 months as of the purchase date or (ii) Merger/Acquisition transaction or an IPO.
- h. On December 28, 2020, as part of the annual general meeting of the shareholders’, the authorized ordinary shares were increased. See Note 11.a. for additional information.
- i. In March 2021, the Company entered into several convertible loan agreements with new investors, whereby they provided the Company with a convertible loan in an aggregate principal amount of \$415,000 (the Company collected so far \$230,000 out of those convertible loans). The convertible loans bear an interest rate at Israeli prime plus 4% per annum. Under those agreements, the Company issued lenders warrants to purchase ordinary shares for an aggregate purchase price of \$1,625,000. The conversion price for all the loan amount and the warrants is defined in the convertible loan agreement but no less than \$0.17.

ITEM 19. Exhibits

Exhibit No.	Exhibit Description
1.1**	Fourth Amended and Restated Articles of Association of P.V. Nano Cell Ltd.
4.1*	Agreement, dated December 15, 2011, by and between P.V. Nano Cell Ltd. and the Ministry of National Infrastructures, Energy and Water Resources
4.2*	Share Purchase Agreement, effective November 29, 2009, by and among the shareholders of Nano Size Ltd. and P.V. Nano Cell Ltd.
4.3*	Convertible Loan Agreement, dated as of October 28, 2010, by and between P.V. Nano Cell Ltd. and Israel Electric Corporation
4.4*	Amendment to Convertible Loan Agreement, dated April 2012, by and between P.V. Nano Cell Ltd. and Israel Electric Corporation
4.5*	Capital Note of IP Bank International (Suzhou) Co., Ltd., dated November 26, 2014
4.6*	Registration Rights Agreement, dated November 26, 2014, by and among the Company and the purchasers party thereto
4.7*	Agreement, dated September 9, 2009, by and between P.V. Nano Cell Ltd. and Dolev Bar-Guy Consulting and Management Ltd.
4.8*	First Addendum to the Consultancy Agreement, dated April 9, 2013, by and between P.V. Nano Cell Ltd. and Dolev Bar-Guy Consulting and Management Ltd.
4.9*	Second Addendum to the Consultancy Agreement, dated May 23, 2013, by and between P.V. Nano Cell Ltd. and Dolev Bar-Guy Consulting and Management Ltd.
4.10	P.V. Nano Cell Ltd. 2010 Option Plan (unofficial English translation from Hebrew original)
4.11^	Share Exchange Agreement, effective December 3, 2017, by and between Digiflex Ltd. and P.V. Nano Cell Ltd.
4.12^	Share Purchase Agreement, dated December 27, 2017, by and between P.V. Nano Cell Ltd. and Jet CU P.C.B. Ltd.
4.13^	Share Purchase Agreement Supplement, dated January 3, 2018, by and between P.V. Nano Cell Ltd. and Jet CU P.C.B. Ltd.
4.14^	Securities Purchase Agreement, dated August 16, 2017, by and between P.V. Nano Cell Ltd. and Alpha Capital Anstalt
4.15^	Securities Purchase Agreement, dated August 29, 2017, by and between P.V. Nano Cell Ltd. and FirstFire Global Opportunities Fund LLC
4.16^	Financial Advisory Agreement, dated January 9, 2017, by and between P.V. Nano Cell Ltd. and Sunrise Securities LLC
4.17^	Placement Agent Agreement, dated February 22, 2017, by and between P.V. Nano Cell Ltd. and Sunrise Securities LLC
4.18^	Warrant executed in favor of Amnon Mendelbaum and Steven Zadka
4.19^	Share Purchase Agreement, dated May 8, 2018, by and between P.V. Nano Cell Ltd. and Slobel NV
4.20^	Form of Share Purchase Agreement, dated December 27, 2017, by and between P.V. Nano Cell Ltd. and Jet CU P.C.B. Ltd.
4.21^	Consultancy Agreement, dated November 12, 2017, by and between P.V. Nano Cell Ltd. and Evyatar Cohen
4.22^^	Convertible Loan Agreement dated October 10, 2018, by and between P.V. Nano Cell Ltd. and GTRIMG Investments Ltd.
4.23^^	Form of Warrant by and between P.V. Nano Cell Ltd. and GTRIMG Investments dated October 10, 2018
4.24^^	Form of Warrant for Additional Loan by and between P.V. Nano Cell Ltd. and GTRIMG Investments dated October 10, 2018
4.25^^	Form of Share Purchase Agreement by and between P.V. Nano Cell Ltd. and Certain Investors
4.26^^	Form of Convertible Loan Agreement by and between P.V. Nano Cell Ltd. and Certain Investors

