heliospectra

Annual Report 2017

heliospectra

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Summary of the year

Selected significant events

In the beginning of the year, Heliospectra appoints Ali Ahmadian, with experience from leading positions in major food companies such as Tetra Pak, as the company's new CEO. Resigning CEO Staffan Hillberg remains as adviser to Heliospectra.

On February 23, it was announced that TCG Retro Market 1 LLC has decided to invest in intelligent LED lighting from Heliospectra for approximately MSEK 2.5.

On February 28, an initial order worth MSEK 1.27 from Mak North America for the standardization of the company's medicinal cannabis cultivation facility in Macedonia with Heliospectra LED lights was presented. In June, Heliospectra received an additional order worth MSEK 1.5 from the company.

In March it was announced that Canada's Island Garden Inc, a licensed medical cannabis cultivation facility located in Canada, decided to invest in an intelligent LED lighting solution from Heliospectra worth MSEK 1.87.

On June 19 and November 29, it was announced that Heliospectra received a fifth and sixth order from a global Fortune 500 AgTech company worth MSEK 4.7 and MSEK 2.7 for a standardization with Heliospectra's E60 series.

In July, the company announced an order worth MSEK 1 from British John Innes Centre in Norwich, an independent, international center of excellence in plant science, research, genetics and microbiology.

In August and September, the second and third order from The Grove Nevada worth MSEK 1.75 and MSEK 1.8 was announced.

On October 10, it was announced that NYSK Holdings, a state-of-the-art medicinal cannabis facility in Macedonia, has invested in a LED lighting solution from Heliospectra worth approximately MSEK 1.

In November, it was announced that the company received an order worth approximately MSEK 1 from Canada's largest microgreens producer, Greenbelt Microgreens, who installed Heliospectra's fully adjustable LX50 series.

On November 21, Heliospectra announced a new order worth MSEK 1.95 from Sokaogon Medicinal Corporation (SMC) in the United States who focuses on industrial hemp cultivation for medicinal applications.

In the third quarter the company presented HelioCORE™ – a market leading control system for plant lighting that gives growers increased control and enables standardization of crop quality, harvest cycles and yield. The system will be launched commercially in the spring of 2018.

Heliospectra was ranked the second-fastest growing technology company in Sweden in Deloitte's prestigious ranking Sweden Technology Fast 50.

The year in brief

- Net sales amounted to KSEK 36,039 (23,053).
- The operating result amounted to KSEK -33,089 (-42,784), signifying a negative operating margin (neg).
- The result after tax was KSEK -33,171 (-45,763) or SEK -0.94 (-1,30) per share.
- Operating cash flow was KSEK -29,511 (-39,377). Total cash flow was KSEK -32,307 (54,092).

Key financial indicators (in KSEK if nothing else is stated)

	2017	2016	2015	2014
Orders	43,814	22,729	–	–
Net sales	36,039	23,053	13,686	3,110
EBITDA	-28,770	-38,446	-28,473	-29,284
Operating profit/loss	-33,089	-42,784	-32,360	-32,901
Cash flow	-32,307	54,092	12,721	2,596
Cash and cash equivalents	40,633	72,940	18,848	6,127
Equity	48,303	81,474	28,147	16,099
Equity/assets ratio, %	65 %	77 %	56 %	51 %
Cash and cash equivalents, %	324 %	614 %	277 %	177 %
Number of shares, thousand	35,112	35,112	18,622	13,791

A comment from Heliospectra's CEO Ali Ahmadian

2017 was characterized by the rapid development of Heliospectra, within our organization as well as in our range of products and services. In addition to this, we also broadened the company's customer base through an increased focus on companies in the food industry, including herbs and microgreens, and AgTech companies.

The overall vision behind these changes was the continued development of Heliospectra from primarily being a hardware developer to being able to offer complete service solutions in intelligent LED lighting and cultivation optimization.

To do this, we have focused on creating concrete value for our customers in all parts of our offer. We were already good at demonstrating the cost benefits of our LED lights, and now we are also getting increasingly better at offering our appreciated expert knowledge, which is crucial when utilizing our technology in an optimal way.

With Technical Services, a package of services ranging from evaluation of specific plants to increased understanding of the customer's possibilities to customer specific implementation and education of employees, we have managed to create value for all parties from our expertise. We started offering Technical Services in the beginning of 2018, and we have noticed a great interest from existing as well as new customers.

Our other major focus during the year was HelioCORE™, the world's first intelligent control system for plant lighting. The system consists of sensors and software that enable growers to forecast quotas, standardize production and increase year-round yields. HelioCORE™ was launched in the spring of 2018, and it constitutes the heart of our service offer as we will market the system as a subscription service. It can also be upgraded with additional exciting modules in the future.

We have finally started offering leasing of our LED lights, which minimizes customer start-up costs while also providing us with recurring and stable revenue.

To implement all these improvements, Heliospectra's organization was sharpened with a more synergistic team structure and more clear distribution of responsibility. At the same time, non-prioritized development projects have been phased out.

The results of this hard and focused work have already begun to show in Heliospectra's results. Compared to 2016, order inflow increased by 93 percent in 2017, and sales increased by 56 percent. In addition, we increased the gross margin and lowered our operating costs, which together strengthened the company's operating profit by 23 percent. We are rapidly moving in the right direction.

Strengthened by this success, and with an exciting HelioCORE™ launch in 2018, we are looking forward to harvesting the benefits of our new, value-driven and complete offering to customers. I am incredibly proud of what our team has achieved, and we now have excellent opportunities to continue to grow while developing the next generation of LED lights and modules for HelioCORE™.

Ali Ahmadian,
CEO Heliospectra AB (publ)

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HelioCORE™ was launched in the spring of 2018, and it constitutes the heart of our service offer as we will market the system as a subscription service.

Ali Ahmadian, VD

Heliospectra's history 2006 – 2017

2006– 2007

- **The company is established**
- Approximately MSEK 1,9 is raised from angel investors and The Incubator in Borås
- Heliospectra's first fully controllable lamp is developed and tested at customer facilities
- The first patent application is submitted

2008

- Capital injection of approximately MSEK 8.7 from Weland and previous investors

2009

- Spiral-shaped lamp is developed and tested

2010

- The company's first internet-based lamp is developed and tested at customer's facilities

2011

- Industrifonden and Midroc invests approximately MSEK 14.8

2012

- Helio L4A is launched on the market
- The company receives its first orders from research customers
- Industrifonden and Midroc invests approximately MSEK 14.6

2013

- Existing shareholders invest approximately MSEK 20

2014

- Heliospectra's LX60 Series is launched
- Share issue of approximately MSEK 40.9
- The company is listed at Nasdaq First North
- The first LX60 order is received, worth approximately MSEK 0.2
- The company's share is listed in the USA via an ADR program
- Heliospectra's first patent in the USA is approved

2015

- First major order worth approximately MSEK 0.1 to cultivator of medicinal plants in the USA
- The company's first patent in Canada is approved
- Directed share issue of approximately MSEK 25
- The company raises approximately MSEK 22.5 through exercised T01 warrants
- Breakthrough order worth approximately MSEK 5.7 to cultivator of medicinal plants in the USA
- Launch of the E60 Series as well as the company's lightbar

