

Surna Inc.
Form 10-K
March 19, 2019

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

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

FOR THE FISCAL YEAR ENDED DECEMBER 31, 2018

OR

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

FOR THE TRANSITION PERIOD FROM ____ TO _____

Commission File Number: 000-54286

SURNA INC.

(Exact name of registrant as specified in its charter)

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

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

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

Large Accelerated Filer [] **Accelerated Filer** []
Non-accelerated Filer [] **Smaller Reporting Company** **[X]**
Emerging Growth Company []

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. []

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

The aggregate market value of the voting and non-voting common stock held by non-affiliates of the registrant as of the last business day of the registrant's most recently completed second fiscal quarter was approximately \$27,700,000 based upon a closing price of \$0.17 reported for such date on the OTCMarkets. Common shares held by each executive officer and director and by each person who owns 5% or more of the outstanding common shares have been excluded in that such persons may be deemed to be affiliates.

As of March 19, 2019, the number of outstanding shares of common stock of the registrant was 227,536,638.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive Proxy Statement relating to the 2019 Annual Meeting of Stockholders, to be filed within 120 days after the close of the registrant's year end, are incorporated by reference into Part III of this Annual Report on Form 10-K.

Surna Inc.

Annual Report on Form 10-K

For Fiscal Year Ended December 31, 2018

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In this Annual Report on Form 10-K, unless otherwise indicated, the “Company”, “we”, “us” or “our” refer to Surna Inc. and, where appropriate, its wholly-owned subsidiary.

CAUTIONARY STATEMENT

This Annual Report on Form 10-K, including “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in Item 7, contains forward-looking statements that involve substantial risks and uncertainties. These forward-looking statements are not historical facts, but are based on current management expectations that involve substantial risks, uncertainties, and other factors, some of which are beyond our control and difficult to predict and could cause actual results to differ materially from those expressed in, or implied by, these forward-looking statements. Forward-looking statements relate to future events or our future financial performance. We generally identify forward-looking statements by terminology such as “may,” “will,” “should,” “expects,” “plans,” “anticipates,” “could,” “intends,” “target,” “projects,” “contemplates,” “believes,” “estimates,” “predicts,” “potential” or “continue” or the negative of these terms or other similar words. All statements, other than statements of historical fact, are statements that could be deemed forward-looking statements including, but not limited to, any projections of revenue, gross profit, earnings or loss, tax provisions, cash flows or other financial items; any statements of the plans, strategies or objectives of management for future operations; any statements regarding current or future macroeconomic or industry-specific trends or events and the impact of those trends and events on us or our financial performance; any statements regarding pending investigations, legal claims or tax disputes; any statements of expectation or belief; and any statements of assumptions underlying any of the foregoing.

These forward-looking statements are subject to known and unknown risks, uncertainties, assumptions and other factors that could cause our actual results of operations, financial condition, liquidity, performance, prospects, opportunities, achievements or industry results, as well as those of the markets we serve or intend to serve, to differ materially from those expressed in, or suggested by, these forward-looking statements. These forward-looking statements are based on assumptions regarding our present and future business strategies and the environment in which we operate. Important factors that could cause those differences include, but are not limited to:

our business prospects and the prospects of our existing and prospective customers;

the inherent uncertainty of product development;

regulatory, legislative and judicial developments, especially those related to changes in, and the enforcement of, cannabis laws;

increasing competitive pressures in our industry;

our relationships with our customers and suppliers;

general economic conditions or conditions affecting demand for the products offered by us in the markets in which we operate, being less favorable than expected;

changes in our business strategy or development plans, including our expected level of capital expenses and working capital;

our ability to attract and retain qualified personnel;

our ability to raise equity and debt capital to fund our operations and growth strategy, including possible acquisitions;

future revenue being lower than expected; and

our ability to convert our backlog into revenue in a timely manner, or at all; and

our intention not to pay dividends.

Although we believe that the assumptions on which these forward-looking statements are based are reasonable, any of those assumptions could prove to be inaccurate, and as a result, the forward-looking statements based on those assumptions also could be inaccurate. In light of these and other uncertainties, the inclusion of a projection or forward-looking statement in this annual report on Form 10-K should not be regarded as a representation by us that our plans and objectives will be achieved. These risks and uncertainties include those described or identified in “Risk Factors” in this Annual Report on Form 10-K. You should not place undue reliance on these forward-looking statements, which apply only as of the date of this Annual Report on Form 10-K. Except as required by the federal securities laws, we undertake no obligation to revise or update any forward-looking statements, whether as a result of new information, future events or otherwise, to reflect events or circumstances occurring after the date of this Annual Report on Form 10-K. The forward-looking statements and projections contained in this Annual Report on Form 10-K are excluded from the safe harbor protection provided by Section 27A of the Securities Act.

PART I

Item 1. Business

Overview

We were incorporated in the State of Nevada on October 15, 2009. On July 25, 2014, we acquired 100% of the membership interests of Hydro Innovations, LLC, a Colorado limited liability company (“Hydro Innovations”), from Stephen and Brandy Keen (the “Keens”). Hydro Innovations was founded by the Keens in Austin, Texas in 2006 to provide agricultural and other growers with the means to maintain a properly controlled indoor cultivation environment with customized, purpose-built cooling equipment, rather than repurposing conventional equipment made for comfort cooling. In 2011, Hydro Innovations delivered its environmental control system to one of the first commercial, state-regulated cannabis cultivation facilities licensed to grow medical cannabis in Arizona.

As state laws regarding the use of cannabis have evolved, we have focused on designing, engineering and manufacturing application-specific environmental control and air sanitation systems for commercial, state- and provincial-regulated indoor cannabis cultivation facilities in the U.S. and Canada. Our engineering and technical team provides energy and water efficient solutions that allow growers to meet the unique demands of a cannabis cultivation environment through precise temperature, humidity, light, and process controls and to satisfy the evolving code and regulatory requirements being imposed at the state, provincial and local levels.

Our objective is to leverage our experience in this sector of the overall cannabis cultivation industry in order to bring value-added climate control solutions to our customers that help improve their overall crop quality and yield as well as optimize the resource efficiency of their controlled environment (i.e., indoor and sealed greenhouses) cultivation facilities. We have been involved in consulting, equipment sales and/or full-scale design for over 800 grow facilities since 2006, making us a trusted resource for indoor environmental design and control management for the cannabis industry.

Our customers include businesses from small cultivation operations to licensed commercial facilities ranging from several thousand to more than 100,000 square feet. We have sold our equipment and systems throughout the U.S. and Canada. Our revenue stream is derived primarily from supplying mechanical engineering services and climate and environmental control equipment to commercial indoor cannabis grow facilities. Although our customers do, we neither produce nor sell cannabis.

We are headquartered in Boulder, Colorado.

Shares of our common stock are traded on the OTCMarkets under the ticker symbol “SRNA.”

Our New Business Model and Strategy

Introduction

Indoor cannabis cultivators are facing the multiple headwinds of high energy costs, increasingly rigorous quality standards and declining cannabis prices. To be competitive, among other things, our customers must develop innovative ways to meet the demands of their business and reduce energy costs, 90% of which is related to their HVAC and lighting systems. That is our focus. We deliver products and services for our customers’ entire facility lifecycles, not just a “one-and-done” environmental control engineering/design and equipment package as part of a facility’s initial construction. We have the advantage of early engagement with our customers at the pre-build and construction phases and the opportunity for building longer-term relationships with our existing customers and their facilities. Going forward, our plan is to capitalize on our existing customer relationships and attempt to become “stickier” to our customers, seeking to generate incremental and recurring revenue.

We have three core assets that we intend to leverage as part of our going forward business strategy. First, we have multi-year relationships with customers and others in the industry. Second, we have specialized engineering know-how and experience gathered from designing environmental control systems for over 200 licensed, commercial cannabis cultivators. Third, we have a line of proprietary environmental control products.

We believe we are well positioned in the industry and, to our knowledge, are the only integrated provider of proprietary environmental control equipment and engineering serving the cannabis space. Further, we believe our employees have more experience than any other mechanical engineering firm serving this industry. Our customers engage us for their environmental and climate control systems because they want experts to design their facilities, and they come to us because of our reputation. We leverage our reputation and know-how against the local contractors and mechanical engineers who collectively constitute our largest competitors.

Our new business plan and strategy is to expand our business with our customers in two ways: (i) by offering a broader range of products and services, and (ii) by addressing a wider range of our customer needs. We believe this plan will take over two years to fully implement. The fiscal objectives of this new strategy are three-fold: (i) diversify our sales by adding recurring, and more consistent and predictable, revenue streams, (ii) achieve revenue growth at a faster rate than operating expenses, and (iii) seek to increase our gross margin by shifting our focus to value-added technology services and proprietary, customized equipment.

If successful, our new product and service initiatives could be “game-changers” for us by providing a more predictable, steady and recurring revenue stream as compared to our traditional one-time engineering/design/equipment projects that, while large in dollar value, were inconsistent and unpredictable and subject to licensing, permitting, funding uncertainties and other factors outside of our control. We believe our new product, service and technology offerings will be attractive to our customers and potentially represent a more consistent revenue stream to the Company.

Our strategy to offer more products and services to address the wider range of our customers’ needs is illustrated by the following matrix of product/service depth and facility lifecycle participation.

Cultivation Facility Lifecycle

We previously provided a one-time engineering/design and equipment package primarily in only two of the four principal phases: Pre-build and Construction. As a result, we relinquished opportunities for building longer-term relationships with existing customers and their facilities in the latter two phases: Startup and Operation. Going forward, we will attempt to become “stickier” to our customers by providing products and services across the entire 4-phase facility lifecycle. Each phase of the facility lifecycle has many activities that are opportunities for us, some of which we will pursue. We do not intend to offer products and services in all activities in each phase, but rather we will focus on those that provide value-add to our customers.

Pre-build. This phase includes budgeting, design options, project timelines, floorplan layout, engineering (mechanical, electrical, plumbing, irrigation), vendor management, permitting, licensing, zoning and fund raising. We intend to focus on budgeting, design, floor planning and engineering services.

Construction. This phase includes general contractor services, installation and construction, project management, environmental and climate control products, controls systems, controls integration, contractor management, and inspection. We intend to focus on environmental and climate control products, and control systems.

Startup. This phase includes commissioning, operator training, warranty service, facility management, facility performance monitoring, and maintenance/service contracts. Over time, we expect to be involved to some degree in all of these activities, except maintenance/service contracts.

Operation. This phase includes upgrades and replacements, retrofit/design, energy audit, energy efficiency improvements, and performance audits. Again, over time, we expect to be involved to some degree in all of these activities. We are currently evaluating various strategic partnerships with software, consulting and engineering firms that specialize in utility data collection, rate analysis and rebate programs and provide facility energy auditing and modeling.

Products and Services

We will also offer a deeper range of products and services than the mechanical engineering and modular chilled water systems we historically offered. This includes products and services targeting smaller indoor grow facilities that typically purchase from retailers as well as sealed greenhouse, or hybrid, facilities.

Services: Engineering and Design. Previously, we provided basic engineering and design work, which has steadily improved over the years as we transitioned to larger and more sophisticated commercial projects, and our reputation today reflects this reality. Going forward, we will: (i) expand and emphasize a strong internal mechanical engineering team, with our own professional engineers who have PE (licensed professional engineer) and LEED (leadership in energy and environmental design) credentials, (ii) offer energy modeling to help our customers and enhance our sales closing rate, (iii) produce engineering and design work at industry standards that general contractors expect and need, (iv) develop an engineering, design and audit services program for the expanding retrofit market, which remediates existing grow facilities that suffer from sub-optimal performance, and (v) offer a comprehensive facility management program consisting of facility/performance monitoring, upgrades, warranty, retrofits, energy and efficiency audits, data collection and analytics.

Our technical experience and know-how in designing indoor cannabis cultivation facilities allow us to deliver to our customers practical solutions to complicated problems in three primary areas: (i) precision climate and environmental controls, (ii) energy and water efficiency, and (iii) building code and permitting. Our engineering design typically includes all mechanical components of a climate control system: cooling and heating, dehumidification, ventilation, air sanitation and odor control. We provide load calculations, equipment specifications, and engineered systems drawings for both the cultivation and comfort cooling portions of our customers' facilities. We also have experience in, or knowledge of, state and local permitting and code compliance for cannabis facilities in states and provinces where cannabis has been legalized for either recreational or medical use or is expected to be legalized, and we provide stamped, engineered drawings in all states and provinces where we operate.

Our competitive advantages are our experience and reputation. Since 2006, we have been continuously improving our facility designs which we believe distinguishes us from our competition, including local heating, ventilation and air conditioning (“HVAC”) contractors, traditional HVAC design consultants, and others who may lack our cannabis-specific expertise. Indoor sealed grow facilities present a very difficult mechanical engineering challenge, and traditional mechanical engineers, without our cannabis experience, are typically unfamiliar with the precise climate and air control requirements needed for such facilities. As important, they may be unable to effectively navigate the local code and permitting rules which did not contemplate cannabis cultivation facilities when enacted. With our engineering design resources and experience, we are able to provide a code-compliant mechanical plan set in any state or province by collaborating with local regulators and our customers to come up with creative solutions that not only meet the intent of the local codes but also address concerns about the growing energy and resource usage of these facilities.

Energy use is, and will continue to be, a primary concern for indoor cultivators and regulators. According to industry sources, legal cannabis cultivation in the U.S. consumed an estimated 1.1 million megawatt hours (MWh) of electricity-based energy in 2017, enough to power 92,500 homes for a year. This consumption is expected to increase 162% from 2017 to 2022. The biggest components are HVAC and lighting which comprise approximately 50% and 40%, respectively, of a facility’s energy use. Unsurprisingly, after labor, energy costs represent the second highest operating cost for indoor cultivators.

As a result, licensed producers are adopting practices to maximize energy efficiency and thereby reduce operating costs, which will become even more important as the industry matures and wholesale prices decline. These practices include water efficiency, LED lighting, and renewable energy alternatives. Sealed greenhouses, or hybrid facilities—which are insulated for energy efficiency and combine natural light with the use of artificial lights—also provide a more economical way to grow cannabis compared to indoor production. But regardless of whether indoor or a hybrid facility is the grow medium, precise environmental controls are required to deliver consistent product quality and yield. We are currently evaluating possible strategic partnerships with greenhouse facility providers that are seeking an environmental controls partner for this specific facility application.

We believe the right solution for our cultivation customers must provide tight temperature/humidity control, reduced fungus, pollen, pesticide and insect contamination risk (“bio-security”), minimized regulatory compliance risk, and lower maintenance complexity, costs and downtime. Our bio-security program uses a combination of a sealed facility and our customized approaches to air sterilization to maintain facility standards while destroying harmful airborne microbes without the production of byproducts. Additionally, our ductless modular chilled water systems using fan coil units within each grow room, isolate the air and potential contaminants within each room, while taking advantage of the energy efficiencies and redundancies offered by such systems. Our experience has shown that our precision environmental controls can reduce the reliance on the use of harmful pesticides and fungicides. We also believe our experience in the tightly regulated Canadian market where pharmaceutical-like standards (including Good Manufacturing Practice standards) exist for filtration, air quality and post-harvest plant quality also gives us an advantage over our competitors, especially as product quality testing regulations continue to be enacted by state, provincial and local agencies.

These are perspectives that help conceptualize the complexity of the environmental controls systems that need to be deployed by indoor cultivators:

Lighting. Lighting demand is 70 times more energy intensive than commercial office buildings. This lighting intensity creates heat, which when combined with plant transpiration to create humidity, creates the need for dehumidification and corresponding additional energy demand. Further complicating matters, lighting schedules and density must be adjusted for the clone, vegetative and flowering stages of cannabis cultivation, and associated variances in watering rates and temperature and humidity targets, which are usually adjusted based on photoperiod.

HVAC. HVAC energy use is driven by the need to remove the heat emitted from lighting and the moisture released during the plant’s evapotranspiration process, coupled with air circulation and odor and contaminant filtration requirements.

Legacy Systems. Mechanical systems are often designed and/or installed poorly, which can increase energy consumption by up to 50%. Reasons include: (i) unlicensed cultivators deploying HVAC systems without an understanding of how HVAC control the growing environment, (ii) cultivators failing to understand the criticality of proper installation, commissioning and servicing of the equipment, even if properly designed, (iii) HVAC systems selected without understanding the interrelationship between sensible (cooling) and latent (moisture) factors, and (iv) most HVAC systems are designed for buildings for humans, not plants.

High Value Crop. For an indoor 10,000-square foot plant canopy facility, and assuming a wholesale price of \$1,500 per pound, a single complete cannabis crop loss (out of a typical five harvests annually) could mean lost revenue of between \$600,000 to \$1,800,000, with the variance depending on the cultivator’s yield efficiency, which we estimate ranges from one to three pounds per 25 square feet of plant canopy.

New technologies and applications, coupled with emerging cultivation techniques, are providing opportunities for increased efficiency, which we are positioned to deliver to our customers. Our engineering and technical sales team, which currently consists of 11 people, is fully qualified and committed to delivering energy and resource efficient solutions to commercial cultivators. Leveraging their technical competence, and our customers' increasing focus on energy efficiency, quality and yield, we intend to offer retrofit/design, energy audit, energy efficiency improvement, and performance audit services.

Products: Environmental Control Systems. Previously, we primarily sold modular chilled water systems. In the future, we will: (i) expand our product offering to include other HVAC solutions, such as custom air handling units, split systems, packaged roof-top units, self-contained and complex water chilled systems, (ii) complete the development of a branded, proprietary controls and monitoring offering (consisting of sensors, controllers, software, monitoring and a user interface) with the goal of eventually generating a recurring revenue stream, (iii) upgrade our proprietary equipment lines of fan coils, dehumidifiers, and chillers, and (iv) source customized, application-specific odor control and air sanitation products.