8.1 ^{^^}	List of Subsidiaries
12.1	Certification of Principal Executive Officer pursuant to Rule 13a-14(a) and Rule 15d-14(a), promulgated under the Securities Exchange Act of 1934, as amended
12.2	Certification of Principal Financial Officer pursuant to Rule 13a-14(a) and Rule 15d-14(a), promulgated under the Securities Exchange Act of 1934, as amended
13.1	Certifications pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

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- * Filed as part of our Registration Statement on Form F-1 filed with the Securities and Exchange Commission on September 2, 2015 (File No. 333-206723).
 - ** Filed as part of Amendment No. 1 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission on September 22, 2015.
 - ^ Filed as part of our annual report on Form 20-F for the 2017 fiscal year filed with the Securities and Exchange Commission on May 15, 2018.
 - ^^ Filed as part of our annual report on Form 20-F for the 2018 fiscal year filed with the Securities and Exchange Commission on May 15, 2019.

SIGNATURES

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on Form 20-F on its behalf.

P.V. Nano Cell Ltd.

By: /s/ Fernando de la Vega
Fernando de la Vega
Chief Executive Officer

Date: April 29, 2021

FIRST AMENDMENT TO THE COMPANY'S 2010 OPTION PLAN
EFFECTIVE FROM OCTOBER 13, 2020

Section 13.1 of the Company's 2010 Option Plan (the "Plan") shall be replaced as follows:

"13.1 The Plan shall terminate 20 years after its approval by the directors."

The other sections of the Plan remain unchanged.

CERTIFICATIONS

I, Fernando de la Vega, certify that:

1. I have reviewed this annual report on Form 20-F of P.V. Nano Cell Ltd. for the year ended December 31, 2019;
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 consolidated 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 company as of, and for, the periods presented in this report;
4. The company'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 company and 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 company, 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 consolidated financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the company'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; and
 - (d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and
5. The company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company'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 company'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 company's internal control over financial reporting.

Date: April 29, 2021

By: /s/ Fernando de la Vega
Fernando de la Vega
Chief Executive Officer

CERTIFICATIONS

I, Evyatar Cohen, certify that:

1. I have reviewed this annual report on Form 20-F of P.V. Nano Cell Ltd. for the year ended December 31, 2019;
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 consolidated 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 company as of, and for, the periods presented in this report;
4. The company'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 company and 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 company, 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 consolidated financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the company'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; and
 - (d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and
5. The company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company'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 company'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 company's internal control over financial reporting.

Date: April 29, 2021

By: /s/ Evyatar Cohen
Evyatar Cohen
Chief Financial Officer

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of P.V. Nano Cell Ltd. (the "Company") on Form 20-F for the period ending December 31, 2019, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned hereby certify that to the best of our knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operation of the Company.

By: /s/ Fernando de la Vega
Fernando de la Vega
Chief Executive Officer

By: /s/ Evyatar Cohen
Evyatar Cohen
Chief Financial Officer
Date: April 29, 2021

The certification set forth above is being furnished as an exhibit solely pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and is not being filed as part of the Annual Report on Form 20-F for the period ended December 31, 2019, or as a separate disclosure document of the Company or the certifying officers.