2016

- An LX60 order worth approximately MSEK 2.2 from the state of Washington
- The first LX60 order in Canada worth approximately MSEK 0.65
- Launch of a water-cooled LX60 for installation at a research station at the South Pole (Antarctica)
- The largest customer in the USA reports excellent results using Heliospectra's lamps
- The first major E60 order worth approximately MSEK 4.3 from an international AgTech company
- The preferential rights issue of approximately MSEK 107

2017

- Ali Ahmadian, with experience from leading positions at major food companies such as Tetra Pak, assumes the position as the company's new CEO
- The fifth and sixth E60 order, worth approximately MSEK 4.7 and MSEK 2.7 MSEK, are received from a global Fortune 500 AgTech company
- LX50 order worth approximately MSEK 1 from Greenbelt Microgreens, Canada's largest producer of microgreens
- HelioCORE™ – a market leading control system for plant lighting that provides growers with increased control and enables standardization of crop quality, harvest cycles and yield is presented

About Heliospectra

Heliospectra develops and offers complete solutions in intelligent lighting and cultivation optimization based on decades of world-leading Swedish research. The company's services and products are aimed at customers within industries such as cultivation of medicinal plants, food and herbs, microgreens and research and development companies in need of accurate control over factors like the intensity and wavelength of the light.

Heliospectra's hard- and software platforms, including LED lights and the control software HelioCORE™ with the accompanying measuring modules, makes the company an innovative and leading player in its field.

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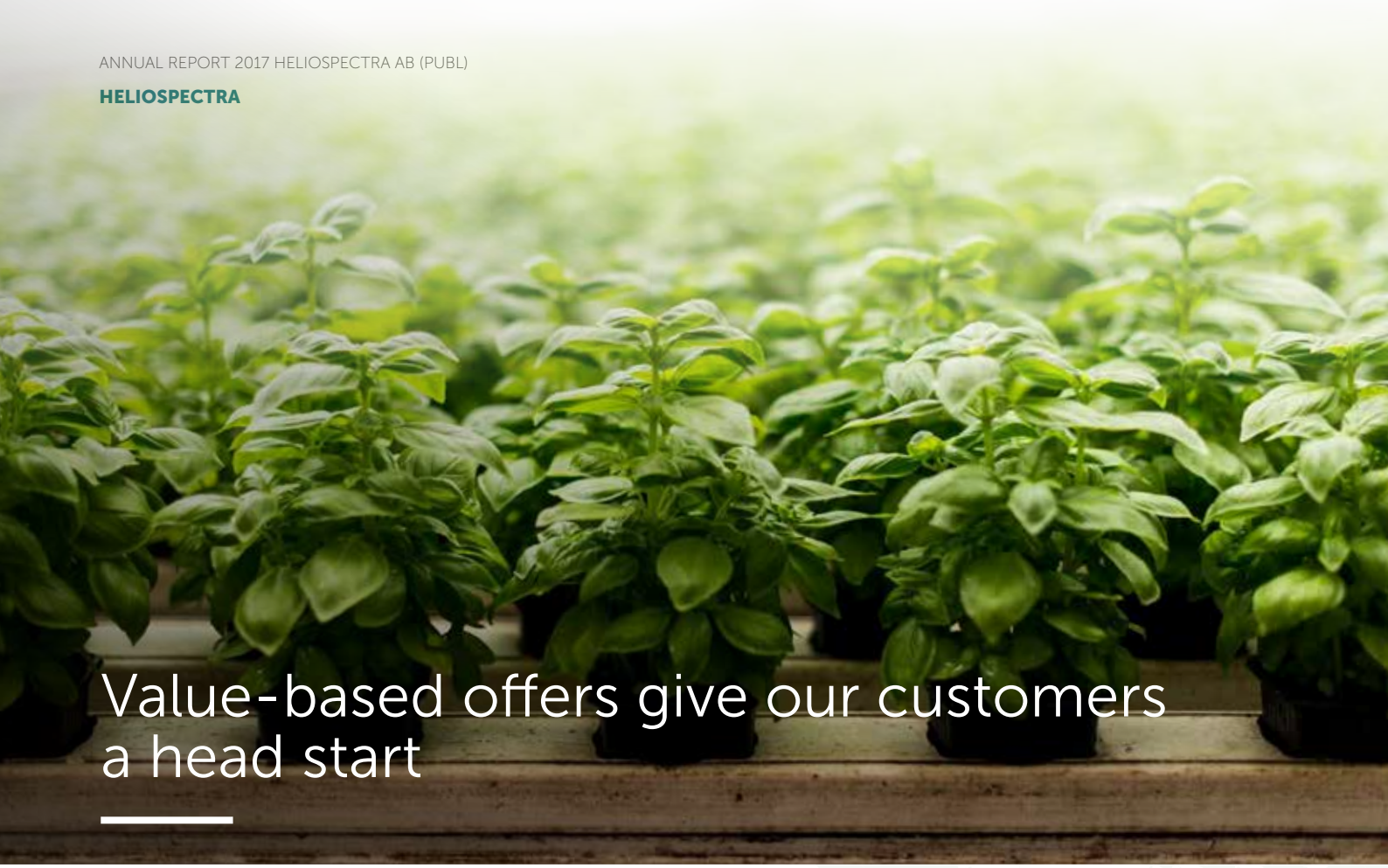


Value-based offers give our customers a head start

Heliospectra offers a complete product and service solution in intelligent lighting and cultivation optimization. This enables us to create short- and long-term value for our customers through their entire growing process.

Maximized yield

Our LED lights in combination with the light control provided by HelioCORE™ makes it possible to give the crops perfect lighting 365 days per year, maximizing the yields.

Less environmental impact

With intelligent lighting from Heliospectra, the use of water and electricity can be reduced, while fewer plants or vegetables has to be discarded.

Increased control

With higher predictability in the growth process, the distribution and sales can also be optimized to receive the best possible price.

Shorter harvest cycles

With optimal growth, the number of harvests per year can be increased while the inventory need is minimized.

Improved quality

Optimal growth improves the taste and appearance of the plants or vegetables, while also boosting their nutrition values.

Customers on every continent

Heliospectra's intelligent LED lighting solutions are used on every continent of the world, including Antarctica. This gives the company a true global presence and customer base.

Geographic overview of Heliospectra's customers

- Areas marked in blue represents countries with Heliospectra customers.

Business areas and revenue model

Heliospectra currently receives revenue from two main areas: sales and rental of its proprietary LED lights as well as services to help customers optimizing their growth processes using the company's lighting solutions (Technical Services). The company also develops an intelligent system for lighting control, HelioCORE™, which opens a third business area for the company from the spring of 2018. HelioCORE™ will be offered as a subscription service including physical measuring modules as well as software.

The company aims to increase its share of revenue from service solutions such as rental of LED lighting, Technical Services and HelioCORE™, which is expected to generate a stronger and more stable cash flow for Heliospectra over time.

In addition to these sources of revenue, Heliospectra aims to receive ongoing partial financing of various development projects in the form of research grants from Swedish and international authorities and organizations.

The company's assessment is that it is possible to achieve positive cash flow with these revenue sources without the need of further external financing. However, the possibility of raising additional capital to implement a more aggressive growth strategy is not ruled out if attractive opportunities arise.