We believe we are a leading company in North America supplying a complete product line for environmental control and air sanitation systems for the indoor cannabis cultivation market. Since 2006, we have made it our mission to continuously expand our product line and improve the functionality of our equipment. Because of our market experience, we have gained valuable feedback and design insights from our customers, and we continue to innovate and respond as cultivation facilities have increased in both size and complexity. This experience positions us well to offer other HVAC solutions, beyond our traditional modular chilled water systems, to meet the diverse needs of our expanding customer base.

Specific Initiatives in Progress

Our execution plan consists of a series of inter-related initiatives, including: (i) leveraging our strong brand name, (ii) positioning and messaging “Surna as the expert” in environmental controls management; (iii) evaluating first-generation grow facilities as prospects for broader service and product offerings or retrofit work; and (iv) developing a corresponding marketing/service/product plan to address facility lifecycle revenue opportunities. The following are examples of specific product and service initiatives that we are already pursuing or assessing:

New Products and Services. With our engineering know-how, we have the internal resources to develop and offer more environmental control solutions, help more customers and expand our market reach without incurring significant incremental costs. We also completed a full review of our major equipment and hardware lines and have developed a line-up of new, more efficient and proprietary products that we will be rolling out over the next 18 months. We designed these products to meet the increasing demands of our customers.

We recently shipped various configurations of our new fan coil units to two projects with three more under contract. These Surna-branded models offer greater efficiency, design flexibility and control for growers using modular chilled water systems. Our proprietary products, such as our new fan coils, cannot be sourced elsewhere and this gives us greater pricing leverage, which we expect will result in increased margins.

During the second quarter of 2019, we are also planning to roll-out two standard-sized and custom air handler products, which will allow us to meet our customer needs in situations where a ducted air handler is the preferred solution as opposed to the ductless systems that we sell today.

We expect to be able to offer a utility rebate consulting service, beginning the second quarter of 2019, to help our new build customers obtain utility rebates. While this service is not expected to generate significant revenue, it should help us sell our environmental controls systems because our customers will be able to use these rebates to offset some of their capital costs.

We are also offering our new proprietary controls systems product to all new prospects.

Retrofit Market. While hundreds of new indoor cannabis cultivation facilities continue to be built every year, the installed base of first-generation cultivation facilities in the U.S. and Canada has grown into the thousands. Currently, we estimate there are over 3,000 existing cultivation facilities with approximately 8,000 legal cultivation licenses

issued throughout the U.S. alone. As discussed above, many of these facilities have environmental control systems that control temperature, humidity, vapor pressure deficit, and CO₂, but were designed by mechanical engineers who lacked cannabis application-specific expertise, which is precisely what we have. Some of these facilities are now facing serious operational challenges maintaining the required indoor growing conditions, which may lead to large dollar crop loss, uneven product consistency and quality, and reduced yields. The industry is beginning to recognize the need for our specialized know-how and experience, and we plan to initiate a targeted outreach strategy to the operators of these first-generation facilities. Our facility retrofit projects present an expanded market opportunity for us beyond our typical new facility projects, which carry uncertainties associated with prospect identification, licensing, permitting and funding.

We recently completed a retrofit consulting project—the first of its kind for us—for a large, multi-facility cultivator, and thereafter received a \$1,000,000+ order to supply equipment to several of their cultivation facilities that have been operating ineffectively. This order is expected to be fulfilled, and the revenue recognized, in the second or third quarter of 2019.

By the third quarter of 2019, we expect to further refine our retrofit offering for first-generation grow facilities. We are internally developing a facility assessment, analysis and consulting service to assist existing facilities in solving their environmental controls challenges.

Sensors, Controls and Automation Business. In late 2018, we decided to focus our next major product initiative in the sensors, controls and automation (“SCA”) market. This is an important initiative for us for several reasons, from tactical to strategic. Cultivation facilities must have SCA to operate their HVAC equipment. In simple form, SCA is the thermostat in the room, with the occupant selecting the desired temperature set point, the wall thermostat (Sensor) detecting the actual temperature, and when the space temperature deviates from the desired set point the thermostat (Control) commands the furnace or air-conditioner to supply heated or cooled air to bring the room temperature back to the set point. In the case of the cultivation facilities that we serve, there are more environmental conditions to monitor and control (such as temperature, relative humidity, CO₂, lighting, system status, and more) than in a typical residential home.

Indoor cannabis growers also need to vary the environmental conditions depending on stage of plant growth (i.e., clone, vegetative and flowering stages of cannabis cultivation), time of day, and plant maturity. In a cultivation facility the desired conditions change many times during the plant’s growth cycle and even within a day, and this is most easily accomplished with a programmable environmental control system (Automation), not unlike a simple programmable thermostat in a home.

We have entered this business to satisfy our customer's needs that we did not previously address and that historically was provided by third-party controls contractors. Our entry into the SCA market helps both our customer's and our business. We are also advantageously positioned to offer SCA products because we will be one of the few mechanical systems providers in the market to offer both a branded, proprietary HVAC equipment package as well as a branded SCA product line. Our customers benefit because they are saved the extra work of finding and engaging a controls contractor, allowing them to get their facility up and running more quickly by taking one decision off the table and thereby establishing a single point of responsibility for controls implementation. We are also in a strong position to provide SCA because we know our proprietary equipment better than anyone, thereby ensuring smooth integration with our equipment products with no work scope shortcomings. Longer term, our customers will benefit by having us remotely monitor the status of the HVAC equipment in the facility, thereby avoiding potential catastrophic problems, up to and including total crop loss, as well as using artificial intelligence (AI) to aggregate environment and growing data for our customers to optimize energy use, operating efficiency, and product quality and yield.

From a tactical perspective, with limited incremental selling costs, our current sales team is positioned to offer our SCA package to nearly every prospect since every cultivation facility must have SCA technology. We believe this technology value-added solution gives us an opportunity to achieve incremental project revenue at margins above those of our traditional equipment product lines. Strategically, through our SCA package, we are also able to deepen our ongoing relationship with the customer which positions us for a long-term customer relationship by tethering us to the customer through a controls interface (dashboard) to their facility. Additionally, it positions us as a broad range provider of environmental control products and facility management services for the total lifecycle of the cultivation facility. While there are several other total controls systems providers, we believe that our industry know-how, experience and reputation will give us a compelling and competitive SCA offering.

We will sell Surna-branded precision sensors to measure temperature, humidity, and CO₂ levels, which are more accurate than typical HVAC sensors and are able to report within tighter tolerance levels. Our controllers will be purpose-built computers programmed by us to ensure our industrial environmental control equipment follows the engineered sequences of operation to obtain desired setpoints. Our sensors connect to our branded controllers through wires installed in the facility, and similarly they are wired to our HVAC equipment (e.g., chillers, fan coils and dehumidifiers) to direct these pieces of equipment. The controllers also provide a user interface on a screen so that they can be programmed and controlled to achieve the customer's environmental objectives, and the cultivator may also assess this data and react to alerts remotely.

We will be launching our SCA offering on April 2, 2019 at the Technology Pavilion of the Cannabis Conference in Las Vegas. Similar to the timing of our equipment offering, completion of the SCA portion of our sales contract will be subject to factors beyond our control and may take between six months to two years to be fully deployed following contract execution. While we have no project contracts that include our SCA offerings at this time, we have begun budgeting and quoting SCA systems with existing prospects and have recently presented quotes to about 10 potential customers. We also have a beta-site customer that has agreed to install our SCA products at one of their cultivation facilities.

Beginning in the second half of 2019, we believe that we will be able to sell our SCA package in at least 25% of our engineering/design/equipment projects, with that percentage increasing over time. More specifically, we hope to complete the installation of our branded SCA product in at least four projects in 2019. Additionally, our SCA package can be sold to most existing facilities on a retrofit basis.

One-off Strategic Alliances. We are also in the process of identifying and assessing one-off strategic alliances (e.g., joint ventures, co-marketing, distribution) that are low cost/low risk, easy to implement and execute, can leverage our brand recognition in the cannabis space, expand the offerings that our sales team can present to our past, present and future commercial cannabis cultivators and, most importantly, generate additional revenues and margins, with little incremental costs. We are currently in preliminary discussion with several potential strategic partners that offer a wide range of complimentary products and services, such as energy-efficient lighting, processing equipment, and cloud-based data aggregation and Artificial Intelligence platforms, which we can refer our customers because we are engaged at the early Pre-build phase.

There can be no assurance that we will be able to successfully execute any of these initiatives, or identify, test and develop new and improved products or services, or that such new products or services will generate revenue or profitability at the levels we expect. At this time, our efforts will be primarily focused on working with current and new strategic partners to jointly develop new and improved products and services with cannabis-specific applications, as opposed to seeking acquisitions.

Marketing

New Construction Market Opportunities Follow Legislation

The demand for our environmental control systems currently is primarily driven by the construction of new cannabis cultivation facilities in the U.S. and Canada. New construction activity is, in turn, driven by state legislation approving either medical or recreational cannabis use. Recent regulatory changes involving medical and/or recreational cannabis use in various jurisdictions, such as California, Michigan, Oklahoma, Utah, Missouri and Canada, tend to be a leading indicator for the granting of licenses for new facility construction. As more new cultivation facilities become licensed, we in turn have an expanded set of potential customers that might buy our environmental control systems. However, since both medical and recreational cannabis use remains prohibited under U.S. federal law, uncertainty continues and tends to unfavorably impact the development and financing of new cannabis cultivation facilities in the U.S.

In the U.S., a total of 33 states (and the District of Columbia) have legalized the medical use of cannabis for over 60 qualifying conditions. Following last year's mid-term elections, 10 states (and D.C.), with more than 50% of the U.S. population, have legalized access to cannabis for recreational use. With increasing consumer acceptance of cannabis and the growth of the industry as a whole, we believe the number of states that allow cannabis use is set to jump even higher in 2019. Consider the following data gathered from various industry sources and publications: In the U.S., over 24 million persons, or 9.9% of adults age 18 and over consume cannabis regularly, and 115 million persons (or 48%) report having consumed it at some point in their lifetimes.

In states where cannabis is currently legal, sales of medical and recreational cannabis are forecast to grow from \$12.9 billion in 2019 to \$26.3 billion in 2025.

There were 2.4 million registered U.S. medical cannabis patients in 2018, up 71% since 2014.

During the year ended December 31, 2018, we booked sales orders for 32 new build projects, each with a contract value over \$100,000, which we refer to as commercial-scale projects. This compares to 20 and 18 commercial-scale projects booked for the years ended December 31, 2017 and 2016, respectively. The California and Canadian markets continued to be strong in 2018. Despite our increased bookings for new commercial-scale projects in 2018, the timing for completion of these projects is largely dependent on customer-centric factors—outside of our control—such as industry uncertainty, project financing concerns, and the licensing and qualification of our prospective customers. Further, the increased complexity and size of our new projects also impacts the timing of completion, with larger projects typically taking more time to complete.

In 2018, the average contract value for our commercial-scale project bookings was \$408,000 compared to \$332,000 for 2017. During 2018, we also booked sales orders with a large, multi-state customer that has put on hold two projects in states where the current market conditions, including wholesale cannabis prices, are not favorable. We

estimate that these two projects will not be completed within the next 24 months, and it is possible that they may be abandoned by our customer.

The following table sets forth our commercial-scale project bookings, based on the year the contract was executed and we received an initial deposit, by country/state.

	Number of New Commercial-Scale Project Bookings		
	2018	2017	2016
Canada	13	7	1
California	6	1	3
Colorado	-	2	3
Arizona	-	3	1
Oregon	-	2	2
Washington	3	1	3
Massachusetts	1	-	-
Ohio	1	-	-
Alaska	-	1	2
Rhode Island	1	1	-
Nevada	-	1	1
Texas	-	1	-
Michigan	4	-	-
New Mexico	1	-	-
Hawaii	-	-	1
Wisconsin	-	-	1
Maryland	1	-	-
Arkansas	1	-	-
Total	32	20	18

Our marketing efforts during 2019 will be targeted at owner/operators, investors and companies that are actively seeking licenses to produce cannabis in California, Michigan, Missouri, Oklahoma, Utah and Pennsylvania. These represent the largest markets, based on the state and local regulatory framework, for our products and services. In particular, Pennsylvania and Oklahoma require indoor growing, and Missouri is expected to issue cultivation licenses in 2019. However, as and when new states pass legislation, we will shift our priorities and/or add new salespeople to pursue new facility construction at the early stage.

Marketing and Selling Our Expanded Product and Service Offering

Our marketing and sales efforts in 2019 and beyond will be diversified into three vectors: (i) new commercial build projects, (ii) existing commercial retrofit projects, and (iii) retail sales.

New commercial build projects are our traditional market, where we provide engineering and/or environmental control products for new cannabis grow facilities. We will continue to pursue such projects with an expanded product and service offering, which we expect will increase our average project size and target margins. While we intend to reduce our trade show presence and expenditures, we are enhancing our outreach with a new marketing methodology which will consist of a new customer-aligned messaging and positioning platform that we believe will increase our lead generation for new projects, and in turn allow our sales force to more effectively convert these leads to new contract bookings.

Our direct salespeople are primarily focused on new (and soon, existing) commercial project sales (typically in excess of 4,000 square feet of plant canopy, although some may be smaller) with each covering a specific geographical territory:

the Northeast region (which includes eastern Canada, and the U.S. East Coast);
the Pacific Northwest region (which includes Washington, Oregon, Alaska and western Canada);
the West Coast region (which currently includes all of California); and
the Midwest region (which includes Michigan).

We currently do not have a salesperson in our Pacific Northwest sales territory, but we intend to fill this position in the second quarter of 2019. We also intend to expand our sales force as our resources allow.

Existing commercial retrofit projects represent a new opportunity that we have just begun to address. The estimated 3,000+ existing commercial grow facilities in North America are easier to identify than new build projects. We believe, based on evidence and our market knowledge, that some of these existing facilities have environmental control problems that we can help remediate. We also believe that the energy consumption of these facilities can be reduced, and we are developing services and products to help them realize savings. We have a full product and service offering in mind, but we expect that the roll-out will take up to two years. However, to expedite this roll-out, we are evaluating possible strategic partners that could add products and services that are an immediate value-add to our customers.

Over the last several years, we deemphasized our wholesale efforts to the hydroponic retail stores network while we focused on building our commercial business. However, over time, as we add new products that can be sold at retail, such as fans, dehumidifiers, and nutrient cooling systems, we intend to make a more focused effort on marketing to the major retail chains that serve the cannabis cultivator market. By the third quarter of 2019, we expect to develop a retail store sales and marketing strategy to leverage our growing product line, which we expect to fully implement by 2020.

Industry Presence

Our marketing outreach is conducted through three primary channels: magazine advertisement, our website, and industry trade shows.

Magazine Advertisement. We regularly advertise in major industry trade publications such as Cannabis Business Times, Cannabis Tech, Grow Opportunity (Canada), Grow Magazine (Canada), Marijuana Venture, and MJBiz Daily. Over time, we believe such advertisements have proven to be an effective business development tool.

Website. Our website is a consistent source of productive leads. We are currently revamping our website consistent with our new marketing methodology and expect that an update will be deployed in the second quarter of 2019.

Trade Shows. We regularly display at industry trade shows and conventions and conduct speaking engagements to achieve industry visibility and presence cost-effectively. In the past, we have attended most major trade and industry conventions including Lift Expo (Vancouver), CannaCon (Seattle), Cannabis Cultivation (Oakland), Lift Expo (Toronto), NCIA Cannabis Business Summit (San Jose), Cannabis World Congress & Business Expo (Los Angeles), CCIA/NCIA California Cannabis Business Conference (Anaheim) and the Marijuana Business Conference & Expo (Las Vegas), plus some smaller regional shows.

Several of our senior technical advisors and sales people also speak on climate control and energy efficiency at events sponsored by organizations such as National Cannabis Industry Association, Cannabis World Congress and Business Exposition and CannaCon and LIFT Vancouver and Toronto. These advisors and sales people are also frequently cited in industry-related publications. Our co-founder, Brandy Keen is also a member of Denver's Department of Public Health and Environment Cannabis Sustainability Work Group, whose mission is to promote sustainability in the cannabis industry through education, the development and dissemination of best practices, and the facilitation of dialogue between the cannabis industry, the community, and technical experts. Ms. Keen was also acknowledged as a contributor to the 2018 Cannabis Energy Report published by New Frontier Data, a leading cannabis industry publisher.

We are a part of the Founder's Circle of Resource Innovations Institute ("RII"), with Ms. Keen being a member of their technical advisory committee. RII promotes and quantifies energy and water conservation in the cannabis industry. As a result of our Founder's Circle status, we have access to RII's data as well as speaking position opportunities at their seminars.

These programs give us industry exposure and allow us to showcase our experience in environment management for cannabis cultivation. With many new participants in the cannabis cultivation industry, we will also be able to provide existing and prospective customers with access to a Colorado-licensed indoor cultivation facility managed by Stephen Keen, one of our co-founders, for demonstration tours in a working indoor grow environment, which we believe may assist us in the sale of our products and services in the future. We also have a technical test and demonstration facility in our building where we are developing and refining our controls products.

New Facility Sales Cycle and Risks

The sales cycles for our new build commercial projects can vary significantly. From pre-sales and technical advisory meetings to sales contract execution, to engineering and design services and equipment delivery, and all the way through installation and commissioning of the installed system, the full cycle can range from six months to two years. Since we do not install the climate control systems, our customers are required to use third-party installation contractors, which adds to the variability of the sales cycle.