Services and products

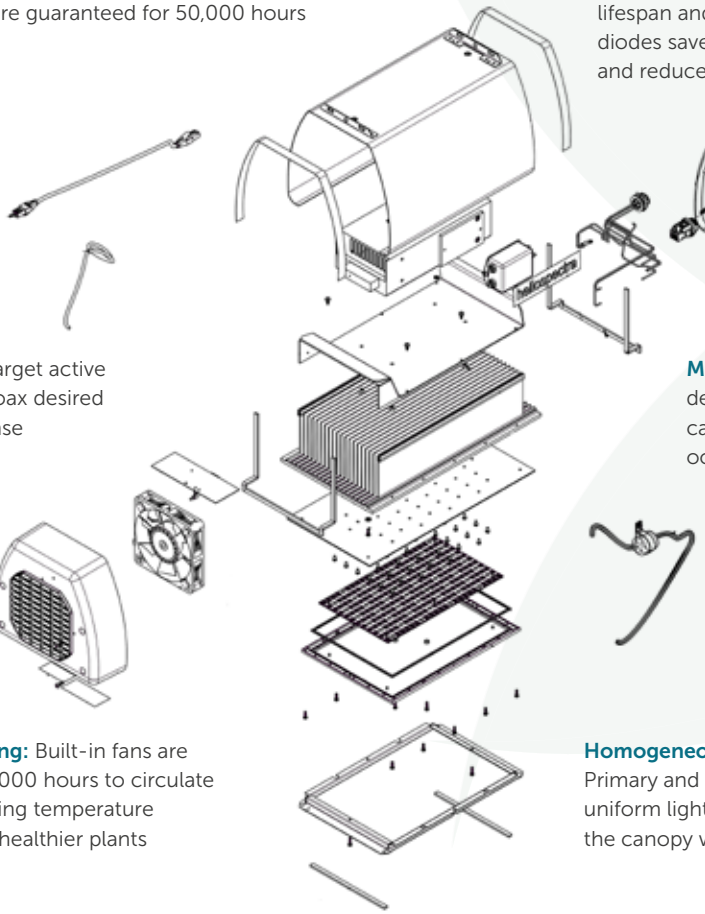
"The company aims to increase its share of revenue from service solutions such as rental of LED lighting, Technical Services and HelioCORE™, which is expected to generate a stronger and more stable cash flow for Heliospectra over time.

Proven, intelligent LED lightings

Heliospectra has developed the most proven and sustainable LED solutions on the market that offer optimal lighting for cultivation, plant research and development in the agrotechnical sector. This puts the company in a leading position ahead of its competitors.

Lifetime: Heliospectra LED lights are guaranteed for 50,000 hours

Low maintenance: The long lifespan and high quality LED diodes save maintenance time and reduce operating costs



Adjustable spectra: Target active photosynthesis and coax desired morphological response

Minimal shading: Sleek exterior design eliminates potential shadows cast across the plants which can occur with natural sunlight

Active cooling: Built-in fans are rated for 70,000 hours to circulate air, maintaining temperature control and healthier plants

Homogeneous light distribution: Primary and secondary optics ensure uniform light distribution across the canopy with deep penetration

> "The long lifespan and high quality LED diodes save maintenance time and reduce operating costs.

Our product portfolio

LX50/60 Series

LX50 and LX60 are aimed at the commercial greenhouse market; they were developed for a long service life in harsh environments. The light has a fully variable frequency spectrum and newly developed optics to optimize the light pattern on different surfaces and in different fields of application. The LX50/60 are sold primarily to traditional vegetable and flower growers as well as growers of medicinal plants. The LX60 and LX50 Series are also available in LX601 or 602 and the corresponding LX501 or 502 versions. The 01 version is designed to be mounted closer to the plant, approx. 0.5 meters. The LX602 should be mounted approx. 2.0 meters from the plant to complement natural sunlight and still achieve the desired results gained from spectrum variation.

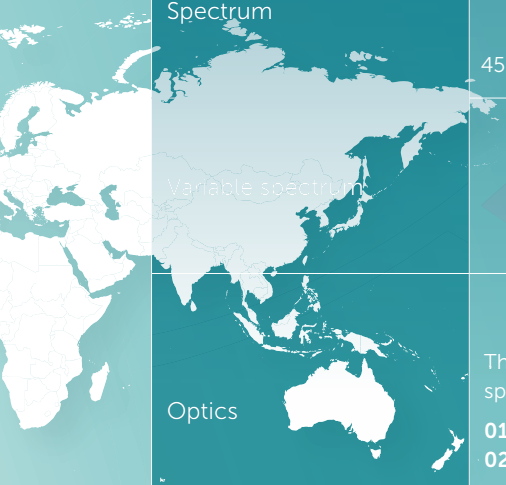
E50/60 Series

The E50/60 Series, launched in 2015, are simplified versions of the LX lights intended primarily for commercial greenhouse growers. They have a fixed instead of a dynamic spectrum and are therefore suitable for customers who want an intensive, quality-assured spectrum. These lightings are available with Heliospectra's "G" and "C" spectra and are thus suitable for both green and flowering plants.

RX30 Series

The RX30 is mainly suited for the research market and development market. Its wavelength spectrum and light intensity can be programmed with high accuracy, both static and dynamic over time. Purchasers of the RX30 include universities, research institutes and AgTech companies that sell products such as seeds, nutrients and pesticides. Since Heliospectra's products have achieved such an established position in the research market, researchers have begun to specify Heliospectra equipment in their applications when seeking research grants.

Product family	LX50/60 Series	E50/60 Series	RX30 Series
Type	High Voltage Top Light/ Top Light	High Voltage Top Light/ Top Light	Research Light
Power	525 W / 630 W	525 W / 630 W	420 W
Spectrum	C plate 450nm, 660nm, 735nm, 5700K	G plate 450nm, 660nm, 5700K	Research plate
Variable spectrum	√ √	– –	√
Optics	The Top Lights come with two optional spectrum compositions: **01 – for indoor** **02 – for greenhouse**		Base reflector and high transparency clear acrylic glass plate
Application	Indoor cultivation, Greenhouse cultivation, Industrial use		Research



Wavelengths

Wavelengths: UV-B (380nm), blue (400nm, 420nm, & 450nm), green (520nm), read (630, 660nm), dark red (735nm), & white (5700K)

Technical Services

Heliospectra has a renowned team of experts in biology, plant research, software development, technical adaptation and lighting consultancy. The company is, therefore, able to offer its customers valuable consultancy services before, during and after the installation of the actual LED lights.

With Technical Services, Heliospectra has a new way of capitalizing on its unique competence while creating better customer relations and lighting installations that deliver optimal results.

Customized lighting strategies

Intelligent LED lightings enable the company's customers to optimize their lighting in a completely new way. In order to really benefit from this potential, Heliospectra designs tailored lighting strategies, independent if the goal is to increase yield, improve quality or alter the morphology of the crop. Especially new customers have much to gain from taking advantage of Heliospectra's long experience instead of just trying out different solutions.

Heliospectra Technical Services

Crop trials & pilot projects

Using customized crop research, Heliospectra enables growers to accelerate their growth processes and achieve specific crop performance objectives. This includes, for example, producing plants with longer shelf life or with improved cold tolerance. For larger customers, Heliospectra also conducts pilot projects to ensure that the new solutions are optimized before large-scale implementation.

Installation design and power grid analysis

In order to achieve optimal lighting results over time, it is crucial that the installation is designed and adapted with regard to the actual conditions, including the available power supply. Heliospectra's experts calculate, measure and plan the project to make sure that the installation and operation will run seamlessly without any disruption in production.

Utility rebate application management

The transition to environmental friendly LED lighting that consumes less electricity and water than conventional HPS lamps is encouraged by authorities all over the world. This means that there are a number of different grants or regional incentives available depending on region and operations. Heliospectra assists customers to identify and apply for relevant available funds based on their extensive experience.

Plant and light cultivation training

Based on their extensive experience, Heliospectra's experts' design customized training programs based on the specific needs and requests. The training can be conducted before or after the installation to raise the practical knowledge of the employees about for example growth optimization and lighting strategies.

HelioCORE™ – world's most advanced intelligent light control system

HelioCORE™, Heliospectra's newly developed light control system, was launched in Q2 2018. It is the heart of the company's effort to increase revenue from ongoing service activities.

By combining light sensors with intelligent software, HelioCORE™ allows growers to control the lighting of a certain crop in a much more advanced and precise way than before.

HelioCORE™ will be sold as a subscription service that can be expanded with new software modules and/or sensors as they are developed by Heliospectra.

Automated light response offers the ability to replicate pre-set light strategies across the plant growth cycle and ensures consistent light quality year-round.

Multiple light zones enable standardization of schedules and settings in order to use the cultivation surface and employees in an optimal way.

Monitoring of energy and power consumption makes it possible to optimize light use based on changes in energy costs, which can create significant savings.

Repository of data logs and lighting strategies enables the grower to evaluate and replicate optimal lighting strategies.

A module based and future-proof system

HelioCORE™ consists of light sensors and three software modules:

The **DLI** controller allows growers to optimize plant growth and adjust lamp use based on specific goals in the form of Daily Light Integral (DLI) targets.

The **On target** module helps maximizing the plant photosynthesis with dynamic light response.

The **Schedule** module allows growers to apply automated pre-set schedules and light strategies across the growth cycle.

Potential future updates under evaluation include sensors that can measure more aspects of the growth environment such as humidity and air quality. This could enable even more advanced strategies and growth schedules.

In addition to this, the company also evaluates biofeedback sensors and modules that could enable automatic light adaption based on how the plants are actually doing and how their growth corresponds to the targets set up by the grower.

The possibility of making ongoing upgrades of HelioCORE™ will make it possible for Heliospectra to reach existing as well as new customers with new functions and offers in a much more effective way than before.

Our customers

Three different customer segments that complement each other

Heliospectra currently focuses on three customer groups: growers of foodstuffs such as vegetables, herbs and microgreens, growers of medicinal plants including cannabis and research and agrotech companies.

Sales activities are aimed at larger, industrial companies and actors with a basic need of optimal lighting solutions and standardization of the operations. Even though they operate in different sectors, all customers want solutions that create ideal lighting and cultivation conditions. This has made it possible for Heliospectra to develop a product and service range that covers large customer groups all over the world.

As demand varies over time between different customer groups, and between regions due to for example changes in legislation, Heliospectra constantly adapts so that its sales and marketing resources can be used in the best possible way at all times.

> "Even though they operate in different sectors, all customers want solutions that create ideal lighting and cultivation conditions.

Cultivation of medicinal plants

The cultivation of medicinal plants, particularly cannabis, has increased immensely in recent years as more countries and regions are opening up the market for commercial growers. At present, the majority of Heliospectra's customers in this segment are based in North America, but they are also located in European countries like Macedonia where several new agreements were announced in 2017.

Traditionally, cannabis growers have often grown crops indoors with artificial lighting only, but the trend shows an increased share of greenhouse cultivation. This creates more complex conditions that can benefit greatly from Heliospectra's services and products.

Cannabis-based pharmaceuticals – already on the Swedish market

Cannabis-based pharmaceuticals are already manufactured in Europe and sold at Swedish pharmacies. One example of this is GW Pharma in England, a company using large greenhouses to grow medicinal plants that are processed and sold to MS patients throughout Europe under the Sativex brand.

This segment is characterized by rapid development and innovation, not least as the market is now maturing in the USA with lower margins as a result. Today there are about twenty suppliers of LED lights in the USA, including several low-cost companies that are not considered competitors to Heliospectra. However, the main competitors are still suppliers of conventional HPS lamps that offer lower installation costs but higher operational costs.

Significant growth potential going forward

Heliospectra expects continued growth in cultivation of medicinal plants as more countries legalize the production of cannabis. The order received from a Macedonian grower in 2017 is a good example of this. The new services Technical Services and HelioCORE™, as well as an increased rental program for LED lighting systems, are also expected to drive the customer growth going forward. Renting LED lights reduces the initial costs for the customer, which is the strongest single advantage that HPS lamps have today.

Heliospectra offers:

- Cultivation with increased density
- A higher number of, and more coordinated harvests
- Improvement of crop quality and proportion of active substances
- Minimized water use and electricity costs
- Improved working environment with an optimized light spectrum

The Grove: costs for electricity, water and ventilation cut in half

When Nevada-based cannabis cultivation company the Grove began exploring the expansion of its facility with Heliospectra LED lighting, the advantages of LED technology and Heliospectra's intelligent solutions became obvious.

The Grove evaluated all lamps available on the market from a yield and plant quality perspective, and the Heliospectra LX601C lamps stood heads above the competition. In addition, the company's engineer Tippets Mechanical could reduce the electricity, water and air conditioning requirements by 50 percent thanks to Heliospectra's LED lights that consume substantially less electricity and generate much less heat than the HPS lights that the company originally planned to install.

Return on investment in one year

When the calculations on initial and recurring costs were done, the Grove concluded that they would be able to get back the higher initial costs for the new Heliospectra lighting solution after just one year of operation. These savings reflect a significant reduction in the production costs for the company's plants, which is important as the cannabis market is becoming more mature with a strong pressure on price as a result.

"By using Heliospectra LED grow lights we were able to cut the HVAC demand in half, saving the Grove over USD 1.4 million in upfront expenses in connection with the build-out," says Kevin Biernacki, the Grove's former Master Grower and Cultivation Manager.

"I wish all of my projects went as well as the Grove. Grow operations really need to be looking at the alternatives to HPS lamps," says Aaron Tippets at Tippets Mechanical.

"By using Heliospectra LED grow lights we were able to cut the HVAC demand in half, saving the Grove over USD 1.4 million in upfront expenses in connection with the build-out.

Kevin Biernack
The Grove's former Master Grower and Cultivation Manager.

Cultivation of vegetables, herbs and microgreens

Production of vegetables, herbs and microgreens is a more mature industry compared to cannabis cultivation, and the large food companies are slower in terms of development processes. At the same time, the increasing world population, and the rapidly growing demand for locally cultivated, high-quality products, has led to a stable growth for cultivators in the food sector. The sector is also progressing towards increased automation and other uses of new technology.

The larger food companies often focus on product quality rather than price when implementing a technology shift, which is in line with Heliospectra's offer. Many companies are also interested in the possibility to cultivate specific plant qualities in different parts of the harvest cycle by using the spectrum and intensity of the lighting. As an example, this technique can be used on sensitive crops to increase their ability to tolerate cold conditions.

Crops suitable for Heliospectra's solutions include culinary herbs such as basil, dill, chives and mint, vegetables traditionally grown in greenhouses such as tomatoes as well as different types of sprouts and shoots, also called microgreens. One example of this is the LX50 order that Heliospectra received in November 2017 from Greenbelt Microgreens, Canada's largest grower of microgreens.