The length of our sales cycle for new facilities is driven by numerous factors including:

- the large number of first-time participants interested in the indoor cannabis cultivation business;
- the complexities and uncertainties involved in obtaining state and local licensure and permitting;
- local and state government delays in approving licenses and permits due to lack of staff or the large number of pending applications, especially in states where there is no cap on the number of cultivators;
- the customer's need to obtain cultivation facility financing;
- the time needed, and coordination required, for our customers to acquire real estate and properly design and build the facility (to the stage when climate control systems can be installed);
- the large price tag and technical complexities of the climate control and air sanitation system;
- availability of power; and
- delays that are typical in completing any commercial construction project.

Based on the foregoing factors, there are risks that we may not realize the full contract value of our backlog in a timely manner, or at all. The performance of our obligations under a sales contract, and the timing of our revenue recognition, is dependent upon our customers' ability to secure funding and real estate, obtain a license and then build

their cultivation facility so they can take possession of the equipment. Our sales contracts currently are not time specific as to when our customers are required to take delivery of our services and equipment. More recently, we determined that some of our new construction facility projects are becoming larger and more complex and, as a result, delays were more likely due to licensing and permitting, lack of or delay in funding, staged facility construction, and/or the shifting priorities of certain customers with multiple facility projects in progress at one time. In order to address these risks, the obligations under these sales contracts are generally allocated into the following types of deliverables, and we typically require non-refundable payments from our customers in advance of our performance of services or delivery of equipment. However, in certain situations, especially as we expand our products and services offering for a customer's entire facility lifecycle (i.e., beyond Pre-build and Construction phases), we may extend credit to our customers in which case we are at risk for the collection of account receivables.

Engineering Services. First, we provide our customer with engineering and design services and drawings. In many cases, the engineering phase is done as part of the license application or building permit process and takes approximately six to eight weeks to complete. Our strategy is to secure the sales contract and commence the engineering and design portion of the project early in the customer's planning phase of the project. This is important for a number of reasons: (i) we can assist our customers with their engineering and design plans as part of their licensing application process as well as better assure the customer has the right-sized equipment for their application, leading to a higher probability of a successful grow, (ii) we are better positioned to utilize our proprietary equipment for the project at an earlier stage, and (iii) we are able to help reduce a customer's time to market. Before we commence the engineering phase of the project, we will generally require an advanced payment intended to cover the engineering value of the contract.

Surna Manufactured Equipment. Upon completion of the engineering and design phase, it may take our customer on average six to 12 months to complete the facility build-out, with possible delays due to financing or other aspects which are beyond our control as discussed above. Customer delays in obtaining financing and completing facility build-out make the completion timing of our sales contract unpredictable. For this reason, we require an additional advance payment before we begin manufacturing our proprietary equipment items.

Third-Party Manufactured Equipment. The final phase of our contract typically involves the delivery of third-party manufactured equipment items and other equipment to complete the project. We typically will not deliver until we receive a final advance payment for the remaining contract value. After the project is completed and the environmental control system has been fully installed by third-party installation contractors, we will deploy our technicians to the customer’s cultivation facility to “commission” the system. Commissioning involves testing that the equipment has been properly assembled and installed by the installation contractor and assuring the equipment is operating within the agreed specifications.

Given the timing of the deliverables of our sales contracts, we often have experienced large variances in quarterly revenue. Our revenue recognition is dependent upon shipment of the equipment portions of our sales contracts, which, in many cases, may be delayed while our customers complete permitting, prepare their facilities for equipment installation or obtain project financing.

Competition

Our environmental control systems and our related engineering and design services compete with various national and local HVAC contractors and traditional HVAC equipment suppliers who traditionally resell, design, and implement climate control systems for commercial and industrial facilities, most of whom do not have the specific knowledge that we have about the complexities and challenges of cannabis cultivation. We have positioned ourselves to differ from these competitors by providing engineering and design services and environmental control systems, across all HVAC solutions, including modular chilled water systems, custom air handling units, split systems, packaged roof-top units, and self-contained and complex chilled-water systems, each tailored specifically for managing the distinct challenges involved in indoor cannabis cultivation. We believe our cannabis-specific applications and experience in this market allow us to deliver the right solution to our cultivation customers. Unlike many of our competitors, our solutions are designed specifically for cultivators to provide tight temperature/humidity control, reduce bio-security risk, reduce energy requirements, and minimize maintenance complexity, costs and downtime. However, as the legal cannabis market continues to grow, we expect increased competition in both the climate control systems and engineering services with some of these competitors attempting to emulate our cannabis specific-application model.

Intellectual Property

We rely on a combination of patent and trademark rights, trade secrets, laws that protect intellectual property, confidentiality procedures, and contractual restrictions with our employees and others to establish and protect our intellectual property rights. We have several pending patent applications, which include a combination of Patent Cooperation Treaty, utility and design patent applications that are directed to certain of our technologies. We have registered trademark registrations around our core Surna brand (“Surna”) in the United States and select foreign jurisdictions, as well as the Surna logo and the combined Surna logo and name in the United States. Our wordmark is

also registered in the European Union and Canada. Subject to ongoing use and renewal, trademark protection is potentially perpetual.

Employees

We currently have 25 full-time employees. However, we may engage, and have in the past utilized, the services of a number of consultants, independent contractors, and other non-employee professionals. Additional employees may be hired in the future depending on need, available resources, and our achieved growth.

Government Regulation

The use, possession, cultivation, and distribution of marijuana is prohibited by U.S. federal law for medical and recreational purposes. Although certain states have legalized medical and recreational cannabis, companies and individuals involved in the sector are still at risk of being prosecuted by federal authorities. Further, the landscape in the cannabis industry changes rapidly. This means that at any time the city, county, or state where cannabis is permitted can change the current laws and/or the federal government can supersede those laws and take prosecutorial action. Given the uncertain legal nature of the cannabis industry, it is imperative that investors understand that investments in the cannabis industry should be considered very high risk. A change in the current laws or enforcement policy can negatively affect the status and operation of our business, require additional fees, stricter operational guidelines and unanticipated shut-downs.

See the “*Risks Related to the Cannabis Industry*” set forth in Item 1A of this Annual Report which addresses various risks related to U.S. and foreign regulation and enforcement of cannabis laws and regulations and their potential impact on our business.

Available Information

Our website address is www.surna.com. Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to reports filed pursuant to Sections 13(a) and 15(d) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), are filed with the U.S. Securities and Exchange Commission (the “SEC”). Such reports and other information filed by us with the SEC are available free of charge through our website when such reports are available on the SEC’s website.

The SEC maintains an Internet site that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC at www.sec.gov.

The contents of the websites referred to above are not incorporated into this filing. Further, references to the URLs for these websites are intended to be inactive textual references only.

Item 1A. Risk Factors

Investing in our common stock involves a number of significant risks. Certain factors may have a material adverse effect on our business, financial condition, and results of operations. You should consider carefully the risks and uncertainties described below, in addition to other information contained in this Annual Report on Form 10-K, including our consolidated financial statements and related notes. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties that we are unaware of, or that we currently believe are not material, may also become important factors that adversely affect our business. If any of the following risks actually occurs, our business, financial condition, results of operations, and future prospects could be materially and adversely affected. In that event, the trading price of our common stock could decline, and you could lose part or all of your investment.

Risks Relating to Our Business

We are solely dependent upon the funds we have raised so far to continue our operations, which may be insufficient to achieve significant revenue, and we may need to obtain additional financing, which may not be available to us and could dilute the ownership of current shareholders.

Historically, we have raised equity and debt capital to support our operations. We anticipate we will require additional cash resources to finance our growth or other future developments, including the launch of our new product and service initiatives and any investments or acquisitions we may decide to pursue. As of December 31, 2018, we had a working capital deficit of approximately \$923,000 and our cash balance was \$253,000. We are likely to need additional funds to complete further development of our business plan to achieve a sustainable sales level where ongoing operations can be funded from operations. We currently have no debt obligations. During 2017 and 2018, we completed private placement unit offerings, consisting of common stock and warrants, to accredited investors raising aggregate proceeds of \$5,663,000. We will likely need to raise debt or equity financing in the future in order to continue our operations and achieve our growth targets. However, there can be no assurance that such financing will be available in sufficient amounts and on acceptable terms, when and if needed, or at all. The precise amount and timing of our funding needs cannot be determined accurately at this time, and will depend on a number of factors, including market demand for our products and services, the success of our product development efforts, the timing of receipts for customer payments, the management of working capital, and the continuation of normal payment terms and conditions for our purchase of goods and services. We believe our cash balances and cash flow from operations will be insufficient to fund our operations and growth for the next 12 months. If we are unable to substantially increase revenues, reduce expenditures, or otherwise generate cash flows from operations, then we will likely need to raise additional funding to continue our operations. Our failure to obtain sufficient financing on acceptable terms and conditions could have a material adverse effect on our growth prospects and our business, financial condition and results of operations.

To the extent that we raise additional equity capital, existing shareholders will experience a dilution in the voting power and ownership of their common stock, and earnings per share, if any, would be negatively impacted. Our inability to use our equity securities to finance our operations could materially limit our growth. Any borrowings made to finance operations could make us more vulnerable to a downturn in our operating results, a downturn in economic conditions, or increases in interest rates on borrowings that are subject to interest rate fluctuations. The amount and timing of such additional financing needs will vary principally depending on the timing of new product launches, investments and/or acquisitions, and the amount of cash flow from our operations. If our resources are insufficient to satisfy our cash requirements, we may seek to issue additional equity or debt securities or obtain a credit facility.

Our independent registered public accounting firm has expressed substantial doubt about our ability to continue as a going concern.

We have determined that our ability to continue as a going concern is dependent on raising additional capital to fund our operations and ultimately on generating future profits. Our independent registered public accounting firm has also included a “going concern” explanatory paragraph in its opinion on our financial statements, expressing substantial doubt that we can continue as an ongoing business for the next 12 months. Our financial statements do not include any adjustments that may result from the outcome of this uncertainty. If we are unable to successfully raise the capital we need, we may need to and believe we can reduce the scope of our business to fully satisfy our future short-term liquidity requirements. If we cannot raise additional capital or reduce the scope of our business, we may be otherwise unable to achieve our goals or continue our operations. While we believe that we will be able to raise the capital we need to continue our operations, there can be no assurances that we will be successful in these efforts or will be able to resolve our liquidity issues or eliminate our operating losses.

Even if we obtain more customers, there is no assurance that we will be able to convert our backlog into revenue or make a profit.

We may be unable to convert the full contract value of our backlog in a timely manner, or at all. The performance of our obligations under a sales contract, and the timing of our revenue recognition, is dependent upon our customers' ability to secure funding and real estate, obtain a license and then build their cultivation facility so they can take possession of the equipment. Our sales contracts currently are not time specific as to when our customers are required to take delivery of our services and equipment. More recently, we determined that some of our new construction facility projects are becoming larger and more complex and, as a result, delays were more likely due to licensing and permitting, lack of or delay in funding, staged facility construction, and/or the shifting priorities of certain customers with multiple facility projects in progress at one time. Even if we obtain more customers, or increase the average size of our projects, there is no guarantee that we will be able to generate a profit. Because we are a small company with limited capital, limited products and services, and limited marketing activities, we may not be able to generate sufficient revenue to operate profitably. If we cannot operate profitably, we may have to suspend or cease operations.

We may extend credit to our customers in the future and, if we are unable to collect these accounts receivable, our future profitability could be adversely impacted.

Historically, we had little exposure to the collection risk on accounts receivable since we typically received payments from our customers in advance of our performance of services or delivery of equipment. However, in certain situations, especially as we expand our products and services offering for a customer's entire facility lifecycle (i.e., beyond Pre-build and Construction phases), we may extend credit to our customers in which case we are at risk for the collection of account receivables. Accordingly, we will be at greater risk for the collection of account receivables. Our credit arrangements are negotiated and may not protect us if a customer develops operational difficulty or incurs operating losses which could lead to a bankruptcy. In these cases, we may lose most of the outstanding balance due. In addition, we are typically not able to insure our accounts receivables. The risk is that we derive our revenue and profits from selling products and services to the emerging cannabis industry. The failure of our customers to pay in full amounts due to us could negatively affect future profitability.

Because we currently do not maintain effective internal controls over financial reporting, we may be unable to accurately report our financial results or prevent fraud, and investor confidence and the market price of our common stock may, therefore, be adversely impacted.

Our reporting obligations as a public company place a significant strain on our management, operational and financial resources, and systems, and will continue to do so for the foreseeable future. Annually, we are required to prepare a management report on our management's assessment of the effectiveness of our internal control over financial reporting. Management has concluded that our internal control over financial reporting is currently not effective and

shall report such in management's report in this annual report on Form 10-K. In the event that our status with the SEC changes to that of an accelerated filer from a smaller reporting company, our independent registered public accounting firm will be required to attest to and report on our management's assessment of the effectiveness of our internal control over financial reporting. Under such circumstances, even if our management concludes that our internal control over financial reporting is effective, our independent registered public accounting firm may still decline to attest to our management's assessment, or may issue a report that is qualified, if it is not satisfied with our controls, or the level at which our controls are documented, designed, operated or reviewed, or if it interprets the relevant requirements differently from us.

We have identified a material weakness in our internal control over financial reporting and, if we do not remediate the material weakness or are unable to implement and maintain effective internal control over financial reporting in the future, the accuracy and timeliness of our financial reporting may be adversely affected.

We currently do not maintain effective controls over certain aspects of the financial reporting process because: (i) we lack a sufficient complement of personnel with a level of accounting expertise and an adequate supervisory review structure that is commensurate with our financial reporting requirements, (ii) there is inadequate segregation of duties due to the limitation on the number of our accounting personnel, and (iii) we have insufficient controls and processes in place to adequately verify the accuracy and completeness of spreadsheets that we use for a variety of purposes including revenue, taxes, stock-based compensation and other areas, and place significant reliance on, for our financial reporting. A material weakness is a deficiency or a combination of deficiencies in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of the annual or interim consolidated financial statements will not be prevented or detected on a timely basis. If we are unable to achieve effective internal control over financial reporting, or if our independent registered public accounting firm determines we continue to have a material weakness in our internal control over financial reporting, we could lose investor confidence in the accuracy and completeness of our financial reports, the market price of our shares could decline, and our reputation may be damaged.

Our inability to effectively manage our growth could harm our business and materially and adversely affect our operating results and financial condition.

Our strategy envisions growing our business. We plan to expand our product, sales, administrative and marketing operations. Any growth in or expansion of our business is likely to continue to place a strain on our management and administrative resources, infrastructure and systems. As with other growing businesses, we expect that we will need to further refine and expand our business development capabilities, our systems and processes and our access to financing sources. We also will need to hire, train, supervise, and manage new employees. These processes are time consuming and expensive, will increase management responsibilities and will divert management attention. We cannot assure that we will be able to:

execute on our new business plan and strategy;

expand our products effectively or efficiently or in a timely manner;

allocate our human resources optimally;

meet our capital needs;

identify and hire qualified employees or retain valued employees; or

effectively incorporate the components of any business or product line that we may acquire in our effort to achieve growth.

Our inability or failure to manage our growth and expansion effectively could harm our business and materially and adversely affect our operating results and financial condition.

Our operating results may fluctuate significantly based on customer acceptance of our products, industry uncertainty, project financing concerns, and the licensing and qualification of our prospective customers. As a result, period-to-period comparisons of our results of operations are unlikely to provide a good indication of our future performance.

Management expects that we will experience substantial variations in our revenues and operating results from quarter to quarter. Our revenue recognition is dependent upon shipment of the equipment portions of our sales contracts, which, in many cases, may be delayed while our customers complete permitting, prepare their facilities for equipment installation or obtain project financing. Industry uncertainty, project financing concerns, and the licensing and qualification of our prospective customers, which are out of our control, make it difficult for us to predict when we will recognize revenue. If customers are unable to obtain licensing, permitting or financing, our sales and revenue will

decline, resulting in a reduction in our operating income or possible increase in losses.

If we do not successfully develop additional products and services, or if such products and services are developed but not successfully commercialized, we could lose revenue opportunities.

Our future success depends, in part, on our ability to expand our product and service offerings. We are currently investigating a number of new and improved product opportunities, and we intend to collaborate with manufacturing partners to optimize these products for the cannabis market. The processes of identifying and commercializing new products is complex and uncertain, and if we fail to accurately predict customers' changing needs and emerging technological trends our business could be harmed. We have already and may have to continue to commit significant resources to commercializing new products before knowing whether our investments will result in products the market will accept. We may be unable to differentiate our new products from those of our competitors, and our new products may not be accepted by the market. There can be no assurance that we will successfully identify additional new product opportunities, develop and bring new products to market in a timely manner, or achieve market acceptance of our products or that products and technologies developed by others will not render our products or technologies obsolete or noncompetitive. Furthermore, we may not execute successfully on commercializing those products because of errors in product planning or timing, technical hurdles that we fail to overcome in a timely fashion, or a lack of appropriate resources. This could result in competitors providing those solutions before we do and a reduction in revenue and earnings.

Our future success depends on our ability to grow and expand our customer base. Our failure to achieve such growth or expansion could materially harm our business.

Our success and the planned growth and expansion of our business depend on us achieving greater and broader acceptance of our products and services and expanding our commercial customer base. There can be no assurance that customers will purchase our services or products or that we will continue to expand our customer base. If we are unable to effectively market or expand our product and service offerings, we will be unable to grow and expand our business or implement our business strategy. This could materially impair our ability to increase sales and revenue, and materially and adversely affect our margins, which could harm our business and cause our stock price to decline.