Light optimization in combination with sunlight

Heliospectra's customers in the food sector are mainly located in the northern hemisphere where the winters are cold with much less sunlight compared to the summer. Because of this, commercial greenhouse growers need supplemental light to run their operations all year round. At the same time, light conditions can vary between seasons and hot or cold/cloudy days. This is true even for growers operating in a warmer climate. Heliospectra is therefore also targeting customers in regions where the sun is strong enough for cultivation - but not optimal - 365 days a year.

Longer lead times - but significant potential

As Heliospectra is able to showcase more successful reference projects for different types of crops, the number of customers in the food segment is expected to increase. Being able to optimize the qualities and quality of the crops more easily with HelioCORETM is something that is also expected to open up exciting opportunities - with larger established companies as well as with innovative urban growers.

Heliospectra offers:

- Greenhouse cultivation with optimal quality all year round
- Improved quality, taste and nutritional value of crops
- Optimization of quality and parts of the harvest cycle
- Minimized water use and electricity costs
- A more efficient and predictable process - from shoot and cultivation to distribution
- Innovative cultivation in for example caves and urban environments

Green Mountain Harvest: Accelerated harvest cycles and improved crop quality

The greenhouse grower Green Mountain Harvest Hydroponic in Vermont, USA, was established in 2013 and provides retailers and whole food stores in and around the Boston area with for example fresh lettuce and herbs. In order to achieve more consistent year-round yields and maximize the production, the company chose to upgrade their 11,000 square foot greenhouse from HPS lamps to intelligent LED lighting from Heliospectra in November 2016.

The optimized light spectrum of the LED lights brought immediate benefits for the company. For example, the company was able to standardize the fresh weight on the summer crisp lettuce, which was very difficult to achieve with the previous HPS lights. The company also noted a 50 percent reduction in the yellowing on the bottom lettuce leaves because the LED light penetrates down deeper into the canopy. The uniform light distribution also reduced tip burn.

"The transition to LED lights meant we got heavier weights in the crop. The leaf structure increased by almost 30 percent. We also shortened the crop time with three to five days," says Peter Armando from Griffin Greenhouse Supply, who assisted with the installation at Green Mountain Harvest.

"The Heliospectra lights mimic the sun and enable us to supplement natural daylight during the shorter winter days and adjust to changes in local weather. The ability to forecast production and predictable, repeatable harvest results has proven invaluable for our business," says John Farr, managing partner at Green Mountain Harvest.

Research & agrotechnology companies

Major agrotechnology companies – significant business potential

In view of this, lighting optimization in the agrotechnical sector, with major players such as Monsanto, Syngenta, Bayer, Dupont and BASF who develop crops and manure, is a business with significant growth potential. In 2017, Heliospectra received several orders from a Fortune 500 company in this segment, and thus prestigious reference assignments that will be very valuable for the future.

World-leading research and development

In addition to the major agrotechnical companies, this segment also includes universities and other research companies in need of advanced lighting solutions. By collaborating with these companies, Heliospectra can stay at the scientific forefront while receiving grants for further development of the company's products.

The company's research projects include a collaboration with the German Aerospace Center on space farming. For this project, Heliospectra developed a new water-cooled LED light. NASA has also used Heliospectra's LED lights when simulating a Mars expedition, as well as Google and Massachusetts Institute of Technology (MIT) during a joint research project.

Heliospectra offers:

- Accurate control of the wavelengths and intensity of the light
- Quality products with constant parameters over time
- Access to Heliospectra's leading expertise in cultivation optimization
- Alterations/optimization of crop qualities during parts of the harvest cycle

EDEN ISS: Space farming tested in harsh conditions on the South Pole

The project EDEN ISS, that is partly financed by European Horizon 2020, was established to develop a Mobile Test Facility for space farming. It could be used, for example, for manned missions to the Moon or Mars. One of the organizations behind the project is the German Aerospace Center DLR. Two years ago, Heliospectra became a part of the project as the company's lighting solutions are both resource-efficient and proven to be very reliable.

Compared to cultivation on our own planet, space farming involves different and partly completely new challenges. The Mobile Test Facility must be entirely self-sufficient and closed while enabling growth independent of weather and season. It includes a number of exciting solutions such as a highly adaptable multi-shelf vertical system. The greenhouse is equipped with an adapted and sophisticated LED lighting system from Heliospectra. The system is based on the company's LX60 lamp and is entirely water-cooled.

The system was tested at the German Aerospace Center (DLR) during the summer of 2017. This led to the production of 40 kilos of cucumbers, radishes, peppers, lettuce and herbs. The system is entirely self-sufficient and the only water that leaves the greenhouse system is in the harvested vegetables.

Since then, the system has been further developed and is now being tested at the South Pole, one of the Earth's most hostile environments. The greenhouse will provide researchers at the station Neumayer III with fresh vegetables during the darkest part of the year. Light obviously plays a critical role when growing crops in controlled environments, and Heliospectra eagerly awaits the results from the project.

EDEN ISS is a project supported by EU's Horizon 2020, a research and innovation program under grant agreement 636501.

Research and development

A large part of Heliospectra's research and development is carried out in customer projects, but the company also runs internal projects and projects with research entities. Development is primarily focused on three different areas:

Cultivation optimization and specific crops

The foundation of Heliospectra's business is to promote the cultivation of the best crops possible. By better understanding how different plant properties and plant cycles can be optimized, generally as well as for specific crops, the foundation is laid for even better customer projects and the next generation of lighting and software solutions.

The company has its own plant laboratory in Gothenburg, and cooperates with entities such as SP Food & Bioscience and Sweden's Agricultural University (SLU).

Optimal lighting environment and lighting

Research on lighting, and how it effects growth processes in detail, is an area where the company collaborates with Chalmers University of Technology in the iLight project, that is partly funded by Mistra Innovation. Heliospectra retains all rights to the innovations and results generated from the project.

With this research, Heliospectra can develop next-generation LED lighting for its different customer segments.

Biofeedback and self-adjusting systems

Research on lighting, and how it effects growth processes in detail, is an area where the company collaborates with Chalmers University of Technology in the iLight project, that is partly funded by Mistra Innovation. Heliospectra retains all rights to the innovations and results generated from the project.

With this research, Heliospectra can develop next-generation LED lighting for its different customer segments.

Intellectual property rights

Heliospectra's strategy is to apply for patents that covers the more advanced inventions in the company's lighting system. At present, Heliospectra has been granted one patent, which has been followed up by applications for so-called improvement patents. The improvement patents are often more detailed and specified than the original patent, thus providing enhanced protection.

Heliospectra also try to protect the products and processes that are not advanced or original enough to patent in other ways. This can be done through trademark or design protection. If nothing else is possible, it can be done by keeping it a trade secret from customers and partners. The code and algorithms used in the company's software for light control and management of hardware feedback are examples that fall into this category.

Sales and distribution channels

Heliospectra sells both directly and through smaller distributors/retailers. On key markets such as greenhouses in Europe and medicinal plants in North America, the company has its own sales teams. The company has also signed agreements with several distributors. Since Heliospectra wants to control where the company's products end up and how they are used, the number of distributors and partners is kept low. This way, the company can make sure that the installations are successful and that the customers understand how to best use the products. This is important since reference cases are often used in the sales process.

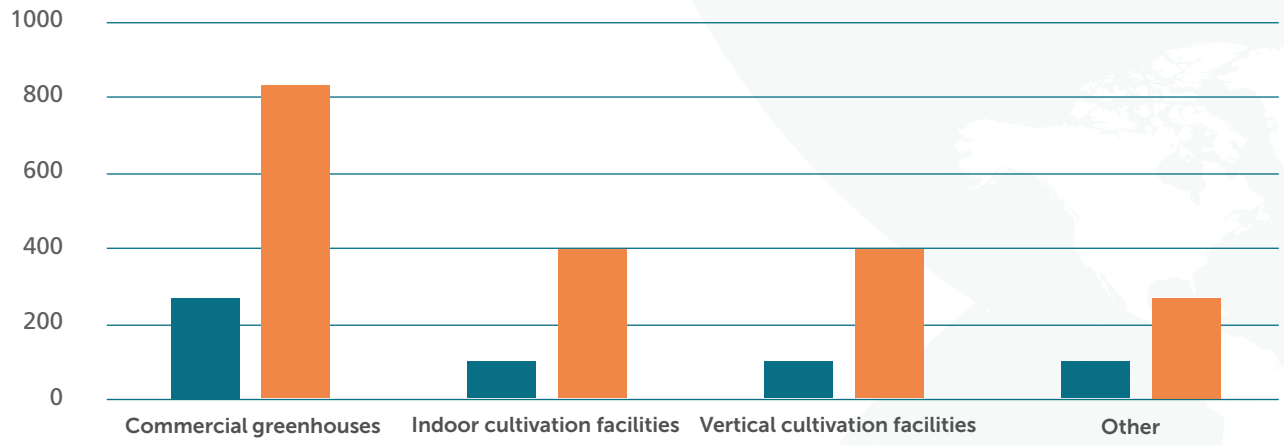
Manufacturing

Heliospectra is actively involved in the design and development of the company's lighting, but the manufacturing of the hardware is outsourced to external manufacturers. LED diodes are manufactured by recognized manufacturers such as Philips and Osram, and most of the other components are standard components. Some of the mechanics, plastics and other components are manufactured in China. The final assembly is made by manufacturers with facilities in Sweden and the USA. At present, production is mainly done by order. A distributor in the USA also holds inventory to quickly deliver to customers who place smaller orders.

Market trends and outlook

The market for cultivation lighting based on LED technology is expected to grow substantially in the coming years, with the largest part of the growth coming from commercial greenhouse operations. However, the submarkets for indoor and vertical cultivation are also expected to grow with more than 100 percent during this time.

Market growth LED plant lights 2015–2020 (MUSD)



Greenhouse growers continue to switch from HPS to LED

Most greenhouses still use conventional HPS lighting to complement natural sunlight. The many advantages of LED lighting, such as optimizing the light spectrum and lower electricity and water consumption (as LED produces significantly less heat) means that more and more growers choose to upgrade to this type of lighting.

The initial investment cost is still a limiting factor for this conversion process, but as the production volumes of LED lighting increases, prices are expected to decline. By renting rather than purchasing, the cost for the customer can also be spread out over time.

Stricter environmental regulations

HPS lighting draw huge amounts of electricity, and greenhouses counts among the largest consumers of electricity in Europe. Governments and authorities around the world want to speed up the transition to the significantly more energy-efficient LED technology through both subsidies and, down the line, legislation. This development is particularly evident in Europe and the USA, as well as in China, and may lead to a faster conversion process for greenhouses in the future.

Increasing population, urbanization and quality awareness

These three trends, which are evident both in the western world and globally, mean that more and more consumers ask and are willing to pay for locally grown high-quality crops. To meet this demand, innovative solutions are needed both in terms of where and how cultivation is conducted.

For example, indoor growing in unused premises such as old factories and caves has attracted interest, and in order to maximize the grow area, vertical cultivation and other solutions with several layers are used.

Cannabis and traditional greenhouse cultivation are coming together

Growers of medicinal cannabis have previously only grown indoors without sun for traditional and regulatory reasons, but as legalization takes hold, they are now starting to use greenhouses to an increasing extent. At the same time, the trends described above have led traditional greenhouse cultivators to also grow indoors. This means that these two fields, which previously were separate, are beginning to come together to exchange knowledge and experience.

Competitors

Not switching from HPS to LED lighting, with the initial costs and the additional work this implies, remains Heliospectra's biggest competitor for existing greenhouses.

In the LED lighting market for cultivation, Heliospectra competes with both major traditional lighting manufacturers who have entered the market for LEDs and companies whose products more directly target the greenhouse market. The market is fragmented between a large number of smaller manufacturers who have chosen a few different paths. Some focus on simpler and more limited LED solutions to complement HPS lighting, while others, like Heliospectra, focus on products which seek to completely replace HPS lighting.

In this segment, where the company's direct competitors are found, there is a large spread in terms of technical level and functionality. The simplest products have a static light spectrum, while the more advanced products allow dimming and control of the different wavelengths in order to control the light blend.

The largest players in the market today consist of Philips, Orbitech, Lumigrow, Illumitex, Fluence and Hortilux, together with Osram, GE Lighting and Eye Iwasaki. Additionally, there are several other players competing with traditional lighting. Heliospectra has a clear competitive advantage by offering a complete concept that makes it possible to both understand, install and control the LED lighting in an optimal way.

Outlook

With a complete lighting solution, that includes sales and rental of LED lighting, expert services in Technical Services and the HelioCORE™ system for optimal light control from spring 2018 and onwards, Heliospectra considers itself to be well equipped to continue the strong growth phase seen in 2017.

The company sees great possibilities to continue receiving orders from cannabis growers, while at the same time gradually increase the proportion of food customers in 2018 and beyond. The research and development customer segment continue to look promising considering the many orders received from a large agricultural engineering company in 2017.

North America and Europe are expected to remain the most important geographic markets for the company in 2018 and going forward, but potential customers are also being targeted further south.

The new service-focused offering with LED lighting rentals, Technical Services and HelioCORE™ is expected to increase the proportion of recurring revenues over the next few years, as well as enabling significant upselling to existing customers. However, the sales of LED lighting will most likely account for the majority of the company's turnover in 2018.

With its new complete and market-leading concept, Heliospectra expects more customers to switch to the company's solutions from competitors, a trend that began in 2017.

Expected milestones in 2018

- Commercial launch of Technical Services – completed in Q1
- Commercial launch of HelioCORE™ – completed in Q2
- Presentation of new lighting product for vertical farming – expected in Q3
- Upgrades of the current lighting platform – expected in Q3
- Up-start of a new regional office in Canada – expected in Q4
- Commerzialisation of a turn-key solution for vertical farming – expected in Q4

The persons behind **Heliospectra**

The board

Andreas Gunnarsson

Chairman of the Board since 2016

Andreas Gunnarsson has extensive experience in starting up and operating growth companies in the technology sector. He is also chairman of the board in Air to Air Sweden AB, board member in WRAP International AB, Lamera AB, SolarWave AB, Crossborder Technologies AB, and alternate at Jensen Devices AB, PromorePharma AB, Minesto AB, Powercell Sweden AB, and Pergamum AB. Andreas has studied at Jönköping International Business School.