Our suppliers could fail to fulfill our orders for parts used to assemble our products, which would disrupt our business, increase our costs, harm our reputation, and potentially cause us to lose our market.

We depend on third party suppliers around the world, including in The People's Republic of China, for materials used to assemble our products. These suppliers could fail to produce products to our specifications or in a workmanlike manner and may not deliver the material or products on a timely basis. Our suppliers may also have to obtain inventories of the necessary parts and tools for production. Any change in our suppliers' approach to resolving production issues could disrupt our ability to fulfill orders and could also disrupt our business due to delays in finding new suppliers, providing specifications and testing initial production. Such disruptions in our business and/or delays in fulfilling orders could harm our reputation and could potentially cause us to lose our market.

International trade disputes could result in tariffs and other protectionist measures that could adversely affect the Company's business.

Tariffs could increase the cost of our products and the components and raw materials that go into making them. These increased costs could adversely impact the gross margin that we earn on sales of our products. Tariffs could also make our products more expensive for customers, which could make our products less competitive and reduce customer demand. Countries may also adopt other protectionist measures that could limit our ability to offer our products and services.

Our inability to effectively protect our intellectual property would adversely affect our ability to compete effectively, our revenue, our financial condition, and our results of operations.

We may be unable to obtain intellectual property rights to effectively protect our branding, products, and other intangible assets. Our ability to compete effectively may be affected by the nature and breadth of our intellectual property rights. While we intend to defend against any threats to our intellectual property rights, there can be no assurance that any such actions will adequately protect our interests. If we are unable to secure intellectual property rights to effectively protect our branding, products, and other intangible assets, our revenue and earnings, financial condition, or results of operations could be adversely affected.

We also rely on non-disclosure and non-competition agreements to protect portions of our intellectual property portfolio. There can be no assurance that these agreements will not be breached, that we will have adequate remedies for any breach, that third parties will not otherwise gain access to our trade secrets or proprietary knowledge, or that third parties will not independently develop competitive products with similar intellectual property.

Our industry is highly competitive, and we have less capital and resources than many of our competitors, which may give them an advantage in developing and marketing products similar to ours, or make our products obsolete.

We are involved in a highly competitive industry where we compete with national and local HVAC contractors and traditional HVAC equipment suppliers who offer products and services similar to those that we sell. These competitors may have far greater resources than we do, giving our competitors an advantage in developing and marketing products and services similar to ours or products that make our products obsolete. While we believe we are better positioned to meet the exacting demands of a cannabis cultivation environment through precise temperature, humidity, light, and process controls and to satisfy the evolving code and regulatory requirements being imposed at the state and local levels, there can be no assurance that we will be able to successfully compete against these other contractors and suppliers.

We will be required to attract and retain top quality talent to compete in the marketplace.

We believe our future growth and success will depend in part on our ability to attract and retain highly skilled managerial, product development, sales and marketing, and finance personnel. Our ability to attract and retain personnel with the requisite credentials, experience and skills will depend on several factors including, but not limited to, our ability to offer competitive wages, benefits and professional growth opportunities. There can be no assurance of success in attracting and retaining such personnel. Shortages in qualified personnel could limit our ability to increase sales of existing products and services and launch new product and service offerings.

We are dependent upon certain key sales, managerial and executive personnel for our future success. If we lose any of our key personnel, our ability to implement our business strategy could be significantly harmed.

We depend on the industry knowledge, technical and financial skill, and network of business contacts of certain key employees. Our future success will depend to a significant extent on the continued service of these key employees. While we may have employment agreements with certain of these key employees, they are free to terminate their employment with us at any time, although they may be subject to certain restrictive covenants on their post-termination activities. We do not carry key-man life insurance on the lives of our key employees. The departure of any one of our key employees could have a material adverse effect on our ability to achieve our business objective and maintain the specialized services that we offer our customers.

System security risks, data protection breaches, cyber-attacks and systems integration issues could disrupt our internal operations or services provided to customers, and any such disruption could reduce our expected revenue, increase our expenses, damage our reputation and adversely affect our stock price.

Experienced computer programmers and hackers may be able to penetrate our network security and misappropriate or compromise our confidential information or that of third parties, create system disruptions or cause shutdowns. Computer programmers and hackers also may be able to develop and deploy viruses, worms, and other malicious software programs that attack or otherwise exploit any security vulnerabilities of the products that we may sell in the future. The costs to us to eliminate or alleviate cyber or other security problems, bugs, viruses, worms, malicious software programs and security vulnerabilities could be significant, and our efforts to address these problems may not be successful and could result in interruptions, delays, cessation of service and loss of existing or potential customers that may impede our engineering, sales, manufacturing, distribution or other critical functions.

Portions of our IT infrastructure may also experience interruptions, delays or cessations of service or produce errors in connection with systems integration or migration work that takes place from time to time. We may not be successful in implementing new systems and transitioning data, which could cause business disruptions and be more expensive, time consuming, disruptive and resource-intensive. Such disruptions could adversely impact our ability to fulfill orders and interrupt other processes. Delayed sales, lower profits, or lost customers resulting from these disruptions could adversely affect our financial results, stock price and reputation.

We incur significant costs as a result of being a public company, which will make it more difficult for us to achieve profitability.

As a public company, we incur legal, accounting and other expenses, including costs associated with the periodic reporting requirements applicable to a company whose securities are registered under the Exchange Act, as well as additional corporate governance requirements, including requirements under the Sarbanes-Oxley Act, and other rules implemented by the SEC. These costs will make it more difficult for us to achieve profitability.

Our ability to use net operating losses to offset future taxable income may be subject to limitations.

As of December 31, 2018, we had federal and state net operating loss carryforwards of \$15,626,000. Our ability to deduct these net operating loss carryforwards against future taxable income is contingent on our generation of future taxable income. Our federal and state net operating loss carryforwards generated through December 31, 2017 will expire, if not utilized, in the years 2034 through 2037. NOLs generated subsequent to December 31, 2017 do not expire but may only be used against taxable income to 80%. These net operating loss carryforwards could expire unused and be unavailable to offset future income tax liabilities. Under the newly enacted federal income tax law, federal net operating losses incurred in 2018 and in future years may be carried forward indefinitely, but the deductibility of such federal net operating losses is limited. It is uncertain if and to what extent various states will conform to the newly enacted federal tax law. In addition, under Section 382 of the Code, and corresponding provisions of state law, if a corporation undergoes an “ownership change,” which is generally defined as a greater than 50% change, by value, in its equity ownership over a three-year period, the corporation’s ability to use its pre-change net operating loss carryforwards and other pre-change tax attributes to offset its post-change income or taxes may be limited. We have experienced ownership changes in the past and we may experience additional ownership changes in the future as a result of subsequent shifts in our stock ownership, some of which may be outside of our control. If an ownership change occurs and our ability to use our net operating loss carryforwards is materially limited, it would harm our future operating results by effectively increasing our future tax obligations.

Risks Related to the Cannabis Industry

U.S. federal laws, regulations and enforcement may adversely affect the implementation of state and local cannabis laws and regulations and, correspondingly, may adversely impact our customers. Such impact may negatively affect our revenue and profits, or we may be found to be in violation of the Controlled Substances Act or other U.S. federal, state or local laws.

Currently, 33 states and the District of Columbia permit some form of whole-plant cannabis use and cultivation either for medical or recreational use. There are efforts in many other states to begin permitting cannabis use and/or cultivation in various contexts, and there are a number of states are actively considering bills to permit recreational use. Nevertheless, the U.S. federal government continues to prohibit cannabis in all its forms as well as its derivatives. Under the federal Controlled Substances Act (the “CSA”), the policy and regulations of the U.S. federal government and its agencies is that marihuana, or its more commonly spelled name marijuana, has no currently accepted medical use and a high potential for abuse, and a range of activities, including cultivation and use of marijuana, is prohibited.

In December of 2018, the Agricultural Improvement Act of 2018 (the “2018 Farm Act”) was enacted into law which included an amendment to wholly remove “hemp” from the CSA and defined “hemp” as all parts of a cannabis plant containing less than 0.3% of tetrahydrocannabinol (“THC”) thereby excluding hemp and its derivatives, including hemp-derived cannabidiol (“CBD”) oil, as a “controlled substance.” Under the 2018 Farm Act, the cultivation of hemp is no longer prohibited under federal law, although the U.S. Department of Agriculture has not yet issued guidance for the regulation of such cultivation by state departments of agriculture. Further, although hemp-derived CBD is now federally legal under the 2018 Farm Act, the U.S. Food and Drug Administration has regulatory oversight on the use of hemp-derived CBD in food, beverage and dietary products as well as any medical or therapeutic claims related thereto. Cannabis-derived CBD oil remains federally illegal in the U.S. However, state laws vary on the permitted sale and use of both hemp-and cannabis-derived CBD oil.

Until Congress amends the CSA or the executive branch de-schedules or reschedules marijuana under it, there is a risk that federal authorities may enforce current federal law. Enforcement of the CSA by federal authorities could impair our revenue and earnings, and it could even force us to cease operating entirely in the cannabis industry. The risk of strict federal enforcement of the CSA in light of congressional activity, judicial holdings and stated federal policy, including enforcement priorities, remains uncertain.

In an effort to provide guidance to federal law enforcement, the U.S. Department of Justice (the “DOJ”) issued Guidance Regarding Marijuana Enforcement to all United States Attorneys in a memorandum from Deputy Attorney General David Ogden on October 19, 2009, in a memorandum from Deputy Attorney General James Cole on June 29, 2011 and in a memorandum from Deputy Attorney General James Cole on August 29, 2013 (the “Cole Memo”). The Cole Memo also had provided guidance to federal prosecutors concerning cannabis enforcement in light of state laws

legalizing medical and recreational cannabis possession in small amounts. Each memorandum provided that the DOJ was committed to enforcement of the CSA, but the DOJ was also committed to using its limited investigative and prosecutorial resources to address the most significant threats in the most effective, consistent and rational way.

The Cole Memo sets forth certain enforcement priorities that are important to the federal government:

- Distribution of marijuana to children;
- Revenue from the sale of marijuana going to criminals;
- Diversion of medical marijuana from states where it is legal under state law to states where it is not;
- Using state-authorized marijuana activity as a pretext for other illegal drug activity;
- Violence in the cultivation and distribution of marijuana;
- Drugged driving and other adverse public health consequences;
- Growing marijuana on public lands; and
- Possession or use of marijuana on federal property.

On January 4, 2018, the Cole Memo was rescinded by Attorney General Jeff Sessions (the “Sessions Memo”). The effect of rescinding the Cole Memo guidance is that U.S. Attorneys now have greater discretion to prosecute CSA violations with respect to individuals and companies that are otherwise complying with state law and the tenets previously set forth in the Cole Memo. The DOJ has not historically devoted resources to prosecuting individuals whose conduct is limited to possession of small amounts of cannabis for use on private property but relied on state and local law enforcement to address that form of cannabis activity. In the event the DOJ goes beyond the objectives of the Cole Memo guidance and begins strict enforcement of the CSA in states that have laws legalizing medical and recreational cannabis in small amounts, there may be a direct and adverse impact to our revenue and earnings, and it could even force us to cease operating entirely in the cannabis industry.

In 2014, the U.S. House of Representatives passed an amendment (the “Rohrabacher-Farr Amendment”) to the Commerce, Justice, Science, and Related Agencies Appropriations Bill, which funds the DOJ. The Rohrabacher-Farr Amendment prohibits the DOJ from using federally appropriated funds to prevent states with medical cannabis laws from implementing such laws by investigating and prosecuting individuals or businesses operating in accordance with applicable state laws. In August 2016, a Ninth Circuit federal appeals court ruled in *United States v. McIntosh* that the Rohrabacher-Farr Amendment bars the DOJ from spending funds on the prosecution of conduct that is allowed by state medical cannabis laws, provided that such conduct is in strict compliance with applicable state law. In March 2015, bipartisan legislation titled the Compassionate Access, Research Expansion, and Respect States Act (the “CARERS Act”) was introduced, proposing to allow states to regulate the medical use of cannabis by changing applicable federal law, including reclassifying cannabis under the CSA to a Schedule II controlled substance and thereby changing the plant from a federally-criminalized substance to one that has recognized medical uses.

Although these developments have been met with a certain amount of optimism in the scientific community, the CARERS Act has not yet been adopted, and the Rohrabacher-Farr Amendment, as an amendment to an appropriations bill, must be renewed annually on a bipartisan basis in order to remain in effect. The Rohrabacher-Farr Amendment has been renamed the Rohrabacher-Blumenauer Amendment through the amendment language, but the intent remains the same. The currently enacted Commerce, Justice, Science, and Related Agencies Act, which includes the Rohrabacher-Blumenauer Amendment, is effective, by passage of continuing resolutions, through September 30, 2019. Following the Sessions Memo, however, the federal government could at any time change its enforcement priorities against the cannabis industry. Any change in enforcement priorities could render our operations unprofitable or even prohibit such operations.

The former Obama administration effectively stated that it is not an efficient use of resources to direct federal law enforcement agencies to prosecute those lawfully abiding by state-designated laws allowing the use and distribution of medical marijuana. However, as discussed above, the Sessions Memo rescinded the Cole Memo enforcement guidance. Any further change in enforcement policy and a decision to enforce the federal laws more aggressively could cause significant financial damage to us and our shareholders and could adversely affect our ability to obtain equity or debt financing, or even prohibit our operating in the cannabis industry entirely.

In June 2018, the Strengthening the Tenth Amendment Through Entrusting States (the “STATES Act”) was introduced that would recognize legalization of cannabis and the U.S. state laws that have legalized it through their legislatures or citizen initiatives. The STATES Act, if enacted into law, would amend the CSA to exempt from federal enforcement individuals or corporations in states who are in compliance with U.S. state, U.S. territory and the District of Columbia, or tribal law on cannabis, with certain additional provisions such as minimum ages.

We have not requested or obtained any opinion of counsel or ruling from any authority to determine if our operations are in compliance with or violate any state or federal laws or whether we are assisting others to violate a state or federal law. In the event that our operations are deemed to violate any laws or if we are deemed to be assisting others to violate a state or federal law, we could have liability that could cause us to modify or cease our operations.

Our recent focus on and entrance into the cannabis industry in Canada presents significant opportunities, but it also presents significant risks that may ultimately affect the revenue and earnings of our business.

In addition to U.S. operations, we sell products and services to cannabis growers in Canada, where medical and recreational cannabis has been legal since 2018 across the country both federally and provincially (subject to certain restrictions relating to CBD). We believe Canada, with its federal legal regime, represents a significant business opportunity for us, but there can be no assurance that we will be able to make any additional sales of products or services in Canada. As a result, our revenue and earnings may be adversely affected.

Successful litigation by non-cannabis states affected by cannabis legalization could have significant adverse effects on our business.

Due to variations in state law among states sharing borders, certain states which have not approved any legal sale of cannabis may seek to overturn laws legalizing cannabis use in neighboring states. For example, in December 2014, the attorney general of each of Nebraska and Oklahoma filed a complaint with the U.S. Supreme Court against the state of Colorado arguing that the Supremacy Clause (Article VI of the U.S. Constitution) prohibits Colorado from passing laws that conflict with federal anti-drug laws and that Colorado's laws are increasing cannabis trafficking in neighboring states that maintain cannabis bans, thereby putting pressure on such neighboring states' criminal justice systems. In March 2016, the U.S. Supreme Court, voting 6-2, declined to hear this case, but there is no assurance that it will do so in the future. Additionally, nothing prevents states' attorneys general from using the same or similar cause of action for a lawsuit in a lower federal or other court.

Previously, the U.S. Supreme Court has held that drug prohibition is a valid exercise of federal authority under the commerce clause; however, it has also held that an individual state itself is not required to adopt or enforce federal laws with which it disagrees. If the U.S. Supreme Court rules that a legal cannabis state's legislation is unconstitutional, that could result in legal action against other states with laws legalizing medical and/or recreational cannabis use. Successful prosecution of such legal actions by non-cannabis states could have significant adverse effects on our business.

Variations in state and local regulation and enforcement in states that have legalized cannabis may impose certain restrictions on cannabis-related activities that may adversely impact our revenue and earnings.

Individual state laws do not always conform to the federal standard or to other states' laws. A number of states have decriminalized cannabis to varying degrees; other states have created exemptions specifically for medical cannabis, and several have both decriminalization and medical laws. Ten states and the District of Columbia have legalized the recreational use of cannabis and various state legislatures are considering recreational use while ballot measures regarding recreational use are likely to be submitted to voters in 2019. Variations exist among states that have legalized, decriminalized, or created medical cannabis exemptions. For example, Alaska and Colorado have limits on the number of cannabis plants that can be grown by an individual in the home. In most states, the cultivation of cannabis for personal use continues to be prohibited except by those states that allow small-scale cultivation by the individual in possession of cannabis for medicinal purposes or that person's caregiver. Active enforcement of state laws that prohibit personal cultivation of cannabis may indirectly and adversely affect our revenue and earnings.

As the possession and use of marijuana is illegal under the CSA, it is possible that our manufacture and sale of equipment that is used to cultivate marijuana may be deemed to be aiding and abetting illegal activities. It is also possible that our products could be considered "drug paraphernalia."