Born: 1974 Elected: 2011

Holding: 22,968 shares

Anders Ludvigson

Member of the Board

Anders Ludvigson has significant industry experience as co-owner and vice president of Ludvig Svensson AB, the world's largest manufacturer of curtains for the green house industry. He has previously held the position as CEO for their operations in the Netherlands. Anders holds a MSc in production management and investment analysis from the Institute of Technology at Linköping University.

Born: 1970 Elected: 2007

Holding: 0 shares

Staffan Hillberg

Member of the Board

Staffan Hillberg was the company's CEO between 2010 – 2017. He has led several growth companies to international expansion and listing, including Heliospectra. Under his leadership the company was also, as the first Nordic company, listed at the OTC market in the USA through an ADR solution. Staffan is currently co-owner of Wood & Hill Investment AB that focuses on buy-outs and real estate investments.

Born: 1964

Holding: 12,500 shares

Holdings through related legal person: 74,754 shares (Wood & Hill Investment AB)

Martin Skoglund

Member of the Board

Martin Skoglund is one of the founders of Heliospectra. He is also co-founder of Chalmers Innovation and the founder of Wood & Hill Investment AB that focuses on buy-outs and real estate investments. Other assignments include chairman of the board of Stallet Fastighets Holding AB, board member in AB Blåbergsholmen, Haga Hem Holding AB, Oakridge AB, and alternate at Natstone AB. Martin holds a MSc and an MBA from the School of Business, Economics and Law at the University of Gothenburg.

Born: 1966 Elected: 2006

Holdings through related legal person: 74 754 shares (Wood & Hill Investment AB)

Göran Larsson

Member of the Board

Göran Larsson has a long and solid experience in board assignments. In addition to the position as member of the board in Heliospectra, he is also chairman of the board of Hestra Handsken AB, Hestraviken AB, Kungsleden AB and Mappa Invest AB, and member of the board of Göran Larsson i Malmö AB and Bratt International AB. Göran holds a degree in Political Sciences.

Born: 1944 Elected: 2015

Holding: 0 shares

Göran Lindner

Alternate

Göran Lindner is the CEO of Midroc New Technology AB, Midroc Invest AB and Midroc Finans AB and has several board assignments in addition to his position in Heliospectra. These include member of the board of Midroc New Technology AB, Midroc Invest AB, Midroc Finans AB, Powercell Sweden AB, Crunchfish AB, Nilsson Special Vehicles company, Minesto AB, Minesto Warrants One AB, Airgrinder AB, Jensen Devices AB, Promore Pharma AB, Dermagen AB and M&J by Malin & Johanna AB, and alternate in Lamera AB, Air to Air Sweden AB, Crossborder Technologies AB, and Solarwave AB.

Born: 1962

Holding: 0 shares

The persons behind Heliospectra

Management group

Ali Ahmadian

CEO

Ali combines his passion for people and technology with 20 years of international business leadership experience to his position at the helm of Heliospectra. Ali is globally recognized for his successful track record of developing new business and delivering profitable growth in a multitude of geographies. He has lived and worked in five different countries on three different continents over the course of his career. Highly skilled in integrating cultural and commercial experiences, he excels in establishing partnerships with different stakeholders and driving diverse teams to peak performance. Prior to joining Heliospectra, Ali was vice president of Tetra Pak in Asia Pacific and served as a member of Tetra Pak's global executive team.

Born: 1976

Holding: 7,000 shares

Magnus Svensson

CFO

Magnus Svensson is the company's CFO and has more than 16 years of experience in finance and accounting. He was previously the finance director at Car-O-Liner Group AB and he has also held senior positions at Lindex AB and Ernst & Young AB. Magnus holds a Master of Science degree in Business Administration and Economics with a focus on accounting and finance from Gothenburg University.

Born: 1974

Holding: 0 shares

Peter Nyberg

Head of Technology and Development

Peter Nyborg is the head of the company's department for R&D and the development of HelioCORE™ and lighting control. He has built and been responsible for engineering and development groups in several industries, including telecom, the car industry and mobile applications for international markets. Peter holds a MSc in computer science from Chalmers University of Technology.

Born: 1976

Holding: 0 shares

Caroline Nordahl Wells

GM Americas

Caroline Nordahl Wells was recruited as general manager for Heliospectra's team in the USA in the beginning of 2016. She has 15 years of experience in growth-oriented industries including technology companies. Caroline is one of the founders of LumiGrow, a plant lighting company which in some respects competes with Heliospectra. During her time in this company, Caroline was responsible for recruiting and leading a successful sales organization.

Born: 1973

Holding: 0 shares

Peter Emanuelsson

Supply Chain Director

Peter Emanuelsson is responsible for the company's purchasing and logistics and has contributed to an increased focus on sustainability since he was recruited to this position in 2016. He has over 20 years of experience in international trade, project management, sales, and strategic sourcing from positions at companies including Ericsson.

Born: 1965

Holding: 0 shares

Director's report

Operations

Heliospectra AB (publ) was established in 2006 and develops and offers complete solutions in intelligent lighting technology and control to customers in plant research and greenhouse cultivation. Heliospectra's products are based on a profound understanding of plant physiology and photosynthesis, coupled with a unique way of putting modern LED technology to good use. After several years of development in Sweden, the company is now in an international expansion phase. Heliospectra has raised approximately USD 33 million through external financing and has also received research grants to a total value of around SEK 2.6 million. In addition to this, Heliospectra has also received numerous awards for its pioneering technology.

The share and ownership structure

The Heliospectra share has been listed on NASDAQ First North Stockholm since June 18, 2014. In October 2014, trading in the Heliospectra share also began in the USA through an ADR program. The main owners of the company are the Weland Group, Midroc New Technology AB and Stiftelsen Industrifonden. As of December 31, 2017, Heliospectra's share capital amounted to SEK 3 511 158 consisting of 35 111 576 shares with a quota value of SEK 0.10.

Significant events during the year

Q1 (January–March)

- Heliospectra appoints Ali Ahmadian as the company's new CEO. Resigning CEO Staffan Hillberg remains as adviser to Heliospectra.
- Heliospectra presents the company at the Cannabis Investor Webcast on January 26th, 2017.
- Heliospectra is ranked at number 42 on Deloitte Global's 2016 Technology Fast 500™ EMEA List of fast-growing companies.
- TCG Retro Market 1 LLC invests in intelligent LED lighting from Heliospectra. In total, the order includes products worth MSEK 2.5n (USD 302,000) and will be installed early in 2017.
- Heliospectra is selected as a finalist in the third annual Sapphire Awards in the Horticulture Lighting category.
- MAK North America, that will open the first licensed cannabis cultivation for medicinal purposes in the Republic of Macedonia, chose to standardize the new facility using Heliospectra LED lighting to an initial value of MSEK 1.27 (USD 143,034).
- Heliospectra appoints Redeye AB as its new Certified Adviser for Nasdaq OMX First North effective March 1, 2017.
- The University of Sydney's Centre for Carbon, Water and Food chose to invest in intelligent LED lighting from Heliospectra's to a value of MSEK 0.82 (USD 90,800).
- Canada's Island Garden Inc, a licensed medical cannabis cultivation on Prince Edward Island, decide to invest in intelligent LED lighting from Heliospectra to a value of MSEK 1.87 (USD 208,368). This is the customer's second purchase following an extensive trial period.