Federal practices could change with respect to providers of equipment potentially usable by cultivators in the medical and recreational cannabis industry, which could adversely impact us. Cannabis growers use equipment that we offer for sale. While we are not aware of any threatened or current federal or state law enforcement actions against any supplier of equipment that might be used for cannabis growing, law enforcement authorities, in their attempt to regulate the illegal use of cannabis, may seek to bring an action or actions against us, including but not limited to a claim of aiding and abetting, or being an accessory to, another's criminal activities or that our products are considered "drug paraphernalia."

The federal aiding and abetting statute, U.S. Code Title 18 Section 2(a), provides that anyone who "commits an offense against the United States or aids, abets, counsels, commands, induces or procures its commission, is punishable as a principal." Under U.S. Code Title 21 Section 863, the term "drug paraphernalia" means "any equipment, product or material of any kind which is primarily intended or designed for use in manufacturing, compounding, converting,

concealing, producing, processing, preparing, injecting, ingesting, inhaling, or otherwise introducing into the human body a controlled substance.” Any drug paraphernalia involved in any violation of Section 863 shall be subject to seizure and forfeiture upon the conviction of a person for such violation. While Section 863(f) contains an exemption for any person authorized by local, state or federal law to manufacture, possess, or distribute such items, any such action may force us to cease operations and our investors could lose their entire investment.

A risk exists that our activities could be deemed to be facilitating the selling or distribution of cannabis in violation of the CSA, or to constitute aiding or abetting, or being an accessory to, a violation of the CSA. There is also a risk that our products could be considered drug paraphernalia and could be subject to seizure. We believe, however, that such risks are relatively low. Federal authorities have not focused their resources on such tangential or secondary violations of the CSA, nor have they threatened to do so, with respect to the sale of equipment that might be used by cannabis cultivators, or with respect to any supplies marketed to participants in the medical and recreational cannabis industry. We are unaware of such a broad application of the CSA or the seizure of drug paraphernalia by federal authorities, and we believe that such an attempted application would be uncustomary.

If the federal government were to change its practices, or were to expend its resources investigating and prosecuting providers of equipment that could be usable by participants in the medical or recreational cannabis industry, such action could have a materially adverse effect on our operations, our customers, or the sales of our products. As a result of such an action, we may be forced to cease operations and our investors could lose their entire investment.

The fact that we provide products and services to companies in the cannabis industry may impact our ability to raise adequate capital for future expansion, which could hinder our growth potential as well as our revenue and earnings.

A very large percentage, if not all, of our customers are operating in an industry that is still illegal under U.S. federal law. With the lingering uncertainty of federal enforcement, many potential investors, especially institutional investors, either refuse to invest in the industry or are very reluctant to make such investments. Our inability to raise adequate capital for future expansion could substantially hinder our growth potential as well as our revenue and earnings.

Our success may be dependent on additional states legalizing recreational and/or medical cannabis use.

Continued development of the recreational and medical cannabis markets is dependent upon continued legislative authorization of cannabis at the state level for recreational and/or medical purposes. Any number of factors could slow or halt the progress. Furthermore, progress, while encouraging, is not assured, and the process normally encounters set-backs before achieving success. While there may be ample public support for legislative proposals, key support must be created in the relevant legislative committee or a bill may never advance to a vote. Numerous factors impact the legislative process. Any one of these factors could slow or halt the progress and adoption of cannabis for recreational and/or medical purposes, which would limit the overall available market for our products and services, which could adversely impact our business, revenue and earnings.

Our customers may have difficulty accessing the service of banks, which may make it difficult for them to purchase our products and services.

As a result of the federal illegality of marijuana, many banks do not provide banking services to the cultivation and distribution segments of the cannabis industry, the argument being that they would be accepting for deposit funds derived from the operation of a federally illegal business. On February 14, 2014, the U.S. Department of the Treasury Financial Crimes Enforcement Network (“FinCEN”) released guidance to banks “clarifying Bank Secrecy Act (“BSA”) expectations for financial institutions seeking to provide services to marijuana-related businesses.” In addition, there have been legislative attempts to allow banks to transact business with state-authorized cannabis businesses. While these are positive developments, there can be no assurance that legislation will be successful, or that, even with the FinCEN guidance, banks will decide to do business with cannabis companies, or that, in the absence of actual legislation, state and federal banking regulators will not strictly enforce current prohibitions on banks handling funds generated from an activity that is illegal under federal law. Moreover, the FinCEN guidance may be rescinded or amended at any time in order to reconcile the now conflicting guidance of the Sessions Memo. At present, few banks have taken advantage of the FinCEN guidance, resulting in many cannabis businesses still operating on an all-cash basis. This makes it difficult for cannabis businesses to manage their businesses, pay their employees and taxes, and having so much cash on hand also creates significant public safety issues. Many ancillary businesses that service cannabis businesses have to deal with the unpredictability of their clients or customers not having a bank account. The inability of our customers to open bank accounts and otherwise access the services of banks, including obtaining credit, may make it more difficult and costly for them to operate and more difficult for such customers to purchase our products and services, which could materially harm our business, revenue and earnings.

We are subject to certain federal regulations relating to cash reporting.

The BSA, enforced by FinCEN, requires us to report currency transactions in excess of \$10,000, including identification of the customer by name and social security number, to the Internal Revenue Service. This regulation

also requires us to report certain suspicious activity, including any transaction that exceeds \$5,000 that we know, suspect or have reason to believe involves funds from illegal activity or is designed to evade federal regulations or reporting requirements and to verify sources of funds. Substantial penalties can be imposed against us if we fail to comply with this regulation. If we fail to comply with these laws and regulations, the imposition of a substantial penalty could have a material adverse effect on our business, financial condition and results of operations.

State and municipal governments in which our customers do business or seek to do business may have or may adopt laws that adversely affect our ability to do business with such customers.

While the federal government has the right to regulate and criminalize cannabis, state and municipal governments may adopt or amend additional laws and regulations that further criminalize or adversely affect cannabis businesses. States that currently have laws that decriminalize or legalize certain aspects of cannabis, such as medical marijuana, could in the future, reverse course and adopt new laws that further criminalize or adversely affect cannabis businesses. Additionally, municipal governments in certain states may have laws that adversely affect cannabis businesses, even though there are no such laws at the state level. For example, municipal governments may have zoning laws that restrict where cannabis operations can be located and the manner and size of which they can expand and operate. These municipal laws, like the federal laws, may adversely affect our customers' ability to do business. Also, given the complexity and rapid change of the federal, state and local laws pertaining to cannabis, our customers may incur substantial legal costs associated with complying with these laws and in acquiring the necessary state and local licenses required by their business endeavors. All of the foregoing may impact our customers' ability to purchase our products and services, which may adversely affect our business, revenue and earnings.

Most, if not all, of our customers are impacted by Section 280E of the Code, which limits certain expenses marijuana companies can deduct. This negative impact could affect the financial condition of our customers, which in turn may negatively affect the ability of our customers to purchase our products and services.

Section 280E of the Code forbids businesses from deducting otherwise ordinary business expenses from gross income associated with the "trafficking" of Schedule I or II substances, as defined by the CSA. The Internal Revenue Service (the "IRS") has subsequently applied Section 280E to state-legal cannabis businesses since marijuana is still a Schedule I substance. Section 280E states that no deductions should be allowed on any amount "in carrying on any trade or business if such trade or business consists of trafficking in controlled substances." Section 280E affects all businesses that engage in the cultivation, sale or processing of marijuana. This includes cultivators, medical dispensaries, marijuana retail stores and infused product manufacturers, as well as marijuana-derived concentrates and oil manufacturers. Because Section 280E limits certain deductions, it can have a dramatic effect on the profitability of these businesses, which in turn may adversely affect their ability to purchase our products and services. Such result may adversely impact our revenue and earnings.

Due to our involvement in the cannabis industry, we may have a difficult time obtaining the various insurances that are desired to operate our business, which may expose us to additional risk and financial liability

Insurance that is otherwise readily available, such as general liability, and directors and officer's insurance, is more difficult for us to find, and more expensive, because we are product and service providers to companies in the cannabis industry. There are no guarantees that we will be able to find such insurances in the future, or that the cost will be affordable to us. If we are forced to go without such insurances, it may prevent us from entering into certain business sectors, may inhibit our growth, and may expose us to additional risk and financial liabilities.

Risks Related to Our Common Stock

Our common stock price may be volatile and may decrease substantially.

The trading price of our common stock has fluctuated substantially, and we expect that it will continue to do so. The price of our common stock in the market on any particular day depends on many factors including, but not limited to, the following:

price and volume fluctuations in the overall stock market from time to time;

investor demand for our shares;

significant volatility in the market price and trading volume of companies in the cannabis industry;

variations in our operating results and market conditions specific to our business;

the emergence of new competitors or new technologies;

operating and market price performance of other companies that investors deem comparable;

changes in our Board of Directors or management;

sales or purchases of our common stock by insiders, including sales of our common stock issued to employees, directors and consultants under our equity incentive plan which were registered under the Securities Act of 1933, as amended (the "Securities Act") under our S-8 registration statement;

commencement of, or involvement in, litigation;

changes in governmental regulations, in particular with respect to the cannabis industry;
actual or anticipated changes in our earnings, and fluctuations in our quarterly operating results;
market sentiments about the cannabis industry;
general economic conditions and trends; and
departures of any of our key employees.

Presently, an exchange listing of our common stock is not likely since we are a U.S.-based company focused on the cannabis industry, which remains illegal under federal law. Moreover, we may not be able to attract institutional ownership of our stock or research analysts to cover our stock in the foreseeable future.

In the past, following periods of volatility in the market price of a company's securities, securities class action litigation has often been brought against that company. Due to the potential volatility of our stock price, we may therefore be the target of securities litigation in the future. Securities litigation could result in substantial costs and divert management's attention and resources from our business.

In addition, if the market for stocks in our industry, or the stock market in general, experiences a loss of investor confidence, the market price of our common stock could decline for reasons unrelated to our business, financial condition, or results of operations. If any of the foregoing occurs, it could cause the price of our common stock to fall and may expose us to lawsuits that, even if unsuccessful, could be costly to defend and a distraction to our Board of Directors and management.

The application of the “penny stock” rules could adversely affect the market price of our common shares and increase an investor’s transaction costs to sell those shares.

The SEC has adopted Rule 3a51-1, which establishes the definition of a “penny stock,” for the purposes relevant to us, as any equity security that has a market price of less than \$5.00 per share or with an exercise price of less than \$5.00 per share, subject to certain exceptions. For any transaction involving a penny stock, unless exempt, Rule 15g-9 requires:

that a broker or dealer approve a person’s account for transactions in penny stocks, and

the broker or dealer receives from the investor a written agreement to the transaction, setting forth the identity and quantity of the penny stock to be purchased.

In order to approve a person’s account for transactions in penny stocks, the broker or dealer must:

obtain financial information and investment experience objectives of the person, and

make a reasonable determination that the transactions in penny stocks are suitable for that person and the person has sufficient knowledge and experience in financial matters to be capable of evaluating the risks of transactions in penny stocks.

The broker or dealer must also deliver, prior to any transaction in a penny stock, a disclosure schedule prescribed by the SEC relating to the penny stock market, which, in highlight form:

sets forth the basis on which the broker or dealer made the suitability determination, and

that the broker or dealer received a signed, written agreement from the investor prior to the transaction.

Generally, brokers may be less willing to execute transactions in securities subject to the “penny stock” rules or involving the cannabis industry. This may make it more difficult for investors to dispose of our common stock and may cause a decline in the market value of our stock.

Our Board of Directors is authorized to reclassify any unissued shares of our preferred stock into one or more classes, which could convey special rights and privileges to its owners.

Our articles of incorporation permit our Board of Directors to reclassify any authorized but unissued shares of preferred stock into one or more classes. Our Board of Directors will generally have broad discretion over the size and timing of any such classification, subject to a finding that the classification and issuance of preferred stock is in our best interests. We are authorized to issue up to 350,000,000 shares of common stock and 150,000,000 shares of preferred stock. As of December 31, 2018, we had 224,989,794 shares of common stock issued and outstanding and 42,030,331 shares of preferred stock issued and outstanding. In the event our Board of Directors opts to classify a portion of our unissued shares of preferred stock into a class of preferred stock, those preferred shares would have a preference over our common stock with respect to dividends and liquidation. The cost of any classification would be borne by our existing common stockholders. The class voting rights of any preferred shares we may issue could make it more difficult for us to take some actions that may, in the future, be proposed by the Board of Directors and/or the holders of our common stock, such as a merger, exchange of securities, liquidation, or alteration of the rights of a class of our securities, if these actions were perceived by the holders of preferred shares as not in their best interests. These effects, among others, could have an adverse effect on your investment in our common stock.

Rule 144 contains risks for certain shareholders.

From time to time, we issue shares on an unregistered basis, which may be eligible for resale under SEC Rule 144 promulgated under the Securities Act. In the event there are shares outstanding that can be sold under Rule 144, there may be market pressure on our stock.

We do not intend to pay cash dividends on our common stock.

We currently are not profitable and do not expect to achieve profitability in the foreseeable future. We have never declared or paid dividends on our common stock. We intend to invest any available funds to continue to grow our revenue. Accordingly, we do not expect to pay cash dividends to our stockholders now or in the foreseeable future.

The market price of our shares of common stock may be adversely affected by the sale of shares by our management or large stockholders.

Sales of our shares of common stock by our officers or senior managers through 10b5-1 plans or otherwise or by large stockholders could adversely and unpredictably affect the price of our common stock. Additionally, the price of our shares of common stock could be affected even by the potential for sales by these persons. We cannot predict the effect that any future sales of our common stock, or the potential for those sales, will have on our share price. Furthermore, due to relatively low trading volume of our stock, should one or more large stockholders seek to sell a significant portion of their stock in a short period of time, the price of our stock may decline.

Item 1B. Unresolved Staff Comments

We are a smaller reporting company as defined by Rule 12b-2 of the Exchange Act, and therefore we are not required to provide information under this item.

Item 2. Properties

We own no real property. On June 27, 2017, we executed a lease, which became effective September 29, 2017, for our manufacturing and office space at 1780 55th Street, Boulder, Colorado 80301. The term of the lease commenced September 29, 2017 and continues through August 31, 2022. Our leased space is approximately 18,600 square feet. We believe that our lease is at market rates and that there is sufficient space available in the Boulder, Colorado area to obtain additional or other space if and when required.

Item 3. Legal Proceedings

There are 6,750,000 restricted stock units that have not been settled due to the failure of the recipient to pay the required withholding taxes based on the value of the underlying shares at the time of vesting. We have commenced litigation against the recipient to have these restricted stock units canceled.

We are not currently subject to any material legal proceedings, nor, to our knowledge, is any material legal proceeding threatened against us. From time to time, we may be a party to certain legal proceedings in the ordinary course of business, including proceedings relating to the enforcement of our rights under contracts with our customers. While the outcome of these legal proceedings cannot be predicted with certainty, we do not expect that these proceedings will have a material effect upon our financial condition or results of operations.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

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

Common Stock

Our shares of common stock are quoted on the OTCQB operated by OTCMarkets under the symbol “SRNA.” Over-the-counter market quotations reflect inter-dealer prices, without retail mark-up, mark-down or commission and may not necessarily represent actual transactions.

As of March 18, 2019, we had 144 shareholders of record and we believe we have approximately 16,950 beneficial shareholders.

Unregistered Share Issuance; Share Repurchase

In May 2018, we entered into a preferred stock option agreement with Stephen and Brandy Keen under which the Company had the right, but not the obligation, to acquire all 35,189,669 shares of preferred stock owned by the Keens (the “Preferred Stock”) on or before April 30, 2020. Mr. Keen is a principal shareholder and was a former executive officer and director. Ms. Keen, the spouse of Mr. Keen, is also a principal shareholder and previously served as an executive officer and director. Pursuant to the preferred stock option agreement, upon our exercise of the option, we agreed to issue one share of our common stock for each 1,000 shares of Preferred Stock purchased by us. As consideration for the Keens’ grant of the option, we paid them \$5,000. We exercised this option and, in December 2018, completed the repurchase by the Preferred Stock and issued 35,190 shares of our common stock to the Keens, which were restricted shares.

Equity Compensation Plans

On August 1, 2017, our Board of Directors adopted and approved the 2017 Equity Incentive Plan (the “2017 Equity Plan”) in order to attract, motivate, retain, and reward high-quality executives and other employees, officers, directors, consultants, and other persons who provide services to us by enabling such persons to acquire an equity interest in us.

Under the 2017 Equity Plan, our Board of Directors (or the compensation committee of the Board of Directors, if one is established) may award stock options, stock appreciation rights (“SARs”), restricted stock awards (“RSAs”), restricted stock unit awards (“RSUs”), shares granted as a bonus or in lieu of another award, and other stock-based performance awards. The 2017 Equity Plan allocates 50,000,000 shares of our common stock (“Plan Shares”) for issuance of equity awards under the 2017 Equity Plan. As of December 31, 2018, we have granted, under the 2017 Equity Plan, awards in the form of RSAs for services rendered by independent directors and consultants, non-qualified stock options, RSUs and stock bonus awards.

The information for our 2017 Equity Plan as of December 31, 2018 is summarized as follows:

	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in first column)
Equity compensation plans approved by shareholders	-	-	-
Equity compensation plans not approved by shareholders (1)	11,460,000	\$ 0.106	24,523,026
Total	11,460,000	\$ 0.106	24,523,026

(1) The number of securities remaining available for future issuance include: (i) 9,867,368 shares to be issued upon vesting outstanding RSUs, (ii) 1,680,000 shares to be issued in connection with incentive stock bonuses pursuant to certain employment agreements, subject to approval of the Board of Directors, and (iii) remaining Plan Shares of 12,975,658 which are available for future award under the 2017 Equity Plan.

Refer to Note 16 – *Equity Incentive Plans* of our consolidated financial statements, which are included as part of this Annual Report for the further details on our 2017 Equity Plan.

Item 6. Selected Financial Data

We are a smaller reporting company, as defined by Rule 12b-2 of the Exchange Act, and therefore we are not required to provide the information under this item.

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

The following discussion should be read in conjunction with our financial statements and related notes and other financial information appearing elsewhere in this Annual Report. In addition to historical information, the following discussion and other parts of this Annual Report contain forward-looking information that involves risks and uncertainties. Our actual results could differ materially from those anticipated by such forward-looking information due to the factors discussed under “Risk Factors” and “Forward-Looking Statements and Projections” appearing elsewhere herein.

Non-GAAP Financial Measures

To supplement our financial results on U.S. generally accepted accounting principles (“GAAP”) basis, we use the non-GAAP measures including net bookings and backlog, as well as other significant non-cash expenses such as stock-based compensation and certain debt-related expenses. We believe these non-GAAP measures are helpful in understanding our past performance and are intended to aid in evaluating our potential future results. The presentation of these non-GAAP measures should be considered in addition to our GAAP results and are not intended to be considered in isolation or as a substitute for financial information prepared or presented in accordance with GAAP. We believe these non-GAAP financial measures reflect an additional way to view aspects of our operations that, when viewed with our GAAP results, provide a more complete understanding of factors and trends affecting our business.

Overview

Our business and strategic plan for 2019 and 2020 will consist of a series of inter-related initiatives, including: (i) leveraging our strong brand name, (ii) positioning and messaging “Surna as the expert helper” in environmental controls management, (iii) offering a broader product and service array, (iv) evaluating first-generation grow facilities as prospects for broader service and product offerings or retrofit work, (v) rolling out our new sensors, controls and automation (“SCA”) product offering, and (vi) developing a corresponding marketing/service/product plan to address facility lifecycle revenue opportunities.

We are also actively identifying and assessing one-off strategic alliances (e.g., joint ventures, co-marketing, distribution) that are low cost/low risk, easy to implement and execute, can leverage our brand recognition in the cannabis space, expand the offerings that our knowledgeable salesforce can present to both past, current and future commercial cannabis cultivators and, most importantly, generate additional revenues and margins.

If these product and service initiatives are successful, we expect that they will bring us a more predictable, steady and recurring revenue stream as compared to our historical one-time engineering/design/equipment projects that, while large in dollar value, were inconsistent and unpredictable and subject to licensing, permitting, funding uncertainties and other factors outside of our control. We believe these new product/service/software/technology offerings will be highly valued by our customers and potentially represent a more highly valued revenue stream to us.

Historically, we have experienced cash flow inconsistency and unpredictability and, as a result, our expense, cash and working capital management have been adversely impacted. In response, we had to access the capital markets to complete a series of equity raises totaling \$5,700,000 to fund our operations during 2017 and 2018. And while we achieved a 33% revenue growth in 2018 (increasing to \$9,600,000 from \$7,200,000 in 2017), our operating loss, net of non-cash equity compensation, increased from \$2,100,000 in 2017 to \$2,800,000 in 2018. So, despite this revenue growth in 2018, the incremental gross profit (at our 2018 gross profit margin of 25.6%) earned on these additional revenues was insufficient to cover our increased operating expenses.

We also experienced bookings and backlog growth in 2018. Our net bookings (as defined below) increased \$4,700,000 from the prior year, increasing from \$9,000,000 in 2017 to \$13,700,000 in 2018, or 52%. Our year-end backlog also increased \$4,000,000 from the prior year-end, increasing from \$4,500,000 at the end of 2017 to \$8,500,000 at the end of 2018. However, during the fourth quarter of 2018, (i) our net bookings were \$1,838,000, a decrease of \$1,490,000, or 45%, compared to the prior quarter, and (ii) our recognized revenue was \$2,195,000, a decrease of \$1,130,000, or 34%, compared to the prior quarter.

Although we had increases in 2018 bookings, backlog and revenue, as evidenced by our fourth quarter 2018 results, we do not consistently convert our backlog into revenue on a quarter-over-quarter basis. Our revenue conversion is largely dependent on customer-centric factors—that are outside of our control—such as industry uncertainty, project financing concerns, and the licensing and qualification of our prospective customers, which makes it difficult for us to predict when we will recognize revenue on our backlog. Further, the increased complexity and size of our new build projects impacts the timing of revenue recognition, with these larger projects typically taking more time to complete. In 2018, the average contract value for our commercial-scale projects was \$408,000 compared to \$332,000 for 2017.

Although bookings or backlog are not the most reliable predictors of revenue that will be recognized over the ensuing 12 months, they offer a leading indication of potential revenue that may be recognized over time. There are risks that we may not realize the full contract value of our backlog in a timely manner, or at all, due to many factors, such as contract cancellation and modification, contract implementation delays and our ability to manage contract performance. Previously, these metrics were featured as key financial highlights reflecting our performance. In the future, bookings and backlog will be reported but de-emphasized as we will be focusing on revenue, gross margin and operating results.

The following table sets forth: (i) our beginning backlog (the remaining contract value of outstanding sales contracts for which we have received an initial deposit as of the previous period), (ii) our net bookings for the period (new sales contracts executed during the period for which we received an initial deposit, net of any adjustments including cancellations and change orders during the period), (iii) our recognized revenue for the period, and (iv) our ending backlog for the period (the sum of the beginning backlog and net bookings, less recognized revenue).

	For the quarter ended				
	December				
	31,	March 31,	June 30,	September	December
	2017	2018	2018	30, 2018	31, 2018
Backlog, beginning balance	\$4,310,923	\$4,456,192	\$7,024,110	\$8,882,906	\$8,885,804
Net bookings, current period	\$2,454,269	\$4,622,646	\$3,866,541	\$3,327,518	\$1,838,210
Recognized revenue, current period	\$2,309,000	\$2,054,728	\$2,007,745	\$3,324,620	\$2,194,875
Backlog, ending balance	\$4,456,192	\$7,024,110	\$8,882,906	\$8,885,804	\$8,529,139

The completion of a customer's cultivation facility project is dependent upon the customer's ability to secure funding and real estate, obtain a license and then build their cultivation facility so they can take possession of the equipment. Accordingly, the time it takes for customers to complete a project, which corresponds to when we are able to recognize revenue, is driven by numerous factors including: (i) the large number of first-time participants interested in the indoor cannabis cultivation business; (ii) the complexities and uncertainties involved in obtaining state and local licensure and permitting; (iii) local and state government delays in approving licenses and permits due to lack of staff or the large number of pending applications, especially in states where there is no cap on the number of cultivators; (iv) the customer's need to obtain cultivation facility financing; (v) the time needed, and coordination required, for our customers to acquire real estate and properly design and build the facility (to the stage when climate control systems can be installed); (vi) the large price tag and technical complexities of the climate control and air sanitation system; (vii) the availability of power; and (viii) delays that are typical in completing any construction project.

There is significant uncertainty regarding the timing of revenue recognition of our backlog as of December 31, 2018. As of December 31, 2018, 82% of our backlog was attributable to customer contracts for which we have only received an initial advance payment to cover our engineering services ("engineering only paid contracts") and, as a result, there are enhanced risks that the equipment portion of these contracts will not be completed or will be delayed, which could

occur if the customer is dissatisfied with the quality or timeliness of our engineering services, there is a delay or abandonment of the project due to the customer's inability to obtain project financing or licensing, or the customer determines not to proceed with the project due to economic factors, such as declining cannabis wholesale prices in the state. In contrast, after the customer has made an advance payment for a portion of the equipment to be delivered under the contract ("partial equipment paid contracts"), we typically are better able to estimate the timing of revenue recognition since the risks and delays associated with licensing, permitting and project funding are typically mitigated once the initial equipment payment is received.

We have provided an estimate in our consolidated financial statements for when we expect to recognize revenue on our remaining performance obligations (i.e., our 2018 year-end backlog), using separate time bands, with respect to engineering only paid contracts and partial equipment paid contracts. We estimate that we will recognize approximately 62% of our 2018 year-end backlog during 2019. However, approximately 31% of our backlog is not expected to be recognized over the next 24 months, and may never be recognized. The largest portion of this backlog involves a large, multi-state customer that has put on hold two projects in states where the current market conditions, including wholesale cannabis prices, are not favorable. Refer to the *Revenue Recognition* section of Note 2 in our consolidated financial statements, included as part of this Annual Report for additional information on our estimate of future revenue recognition on our remaining performance obligations.

Our backlog, remaining performance obligations and net bookings may not be indicative of future operating results, and our customers may attempt to renegotiate or terminate their contracts for a number of reasons, including delays in or inability to obtain project financing or licensing or abandonment of the project entirely. Accordingly, there can be no assurance that contracts included in backlog or remaining performance obligations will actually generate revenues or when the actual revenues will be generated. Net bookings and backlog are considered non-GAAP financial measures, and therefore, they should be considered in addition to, rather than as a substitute for, our GAAP measures for recognized revenue, deferred revenue and remaining performance obligations. Further, we can provide no assurance as to the profitability of our contracts reflected in remaining performance obligations, backlog and net bookings. As part of our new business plan and strategy, going forward, we will seek to: (i) reduce our reliance on new build facility projects which generate inconsistent revenue and cash flow, (ii) establish revenue from "lifecycle" operational and facility management offerings, (iii) operate with a more disciplined expense, cash and working capital management, (iv) become financially self-sustaining by attempting to achieve cash flow breakeven and operating profit, and (v) raise capital for strategic initiatives when the return on investment is quantifiable and justified.

Our working capital position is inadequate and, as with many emerging growth companies in the cannabis and other industries, we will likely need to raise capital in order to execute on our strategic initiatives, improve our working capital situation and drive our growth. While we understand new equity capital raises are inherently dilutive at the time of issuance, it is important that our shareholders know that management has taken several steps beginning in the fourth quarter of 2018 to preserve our cash resources to the best of our ability. Below are some steps we have taken to date:

We believe the core business is sustainable with our targeted margin. However, the nature of our current business is to do large projects, and the average size of these projects has risen over time, sometimes exceeding \$1,000,000 per project. Unfortunately, when a project is delayed, as frequently happens for reasons outside of our control, our cash flow is adversely impacted. Our senior management team is focused on generating sales and moving our existing projects to completion. Our new strategy will include a focus on more steady and predictable revenue opportunities.

We have made reductions in payroll costs and other personnel-related expenses to reduce our cash burn rate. These cuts represent nearly a 30% reduction in our annualized payroll-related costs, or \$900,000 annualized savings.

Another factor contributing to the current strained cash position was a change in some of the manufacturing partners we have for our proprietary products as part of our push to upgrade the performance and efficiency of our product line. As we continue our new product initiatives, we are likely to have more products that will require advance payments and/or require us to stock inventory. We have done our best to manage around this, but the reality is our working capital requirements have increased as a result.

We believe that we have reduced our cash burn rate to the lowest level possible and therefore the only way to improve our cash flow and working capital position is to add revenue and margin to “grow out” of our current situation. While we have identified many opportunities as part of our new business plan and strategy, there is significant work ahead in order for us to execute on them and realize our new vision. There is no assurance that we will be successful in achieving our new business plan and strategy, and we will need additional capital resources in order to do so.

We are committed to implementing a full investor relations program and to fully engage with the investment community on an ongoing basis. As part of this program, we intend to articulate a series of specific metrics for 2019 and 2020.

Results of Operations

Comparison of Years ended December 31, 2018 and 2017

Revenues and Cost of Goods Sold

Revenue for the year ended December 31, 2018 was \$9,582,000 compared to \$7,210,000 for the year ended December 31, 2017, an increase of \$2,372,000, or 33%. This revenue increase was partly the result of our increased net bookings in 2018, which grew from \$9,000,000 in 2017 to \$13,700,000 in 2018, or 51%. However, despite our increases in 2018 bookings and revenue, we remain unable to consistently convert our backlog into revenue on a quarter-over-quarter basis. Our revenue conversion is largely dependent on customer-centric factors – outside of our control – such as industry uncertainty, project financing concerns, and the licensing and qualification of our prospective customers, which makes it difficult for us to predict when we will recognize revenue on our backlog.

Cost of revenue increased by \$1,832,000 from \$5,300,000 for the year ended December 31, 2017 to \$7,132,000 for the year ended December 31, 2018.

The gross profit for the year ended December 31, 2018 was \$2,450,000 compared to \$1,910,000 for the year ended December 31, 2017. Gross profit margin decreased by approximately one percentage point from 26.5% for the year ended December 31, 2017 to 25.6% for the year ended December 31, 2018. This decrease was due primarily to higher project management costs which were partially offset by increased margin on our engineering services.

Our revenue cost structure is comprised of both fixed and variable components. The fixed cost component represents engineering, manufacturing and project management salaries and benefits and manufacturing overhead that totaled \$1,666,000, or 17.4% of total revenue, for the year ended December 31, 2018 as compared to \$1,205,000, or 16.7% of total revenue, for the year ended December 31, 2017. The increase of \$461,000 was primarily due to an increase in salaries and benefits of \$412,000 and stock-based compensation of \$25,000. The variable cost component, which represents our cost of equipment, outside engineering costs, shipping and handling, travel and warranty costs, totaled \$5,466,000, or 57.0% of total revenue, in the year ended December 31, 2018 as compared to \$4,095,000, or 56.8% of total revenue, in the year ended December 31, 2017. In the year ended December 31, 2018 as compared to the prior year: (i) our travel costs increased by \$76,000, (ii) our warranty costs increased by \$29,000, which were offset by (iii) a reduction in charges for excess and obsolete inventory allowances of \$278,000.

Operating Expenses

Operating expenses increased by 18% from \$6,152,000 for the year ended December 31, 2017 to \$7,270,000 for the year ended December 31, 2018, an increase of \$1,118,000. The operating expense increase consisted primarily of: (i) an increase in selling, general and administrative expenses (“SG&A expenses”) of \$766,000, and (ii) an increase in advertising and marketing expenses of \$354,000.

The increase in SG&A expenses for the year ended December 31, 2018 compared to the year ended December 31, 2017, was due primarily to: (i) an increase of \$300,000 in salaries and benefits, (ii) an increase of \$202,000 in stock-based compensation, (iii) an increase in consulting fees of \$368,000, of which \$260,000 was related to stock-based consulting fees, (iv) an increase of \$132,000 in accounting fees, (v) an increase of \$129,000 in bad debt expense, (vi) an increase of \$119,000 in depreciation offset by (vii) a decrease of \$187,000 in legal fees, and (viii) a decrease of \$576,000 in stock-based compensation to our independent directors.

The increase in marketing expenses were due primarily to: (i) an increase of \$320,000 for industry trade shows and events, (ii) an increase in advertising and marketing of \$83,000 offset by (iii) a decrease of \$105,000 for web development and collateral materials.

Operating Loss

We had an operating loss of \$4,820,000 for the year ended December 31, 2018, as compared to an operating loss of \$4,242,000 for the year ended December 31, 2017, an increase of \$578,000. The operating loss included \$2,017,000 of non-cash, stock-based compensation expenses in the year ended December 31, 2018 as compared to \$2,140,000 for the year ended December 31, 2017. Excluding these non-cash items, our operating loss increased by \$701,000.

Other Income (Expense)

Our other expenses (net) decreased by \$754,000 from an expense of \$677,000 for the year ended December 31, 2017 to income of \$77,000 for the year ended December 31, 2018. This decrease is primarily related to the loss on extinguishment of debt of \$643,000 related to the conversion of certain notes during 2017.

Net Loss

Overall, we had a net loss of \$4,744,000 for the year ended December 31, 2018 as compared to a net loss of \$4,919,000 for the year ended December 31, 2017, a decrease of \$175,000. The net loss included \$2,017,000 of non-cash, stock-based compensation costs and non-cash debt-related gains of \$21,000 in the year ended December 31, 2018 as compared to non-cash, stock-based compensation expense of \$2,140,000 and non-cash debt-related costs of \$681,000 in the year ended December 31, 2017. Excluding these non-cash items, our net loss increased by \$650,000.

Comparison of Years ended December 31, 2017 and 2016

Revenues and Cost of Goods Sold

Revenue for the year ended December 31, 2017 was \$7,210,000 compared to \$7,580,000 for the year ended December 31, 2016, a decrease of \$370,000, or 5%. Although our net bookings trended favorably and our backlog grew during 2017, revenue recognition continues to be impacted by our long and uncertain sales cycle and delays faced by our customers in the construction of new cultivation facilities. Further, while additional states have approved some form of cannabis use and cultivation, either for medical or recreational use, the legislation will not result in immediate new construction activity as states need time to issue implementing rules and regulations for the licensing and sales activity and local authorities need to issue building permits.

Cost of revenue increased by \$24,000 from \$5,276,000 for the year ended December 31, 2016 to \$5,300,000 for the year ended December 31, 2017.

The gross profit for the year ended December 31, 2017 was \$1,910,000 compared to \$2,304,000 for the year ended December 31, 2016. Gross profit margin decreased by four percentage points from 30% for the year ended December 31, 2016 to 26% for the year ended December 31, 2017. This decrease was due primarily to lower margin on our engineering services and an increase in shipping and handling costs in year ended December 31, 2017 compared to the year ended December 31, 2016.

Our revenue cost structure is comprised of both fixed and variable components. The fixed cost component represents engineering, manufacturing and project management salaries and benefits and manufacturing overhead that totaled \$1,205,000, or 17% of total revenue, for the year ended December 31, 2017 as compared to \$1,049,000, or 14% of total revenue, for the year ended December 31, 2016. The increase of \$156,000 was primarily due to an increase in salaries and benefits of \$56,000 and stock-based compensation of \$75,000. The variable cost component, which represents our cost of equipment, outside engineering costs, shipping and handling, travel and warranty costs, totaled \$4,095,000, or 57% of total revenue, in the year ended December 31, 2017 as compared to \$4,227,000, or 56% of total revenue, in the year ended December 31, 2016. In the year ended December 31, 2017 as compared to the prior year: (i) our shipping and handling costs increased by \$108,000, (ii) our charges for obsolete inventory allowances increased by \$229,000 due to specifically-built inventory which our customer refused delivery, which were offset by (iii) a reduction in warranty costs of \$682,000, which was primarily related to \$533,000 in costs we incurred in 2016 to replace a customer's system due to faulty installation by a third-party.

Operating Expenses

Operating expenses increased by 117% from \$2,837,000 for the year ended December 31, 2016 to \$6,152,000 for the year ended December 31, 2017, an increase of \$3,315,000. The operating expense increase consisted of: (i) an increase in SG&A expenses of \$3,008,000, and (ii) an increase in advertising and marketing expenses of \$336,000, offset by (iii) a decrease in product development expense of \$29,000.

The increase in SG&A expenses for the year ended December 31, 2017 compared to the year ended December 31, 2016, was due primarily to: (i) an increase of \$1,345,000 in stock-related compensation paid to employees and consultants, (ii) an increase of \$614,000 in salaries and benefits, (iii) an increase of \$204,000 in legal and consulting fees, (iv) an increase in sales travel of \$134,000 and (v) an increase of \$785,000 in cash and stock-related compensation paid to our independent directors.

The increase in marketing expenses were primarily for: (i) our investment in re-branding the Surna name and logo, including approximately \$160,000 to revise and update our website and marketing materials, (ii) our increased presence at industry trade shows and events resulting in increased expenses of \$49,000, and (iii) marketing salaries and benefits (including stock related-compensation) which increased by approximately \$58,000.

Operating Loss

We had an operating loss of \$4,242,000 for the year ended December 31, 2017, as compared to an operating loss of \$533,000 for the year ended December 31, 2016, an increase of \$3,709,000. The operating loss included \$2,140,000

of non-cash, stock-based compensation expenses in the year ended December 31, 2017 as compared to \$4,000 for the year ended December 31, 2016. Excluding these non-cash items, our operating loss increased by \$1,573,000.

Other Income (Expense)

Our other expenses (net) decreased by 75% from \$2,740,000 for the year ended December 31, 2016 to \$677,000 for the year ended December 31, 2017. This decrease is primarily related to the decrease in the amortization of debt discount and interest expense on convertible promissory notes. The convertible promissory notes converted in the fourth quarter of 2016 and the first quarter of 2017. We did incur a loss on extinguishment of debt of \$643,000 and \$338,000 for the years ended in December 31, 2017 and 2016, respectively, due to the conversion of certain notes.

Net Loss

Overall, we had a net loss of \$4,919,000 for the year ended December 31, 2017 as compared to a net loss of \$3,273,000 for the year ended December 31, 2016, an increase of \$1,646,000. The net loss included \$2,140,000 of non-cash, stock-based compensation expenses and \$681,000 of debt-related costs in the year ended December 31, 2017 as compared to non-cash, stock-based compensation expense of \$4,000 and debt-related costs of \$2,780,000 in the year ended December 31, 2016. Excluding these non-cash items, our net loss increased by \$1,609,000.

Financial Condition, Liquidity and Capital Resources

Cash and Cash Equivalents

As of December 31, 2018, we had cash and cash equivalents of \$253,000, compared to cash and cash equivalents of \$2,468,000 as of December 31, 2017. The \$2,215,000 decrease in cash and cash equivalents during the year ended December 31, 2018 was primarily the result of: (i) our net loss of \$4,744,000 adjusted for non-cash items of \$2,177,000, (ii) cash used of \$282,000 for changes in our working capital, (iii) cash used in our investing activities of \$182,000, (iv) cash used to repurchase shares of our common stock of \$400,000, offset by (iv) aggregate proceeds of \$1,210,000 raised from the sale of investment units in a private placement offering to accredited investors.

Our cash is held in bank depository accounts in certain financial institutions. We have from time to time deposits in financial institutions that exceed the federally insured amount.

As of December 31, 2018, we had accounts receivable (net of allowance for doubtful accounts) of \$210,000, inventory (net of excess and obsolete allowance) of \$936,000, and prepaid expenses of \$128,000. As of December 31, 2018, we had no indebtedness, total accounts payable and accrued expenses of \$1,809,000, and deferred revenue of \$642,000. As of December 31, 2018, we had a working capital deficit of \$923,000, compared to a working capital surplus of \$308,000 as of December 31, 2017.

Our accounts receivable from three customers made up 17%, 12% and 11%, respectively, of the total balance as of December 31, 2018.

We have never declared or paid any cash dividends on our common stock. We currently intend to retain all available funds and any future earnings for use in the operation and expansion of our business and do not anticipate paying any cash dividends in the foreseeable future.

Summary of Cash Flows

The following summarizes our cash flows for the years ended December 31, 2018 and 2017:

	For the Year Ended December 31,	
	2018	2017
Net cash used in operating activities	\$(2,849,000)	\$(2,267,000)
Net cash used in investing activities	(182,000)	(205,000)
Net cash provided by financing activities	816,000	4,621,000
Net (decrease) increase in cash	\$(2,215,000)	\$2,149,000

Operating Activities

We have never reported net income. We incurred a net loss for the year ended December 31, 2018 of \$4,744,000 and have an accumulated deficit of \$24,346,000 as of December 31, 2018.

Cash used in operations for the year ended December 31, 2018 was \$2,849,000 compared to cash used in operations of \$2,267,000 for the year ended December 31, 2017, an increase of \$582,000. The additional cash usage is primarily attributable to: (i) a reduction in non-cash charges of \$965,000, which was offset by (ii) a decrease in cash used for working capital of \$208,000, and (iii) a decrease in net loss of \$175,000. During the year ended December 31, 2018, significant non-cash items included: (i) stock-related compensation of \$2,029,000, and (ii) depreciation and amortization expense of \$164,000.

Investing Activities

Cash used in investing activities for the year ended December 31, 2018 was approximately \$182,000 compared to cash used in investing activities of \$205,000 for the year ended December 31, 2017. During the year ended December 31, 2018, we received payments for tenant improvement allowances of \$100,000, offset by payments for fixed assets, intangibles assets and certain equipment to be held for lease to a related party of \$282,000.

Financing Activities

Cash provided by financing activities for the year ended December 31, 2018 was \$816,000 compared to cash provided by financing activities of \$4,621,000 for the year ended December 31, 2017. During the year ended December 31, 2018, we completed one private placement consisting of the sale of shares of our common stock, with attached warrants, resulting in aggregate proceeds of \$1,210,000. During the year ended December 31, 2018, we also repurchased shares of our common stock from a related party for \$400,000.

Going Concern

Our consolidated financial statements have been presented on a going concern basis, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. Our independent registered public accounting firm included in its audit opinion on our financial statements for the year ended December 31, 2018 a statement that there is substantial doubt as to our ability to continue as a going concern. The financial statements have been prepared assuming that we will continue as a going concern. We have determined that our ability to continue as a going concern is dependent on raising additional capital to fund our operations and ultimately on generating future profitable operations. There can be no assurance that we will be able to raise sufficient additional capital or eventually have positive cash flow from operations to address all of our cash flow needs. If we are not able to find alternative sources of cash or generate positive cash flow from operations, our business and shareholders will be materially and adversely affected. The foregoing factors raise substantial doubt about our ability to continue as a going concern for a period of one year from the date our financial statements are issued. Our consolidated financial statements do not include any adjustment that might result from the outcome of this uncertainty.

Capital Raising

We believe our cash balances and cash flow from operations will be insufficient to fund our operations for the next 12 months. If we are unable to substantially increase revenues, reduce expenditures, or otherwise generate cash flows for operations, then we will need to raise additional funding to continue as a going concern.

If results of operations for 2019 do not meet management's expectations, or additional capital is not available, management believes it has the ability to reduce certain expenditures. The precise amount and timing of the funding needs cannot be determined accurately at this time, and will depend on a number of factors, including the market demand for our products and services, the quality of product development efforts, management of working capital, and continuation of normal payment terms and conditions for purchase of our products and services.

Based on management's estimate for our operational cash requirements, we will need to raise debt and/or equity financing sometime in 2019 in order to continue our operations and achieve our growth targets. There can be no assurance that we will be able to raise debt or equity financing in sufficient amounts, when and if needed, on acceptable terms or at all.

If we are unable to generate sufficient cash flow from operations, make adjustments to our payment arrangements or raise sufficient additional capital through future debt and equity financings or strategic and collaborative ventures with potential partners, we will likely have to reduce the size and scope of our operations. Our officers and shareholders

have not made any written or oral agreement to provide us additional financing. There can be no assurance that we will be able to continue to raise capital on terms and conditions that are deemed acceptable to us, or at all.

Inflation

In the opinion of management, inflation has not and will not have a material effect on our operations in the immediate future. Management will continue to monitor inflation and evaluate the possible future effects of inflation on our business and operations.

Contractual Payment Obligations

As of December 31, 2018, our contractual payment obligations consisted of a building lease. On June 27, 2017, we executed a lease, to be effective September 29, 2017, for our manufacturing and office space. The term of the lease commenced September 29, 2017 and continues through August 31, 2022. Beginning September 1 each year during the term, the monthly rent will increase by 3%.

As of December 31, 2018, our contractual obligations under our building lease were as follows:

Contractual Obligations	Total	Less than 1 Year	1 - 3 Year	3 - 5 Years	More than 5 Years
Operating lease obligations	\$903,203	\$236,926	\$495,389	\$170,888	\$ -

Commitments and Contingencies

Litigation

There are 6,750,000 restricted stock units that have not been settled due to the failure of the recipient to pay the required withholding taxes based on the value of the underlying shares at the time of vesting. We have commenced litigation against the recipient to have these restricted stock units canceled.

From time to time, in the normal course of our operations, we are subject to litigation matters and claims. Litigation can be expensive and disruptive to normal business operations. Moreover, the results of complex legal proceedings are difficult to predict and our view of these matters may change in the future as the litigation and events related thereto unfold. An unfavorable outcome to any legal matter, if material, could have an adverse effect on our operations or our financial position, liquidity or results of operations.

Other Commitments

In the ordinary course of business, we may provide indemnifications of varying scope and terms to customers, vendors, lessors, business partners, and other parties with respect to certain matters, including, but not limited to, losses arising out of our breach of such agreements, services to be provided by us, or from intellectual property infringement claims made by third parties. In addition, we have entered into indemnification agreements with our directors and certain of our officers and employees that will require us to, among other things, indemnify them against certain liabilities that may arise by reason of their status or service as directors, officers, or employees. We maintain director and officer insurance, which may cover certain liabilities arising from our obligation to indemnify our directors and certain of our officers and employees, and former officers, directors, and employees of acquired companies, in certain circumstances.

Off-Balance Sheet Arrangements

We are required to disclose any off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures, or capital resources that are material to investors. As of December 31, 2018, we had no off-balance sheet arrangements. During 2018 and 2017, we did not engage in any off-balance sheet financing activities other than those included in the “Contractual Payment Obligations” discussed above and those reflected in Note 12 of our consolidated financial statements.

Recent Developments

Refer to Note 18 - *Subsequent Events* of our consolidated financial statements, included as part of this Annual Report, for the more significant events occurring since December 31, 2018.

Critical Accounting Policies and Estimates

This discussion and analysis of our financial condition and results of operations is based upon our consolidated financial statements, which have been prepared in conformity with accounting principles generally accepted in the United States of America. Certain accounting policies are particularly important to the understanding of our financial position and results of operations and require the application of significant judgment by our management or can be materially affected by changes from period to period in economic factors or conditions that are outside of our control.

As a result, they are subject to an inherent degree of uncertainty. In applying these policies, management uses their judgment to determine the appropriate assumptions to be used in the determination of certain estimates. Those estimates are based on our historical operations, our future business plans and projected financial results, the terms of existing contracts, observance of trends in the industry, information provided by our customers, and information available from other outside sources, as appropriate. Actual results could materially differ from those estimates. For information regarding our critical accounting policies as well as recent accounting pronouncements, see Note 2 of our consolidated financial statements.

Our management has discussed the development and selection of critical accounting estimates with the Audit Committee of the Board of Directors and the Audit Committee has reviewed our disclosure relating to critical accounting estimates in this Annual Report. We believe the following are the more significant judgments and estimates used in the preparation of our consolidated financial statements.

Allowance for accounts receivable. Accounts receivables are recorded at the invoiced amount, or based on revenue earned for items not yet invoiced, and generally do not bear interest. An allowance for doubtful accounts is established, as necessary, based on past experience and other factors, which, in management's judgment, deserve current recognition in estimating bad debts. Based on its review, we establish or adjust the allowance for specific customers and the accounts receivable portfolio as a whole. As of December 31, 2018 and 2017, the allowance for doubtful accounts was \$119,022 and \$105,267, respectively. If the financial condition of our customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances may be required.

Excess and obsolete inventory. Inventory is stated at the lower of cost or net realizable value. The inventory is valued based on a first-in, first-out ("FIFO") basis. Lower of cost or net realizable value is evaluated by considering obsolescence, excessive levels of inventory, deterioration and other factors. Adjustments to reduce the cost of inventory to its net realizable value, if required, are made for estimated excess, obsolescence or impaired inventory. Excess and obsolete inventory is charged to cost of revenue and a new lower-cost basis for that inventory is established and subsequent changes in facts and circumstances do not result in the restoration or increase in that newly established cost basis. As of December 31, 2018 and 2017, the allowance for excess and obsolete inventory was \$295,347 and \$323,384, respectively.

Goodwill impairment. Goodwill, defined as unidentified asset(s) acquired in conjunction with a business acquisition, is tested for impairment on an annual basis and between annual tests whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. We recorded goodwill in connection with our acquisition of Hydro in July 2014. We perform a quantitative impairment test annually during the fourth quarter by comparing the fair value of the reporting unit with its carrying amount, including goodwill. If the fair value of the reporting unit exceeds its carrying amount, goodwill is considered not impaired. An impairment charge would be recognized for the amount by which the carrying amount exceeds the reporting unit's fair value. We completed this assessment as of December 31, 2018, and concluded that no impairment existed.

Product warranty. We warrant the products that we manufacture for a warranty period equal to the lesser of 12 months from start-up or 18 months from shipment. Our warranty provides for the repair, rework, or replacement of products (at our option) that fail to perform within stated specification. Our third-party suppliers also warrant their products under similar terms, which are passed-through to our customers. We assess the historical warranty claims on our manufactured products and, since 2016, warranty claims have been approximately 1% of annual revenue generated on these products. We continue to assess the need to record a warranty reserve at the time of sale based on historical claims and other factors. As of December 31, 2018 and 2017, we had an accrued warranty reserve amount of \$144,822 and \$105,122, respectively, which are included in accounts payable and accrued liabilities on our consolidated balance sheets.

Income taxes. We account for deferred tax liabilities and assets for the future consequences of events that have been recognized in our consolidated financial statements or tax returns. Measurement of the deferred items is based on enacted tax laws. In the event the future consequences of differences between financial reporting bases and tax bases of our assets and liabilities result in a deferred tax asset, we perform an evaluation of the probability of being able to realize the future benefits indicated by such asset. A valuation allowance related to a net deferred tax asset is recorded when it is more likely than not that some portion or all of the net deferred tax asset will not be realized. Management's judgment is required in determining our provision for income taxes, deferred tax assets and liabilities, and any valuation allowance recorded against the net deferred tax assets. We recorded a full valuation allowance as of December 31, 2018 and 2017. Based on the available evidence, we believe it is more likely than not that we will not be able to utilize our net deferred tax assets in the foreseeable future. We intend to maintain valuation allowances until sufficient evidence exists to support the reversal of such valuation allowances. We make estimates and judgments about our future taxable income that are based on assumptions that are consistent with our plans. Should the actual amounts differ from our estimates, the carrying value of our deferred tax assets could be materially impacted.

Share-based compensation. We recognize the cost resulting from all share-based compensation arrangements, including stock options, restricted stock awards and restricted stock units that we grant under our equity incentive plan in our consolidated financial statements based on their grant date fair value. The expense is recognized over the requisite service period or performance period of the award. Awards with a graded vesting period based on service are expensed on a straight-line basis for the entire award. Awards with performance-based vesting conditions which require the achievement of a specific company financial performance goal at the end of the performance period and required service period are recognized over the performance period. Each reporting period, we reassess the probability of achieving the respective performance goal. If the goals are not expected to be met, no compensation cost is recognized and any previously recognized amount recorded is reversed. If the award contains market-based vesting conditions, the compensation cost is based on the grant date fair value and expected achievement of market condition and is not subsequently reversed if it is later determined that the condition is not likely to be met or is expected to be lower than initially expected. The grant date fair value of stock options is based on the Black-Scholes Model. The Black-Scholes Model requires judgmental assumptions including volatility and expected term, both based on historical experience. The risk-free interest rate is based on U.S. Treasury interest rates whose term is consistent with the expected term of the option.

Allocation of transaction price; standalone selling price. A contract's transaction price is allocated to each distinct performance obligation and recognized as revenue when, or as, the performance obligation is satisfied. When there are multiple performance obligations within a contract, we allocate the transaction price to each performance obligation based on standalone selling price. We determine the standalone selling price for each of the performance obligations at the inception of the contract and do not adjust the initial allocation for future changes in any selling prices. When estimating the selling price, we use various observable inputs. The best observable input is our actual selling price for the same good or service, however, this input is generally not available for our contracts containing multiple performance obligations. For engineering services, we estimate the standalone selling price by reference to certain physical characteristics of the project, such as facility size and mechanical systems involved, which are indicative of the scope and complexity of the mechanical engineering services to be provided. For equipment sales, the standalone selling price is determined by forecasting the expected costs of the equipment and then adding an appropriate margin, based on a range of acceptable margins established by management. Depending on the nature of the performance obligations, we may use a combination of different methods and observable inputs if certain performance obligations have highly variable or uncertain standalone selling prices. Once the selling prices are determined, we apply the relative values to the total contract consideration and estimates the amount of the transaction price to be recognized as each promise is fulfilled.

Remaining performance obligations. The new revenue standard requires certain quantitative and qualitative disclosures about our remaining performance obligations, which are defined as performance obligations that are unsatisfied (or partially unsatisfied) as of the end of the reporting period, including (i) the aggregate amount of the transaction price allocated to the remaining performance obligations, and (ii) when we expect to recognize as revenue with respect to such amounts on either: (x) a quantitative basis using appropriate time bands for the duration of the remaining performance obligations, or (y) by using qualitative information. Industry uncertainty, project financing concerns, and the licensing and qualification of our prospective customers, which are out of our control, make it difficult for us to predict when we will recognize revenue on our remaining performance obligations. There are risks that we may not realize the full contract value on customer projects in a timely manner or at all, and completion of a customer's cultivation facility project is dependent upon the customer's ability to secure funding and real estate, obtain a license and then build their cultivation facility so they can take possession of the equipment. Accordingly, the time it takes for customers to complete a project, which corresponds to when we are able to recognize revenue, is driven by numerous factors including: (i) the large number of first-time participants interested in the indoor cannabis cultivation business; (ii) the complexities and uncertainties involved in obtaining state and local licensure and permitting; (iii) local and state government delays in approving licenses and permits due to lack of staff or the large number of pending applications, especially in states where there is no cap on the number of cultivators; (iv) the customer's need to obtain cultivation facility financing; (v) the time needed, and coordination required, for our customers to acquire real estate and properly design and build the facility (to the stage when climate control systems can be installed); (vi) the large price tag and technical complexities of the climate control and air sanitation system; (vii) the availability of power; and (viii) delays that are typical in completing any construction project.

There is significant uncertainty regarding the timing of our recognition on all remaining performance obligations as of December 31, 2018. Customer contracts for which we have only received an initial advance payment to cover the allocated value of our engineering services ("engineering only paid contracts") carry enhanced risks that the equipment portion of these contracts will not be completed or will be delayed, which could occur if the customer is dissatisfied with the quality or timeliness of our engineering services or there is a delay or abandonment of the project due to the customer's inability to obtain project financing or licensing. In contrast, after the customer has made an advance payment for a portion of the equipment to be delivered under the contract ("partial equipment paid contracts"), we are typically better able to estimate the timing of revenue recognition since the risks and delays associated with licensing, permitting and project funding are typically mitigated once the initial equipment payment is received.

Commitments and contingencies. In the normal course of business, we are subject to loss contingencies, such as legal proceedings and claims arising out of our business, that cover a wide range of matters, including, among others, customer disputes, government investigations and tax matters. An accrual for a loss contingency is recognized when it is probable that an asset had been impaired or a liability had been incurred and the amount of loss can be reasonably estimated.

Refer to Note 2 of our consolidated financial statements, included as part of this Annual Report, where our accounting policies are more fully described.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

We are a smaller reporting company, as defined by Rule 12b-2 of the Exchange Act, therefore are not required to provide the information under this item.

Item 8. Financial Statements and Supplementary Data

Our consolidated financial statements are included herein, beginning on page F-1. The information required by this item is incorporated herein by reference to the consolidated financial statements set forth in Item 15. "Exhibits and Financial Statement Schedules" of this Annual Report.

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

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management conducted an evaluation, with the participation of our Chief Executive Officer and our Principal Financial and Accounting Officer, which positions are currently held by the same person, of the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this Annual Report on Form 10-K. Based upon that evaluation, our Chief Executive Officer and our Principal Financial and Accounting Officer concluded that as a result of the material weakness in our internal control over financial reporting described below, our disclosure controls and procedures were not effective as of December 31, 2018.

Management’s Annual Report on Internal Control over Financial Reporting

Management is responsible for the preparation of our financial statements and related information. Management uses its best judgment to ensure that the financial statements present fairly, in material respects, our financial position and results of operations in conformity with generally accepted accounting principles.

Management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in the Exchange Act. These internal controls are designed to provide reasonable assurance that the reported financial information is presented fairly, that disclosures are adequate and that the judgments inherent in the preparation of financial statements are reasonable. There are inherent limitations in the effectiveness of any system of internal controls including the possibility of human error and overriding of controls. Consequently, an effective internal control system can only provide reasonable, not absolute, assurance with respect to reporting financial information.

Our internal control over financial reporting includes policies and procedures that: (i) pertain to maintaining records that, in reasonable detail, accurately and fairly reflect our transactions; (ii) provide reasonable assurance that transactions are recorded as necessary for preparation of our financial statements in accordance with generally accepted accounting principles and that the receipts and expenditures of company assets are made in accordance with our management and directors authorization; and (iii) provide reasonable assurance regarding the prevention of or timely detection of unauthorized acquisition, use or disposition of assets that could have a material effect on our financial statements.

Under the supervision of management, by our Chief Executive Officer and our Principal Financial and Accounting Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”) published in 2013 and subsequent guidance prepared by COSO specifically for smaller public companies. Based on that evaluation, our management concluded that our internal control over financial reporting was not effective as of December 31, 2018 for the reasons discussed below.

A material weakness is a deficiency or a combination of deficiencies in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of the annual or interim consolidated financial statements will not be prevented or detected on a timely basis.

Management identified the following material weakness in its assessment of the effectiveness of internal control over financial reporting as of December 31, 2018:

The Company did not maintain effective controls over certain aspects of the financial reporting process because: (i) we lack a sufficient complement of personnel with a level of accounting expertise and an adequate supervisory review structure that is commensurate with our financial reporting requirements, (ii) there is inadequate segregation of duties due to the limitation on the number of our accounting personnel, and (iii) we have insufficient controls and processes in place to adequately verify the accuracy and completeness of spreadsheets that we use for a variety of purposes including revenue, taxes, stock-based compensation and other areas, and place significant reliance on, for our financial reporting.

We intend to take appropriate and reasonable steps to make the necessary improvements to remediate these deficiencies. We are committed to continuing to improve our financial organization including, without limitation, expanding our accounting staff and improving our systems and controls to reduce our reliance on the manual nature of our existing systems. However, due to our size and our financial resources, remediating the several identified weaknesses has not always been possible and may not be economically feasible now or in the future.

Our management, including our Chief Executive Officer and our Principal Financial and Accounting Officer, does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent all error and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints and the benefits of controls must be considered relative to their costs. Due to the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within our Company have been detected.

The material weaknesses in internal control over financial reporting as of December 31, 2018, remained unchanged from December 31, 2017. Management believes that the material weaknesses set forth above did not have an effect on our financial reporting for the year ended December 31, 2018.

We will continue to monitor and evaluate the effectiveness of our internal control over financial reporting on an ongoing basis and are committed to taking further action and implementing additional enhancements or improvements, as necessary and as funds allow. We do not, however, expect that the material weaknesses in our disclosure controls will be remediated until such time as we have improved our internal control over financial reporting.

This Annual Report on Form 10-K does not include an attestation report of our registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by our registered public accounting firm pursuant to rules of the SEC that permit us to provide only management's report in this Annual Report on Form 10-K.

Changes in Internal Control over Financial Reporting

There were no changes identified in connection with our internal control over financial reporting during the quarter ended December 31, 2018, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None.

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PART III

We will file a definitive Proxy Statement for our 2019 Annual Meeting of Stockholders with the SEC, pursuant to Regulation 14A, not later than 120 days after the end of our fiscal year. Accordingly, certain information required by Part III has been omitted under General Instruction G(3) to Form 10-K. Only those sections of our definitive Proxy Statement that specifically address the items set forth herein are incorporated by reference.

Item 10. Directors, Executive Officers and Corporate Governance

Information in response to this Item is incorporated in this Annual Report by reference to the information provided in our definitive Proxy Statement for our 2019 Annual Meeting of Stockholders (the “2019 Proxy Statement”) to be filed with the SEC pursuant to Regulation 14A under the Exchange Act.

We have adopted a code of business conduct and ethics that applies to our directors, officers and employees. The code of business conduct and ethics is available on our website at www.surna.com. We will report any amendments to or waivers of a required provision of the code of business conduct and ethics on our website or in a Form 8-K.

Item 11. Executive Compensation

The information with respect to compensation of our executives and directors will be contained in the 2019 Proxy Statement to be filed with the SEC and is incorporated in this Annual Report by reference in response to this item.

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

The information with respect to security ownership of certain beneficial owners and management will be contained in the 2019 Proxy Statement to be filed with the SEC and is incorporated in this Annual Report by reference in response to this item.

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

The information with respect to certain relationships and related transactions will be contained in the 2019 Proxy Statement to be filed with the SEC and is incorporated in this Annual Report by reference in response to this item.

Item 14. Principal Accountant Fees and Services

The information with respect to principal accountant fees and services will be contained in the 2019 Proxy Statement to be filed with the SEC and is incorporated in this Annual Report by reference in response to this item.

PART IV

Item 15. Exhibits and Financial Statement Schedules

a. Documents Filed as Part of this Report

The following consolidated financial statements of Surna Inc. are filed as part of this Annual Report on Form 10-K:

Financial Statements	Page(s)
<u>Report of Independent Registered Public Accounting Firm</u>	F-1
<u>Consolidated Balance Sheets as of December 31, 2018 and 2017</u>	F-2
<u>Consolidated Statements of Operations for the Years Ended December 31, 2018 and 2017</u>	F-3
<u>Consolidated Statements of Changes in Shareholders' Equity (Deficit) for the Years Ended December 31, 2018 and 2017</u>	F-4
<u>Consolidated Statements of Cash Flows for the Years Ended December 31, 2018 and 2017</u>	F-5
<u>Notes to Consolidated Financial Statements</u>	F-6

b. Exhibits

See "Exhibit Index" on the page following the consolidated financial statements and related footnotes and the signature page to this Annual Report on Form 10-K.

c. Financial Statement Schedules

No financial statement schedules are filed herewith because (i) such schedules are not required, or (ii) the information has been presented in the aforementioned financial statements.

Item 16. Form 10-K Summary

The Company has elected not to provide the summary of information under this item.

Surna Inc.

Index to Consolidated Financial Statements

Financial Statements	Page(s)
<u>Report of Independent Registered Public Accounting Firm</u>	F-1
<u>Consolidated Balance Sheets as of December 31, 2018 and 2017</u>	F-2
<u>Consolidated Statements of Operations for the Years Ended December 31, 2018 and 2017</u>	F-3
<u>Consolidated Statements of Changes in Shareholders' Equity (Deficit) for the Years Ended December 31, 2018 and 2017</u>	F-4
<u>Consolidated Statements of Cash Flows for the Years Ended December 31, 2018 and 2017</u>	F-5
<u>Notes to Consolidated Financial Statements</u>	F-6

Report of Independent Registered Public Accounting Firm

Shareholders' and Board of Directors

Surna Inc.

Boulder, Colorado

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Surna Inc. and subsidiary (the "Company") as of December 31, 2018 and 2017, the related consolidated statements of operations, shareholders' equity (deficit), and cash flows for the years then ended, 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 as of December 31, 2018 and 2017, and the results of their operations and their cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Going Concern Uncertainty

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 3 to the consolidated financial statements, the Company has suffered recurring losses from operations and has a working capital deficiency that raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 3. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

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

/s/ ACM LLP

We have served as the Company's auditor since 2017.

Greeley, Colorado

March 19, 2019

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Surna Inc.**Consolidated Balance Sheets**

	December 31,	
	2018	2017
ASSETS		
Current Assets		
Cash and cash equivalents	\$253,387	\$2,468,199
Accounts receivable (net of allowance for doubtful accounts of \$119,022 and \$105,267, respectively)	210,187	422,589
Inventory, net	935,886	522,622
Prepaid expenses	127,694	293,458
Other assets	654	550
Total Current Assets	1,527,808	3,707,418
Noncurrent Assets		
Property and equipment, net	520,321	401,356
Goodwill	631,064	631,064
Intangible assets, net	23,028	37,985
Deposits	51,000	51,000
Total Noncurrent Assets	1,225,413	1,121,405
TOTAL ASSETS	\$2,753,221	\$4,828,823
LIABILITIES AND SHAREHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable and accrued liabilities	\$1,809,129	\$1,969,263
Deferred revenue	641,798	1,011,871
Amounts due to shareholders	-	6,927
Derivative liabilities	-	410,880
Total Current Liabilities	2,450,927	3,398,941
NONCURRENT LIABILITIES		
Deferred rent	107,958	17,396
Total Noncurrent Liabilities	107,958	17,396
TOTAL LIABILITIES	2,558,885	3,416,337
Commitments and Contingencies (Note 12)		
SHAREHOLDERS' EQUITY	420	772

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Preferred stock, \$0.00001 par value; 150,000,000 shares authorized; 42,030,331 and 77,220,000 shares issued and outstanding, respectively		
Common stock, \$0.00001 par value; 350,000,000 shares authorized; 224,989,794 and 206,248,522 shares issued and outstanding, respectively	2,250	2,062
Additional paid in capital	24,538,027	20,664,563
Accumulated deficit	(24,346,361)	(19,254,911)
Total Shareholders' Equity	194,336	1,412,486
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	\$2,753,221	\$4,828,823

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

Surna Inc.

Consolidated Statements of Operations

	For the Years Ended	
	December 31,	
	2018	2017
Revenue, net	\$9,581,968	\$7,210,241
Cost of revenue	7,132,090	5,299,977
Gross profit	2,449,878	1,910,264
Operating expenses:		
Advertising and marketing expenses	979,711	625,773
Product development costs	317,713	319,680
Selling, general and administrative expenses	5,972,948	5,206,471
Total operating expenses	7,270,372	6,151,924
Operating loss	(4,820,494)	(4,241,660)
Other income (expense):		
Interest and other income, net	58,254	4,097
Interest expense	(2,908)	(41,485)
Amortization of debt discount on convertible promissory notes	-	(63,157)
Loss on extinguishment of debt	-	(643,428)
Gain on change in fair value of derivative liabilities	21,403	66,934
Total other income (expense)	76,749	(677,039)
Loss before provision for income taxes	(4,743,745)	(4,918,699)
Income taxes	-	-
Net loss	\$(4,743,745)	\$(4,918,699)
Loss per common share – basic and dilutive	\$(0.02)	\$(0.03)
Weighted average number of common shares outstanding, basic and dilutive	218,752,365	182,857,538

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

Surna Inc.

Consolidated Statements of Changes in Shareholders' Equity (Deficit)

	Preferred Stock		Common Stock		Additional Amount Paid in Capital	Accumulated Deficit	Shareholders' Equity (Deficit)	
	Number of Shares	Amount	Number of Shares	Number of Shares to be Issued				
Balance January 1, 2017	77,220,000	\$772	160,744,916	-	\$1,607	\$12,222,789	\$(14,336,212)	\$(2,111,044)
Common shares issued for conversion of debt and interest, net of unamortized debt discount Value attributed to modification of warrants	-	-	10,601,554	-	106	1,751,049	-	1,751,155
Common shares issued with convertible notes payable	-	-	250,000	-	2	39,127	-	39,129
Common shares issued for cash	-	-	31,515,250	-	315	4,452,765	-	4,453,080
Fair value of warrants issued and options granted to directors for compensation	-	-	-	-	-	386,466	-	386,466
Common shares issued as compensation for services	-	-	3,160,494	-	32	434,293	-	434,325
Common shares issued in	-	-	200,000	-	2	20,497	-	20,499

settlement of restricted stock units awarded as compensation for consulting services									
Fair value of vested restricted stock units awarded to employees and directors	-	-	-	-	-	744,556	-	744,556	
Fair value of vested stock options granted to employees	-	-	-	-	-	189,536	-	189,536	
Fair value of vested incentive stock bonuses awarded to employees	-	-	-	-	-	364,483	-	364,483	
Other common shares	-	-	(223,692)	-	(2)	2	-	-	
Net loss	-	-	-	-	-	-	(4,918,699)	(4,918,699)	
Balance December 31, 2017	77,220,000	772	206,248,522	-	2,062	20,664,563	(19,254,911)	1,412,486	
Cumulative effect of changes due to adoption of ASC 606 revenue recognition	-	-	-	-	-	-	56,912	56,912	
Adjusted balance January 1, 2018 to reflect adoption of ASC 606	77,220,000	772	206,248,522	-	2,062	20,664,563	(19,197,999)	1,469,398	
Extinguishment of derivative liability upon exercise of investor warrants	-	-	-	-	-	389,477	-	389,477	
	-	-	2,666,865	-	27	(27)	-	-	

Common shares issued on cashless exercise of former director and investor warrants								
Common shares issued on exercise of investor warrants and employee options	-	-	125,000	-	1	18,375	-	18,376
Common shares issued or to be issued on settlement of restricted stock units and award of stock bonuses	-	-	8,867,368	1,000,000	88	(88)	-
Common shares issued as compensation for services	-							