Q2 (April–June)

- MAK North America place a second order for LED lighting solutions from Heliospectra worth MSEK 1.5 (USD 184,560). The lights will be used in the first licensed medical cannabis growing installation in Macedonia. Delivery is scheduled for the beginning of Q3, and will be reported in accounts during Q2 and Q3.
- CORTEX – the market's leading plant lighting control system – is launched by Heliospectra. Heliospectra's new system provides growers with more control and enables the standardization of crop quality, harvesting cycles and yields.
- Heliospectra receives its fifth order from a global Fortune 500 AgTech company. The order is for the Heliospectra LX60 series, an intelligent LED lamp that is compatible with the company's new Cortex control system. The purchase shows that the AgTech industry is quick to adopt innovative IoT technology. The order, valued at approximately MSEK 4.7 (USD 539,000), is in addition to four previous orders from this customer in 2015 and 2016.

Q3 (July–September)

- Heliospectra announces an order from TruGanic Hybrid Cultivation. The customer chose to invest in Heliospectra's lighting solutions to achieve consistent medicinal profiles and the ability to standardize high crop quality. The order is valued at around MSEK 0.79 (USD 93,500).
- Heliospectra showcased the company's new CORTEX control system at the Cultivate '17 trade fair July 15–18, 2017 in Columbus, Ohio. Cortex integrates with Heliospectra's intelligent LED lighting and light sensors and offers commercial growers the industry's most advanced control functions for lighting in farming environments.
- Heliospectra announces an order from the John Innes Centre in Norwich in the UK, an independent international research center in plant science, genetics and microbiology. The order is valued at GBP 92,248 (MSEK 1.05).
- Heliospectra announces that a new Fortune 500 Global AgTech-customer has selected Heliospectra's intelligent LED lighting solutions. The order, valued at USD 70,000 (MSEK 0.58), boosts Heliospectra's already significant increase

in its product sales and marketing during 2017.

- Heliospectra announces a order from a new, indoor controlled farm in Portugal. The customer is investing in Heliospectra's lighting solutions to speed up harvesting cycles and increase yields. The order is worth MSEK 0.63 (USD 77,500).
- With the appointment of Peter Nyberg as Head of Technology and Development, Heliospectra expands its senior management group. Peter joins the company on August 15, 2017.
- Heliospectra announces an order from its Italian reseller, Ageon S.r.l. Delivery will be to Gandini Antonio S.S. in Northern Italy, one of Italy's leading commercial tomato growers. The aim of the installation is to improve plant quality and increase yields. The order is valued at MSEK 0.81 (USD 99,000).
- Heliospectra announces a second order from the prominent farming installation The Grove in Nevada. The farming installation is standardized on Heliospectra's LED lighting solutions and technology since 2015. Since then, the Grove has achieved exceptional results when it comes to accelerating harvests while also controlling cultivation to provide consistent medicinal profiles in its cannabis plants. The order is worth MSEK 1.75 (USD 209,960).
- Heliospectra announces a third order from the Grove, Nevada. Having standardized on Heliospectra's LED lighting solutions and technology since 2015, the Grove continues to achieve consistent results and high-quality medicinal cannabis. The new order is valued at MSEK 1.80 (USD 224,064) and is a part of the expansion of the company's commercial farming installation in Nevada.

Q4 (October-December)

- Heliospectra announces an order from the new customer NYSK Holdings, an ultramodern medical cannabis farm in Macedonia. The grower has chosen to collaborate with Heliospectra in order to offer patients a product of medicinal quality for chronic illnesses. The order is worth around MSEK 1.02 (USD 125,000).
- Heliospectra announces an order from Medical 420, a farming installation in Macedonia that specializes in growing medicinal cannabis. The installation is investing in Heliospectra's market-leading LED lighting solutions to improve quality, accelerate harvest cycles and increase yields. The order is valued at MSEK 0.98 (USD 117,000).
- Heliospectra announces a new order from Greenbelt Microgreens. The customer is Canada's largest producer of microgreens and has greenhouses in Ontario and British Columbia. The company will install Heliospectra's fully controllable LX50 series with the aim of achieving continuously high yields and superior quality all year round. The order is valued at around MSEK 1 (CAD 151,254).
- Heliospectra will showcase the company's intelligent lighting solutions and new HelioCORE control system at booth # 3607 at MJ BizCon 15–17 November 2017 in the Las Vegas Convention Center, Las Vegas, Nevada.
- Heliospectra is changing the name of its newly announced CORTEX control system to HelioCORE™, effective as of November 16, 2017. The new lighting control system was introduced in July this year and will be available for commercial sales during the first quarter of 2018.
- Heliospectra is proud to announce that it has been ranked as the second fastest growing technology company in Sweden in Deloitte's prestigious Sweden Technology Fast 50.
- Heliospectra announces a new order from Sokaogon Medicinal Corporation (SMC) in Mole Lake, Wisconsin. Sokaogon Medicinal Corporation focuses on industrial hemp cultivation for medicinal use. The order is valued at MSEK 1.98 (USD 232,704).
- Heliospectra announces a new order from the University of Adelaide. The University's Waite Campus has received a major investment to upgrade technology at their Plant Accelerator® and have chosen Heliospectra's LED lighting as a more sustainable lighting solution. The order is valued at MSEK 0.91 (USD 109,494).
- Heliospectra announces its sixth order from a global Fortune 500 AgTech company. The order includes Heliospectra's E60 series, and indicates that leading AgTech-companies continue to standardize on Heliospectra's proven LED solutions. The order, valued at around MSEK 2.72 (USD 328,482), follows five previous orders from this customer in 2015 and 2017.
- Heliospectra announces a new order from Revered of Aurora, Colorado. The customer is focusing on both medicinal and recreational products and has been a leading company in Colorado's cannabis market since 2014. It has chosen to invest in Heliospectra's intelligent LX60 LED lighting solution as part of its continued expansion and enhanced brand portfolio. The order is valued at MSEK 0.74 (USD 88,130).

Financial trends

Sales and performance

Net sales amounted to KSEK 36,039 (23,053). The operating loss amounted to KSEK -33,089 (-42,784), signifying a negative operating margin. The loss after tax was KSEK -33,171 (-45,763) equivalent to SEK -0.94 (-1,30) per share.

Financial position

Operating cash flow was KSEK -29,511 (-39,377). Total cash flow was KSEK -32,307 (54,092). At the end of the period, the Group's cash and cash equivalents amounted to KSEK 40,633 (72,940). As of December 31, 2017, equity to assets ratio was 65 percent (77).

Investments

Investments during the year totaled KSEK 2,296 (5,158). The investments can be divided into KSEK 2,173 (3,971) for intangible assets and KSEK 123 (1,187) for tangible assets. The investments into intangible assets refer to capitalized R&D expenses and patents. The investments in tangible assets concern office equipment.

Employees

At the end of the fiscal year, the number of employees totaled 23 (30).

Significant events after the end of the period

- A Canadian grower chooses Heliospectra's intelligent LED lighting solutions for its new high-performance cultivation facility in eastern Canada. The order includes Heliospectra LX60 intelligent LED lighting solution and is valued at MSEK 5.49 (USD 651,200).
- Heliospectra demonstrates the company's intelligent LED lighting solutions, technical services, and the new HelioCORETM light control software at IPM Essen and Fruit Logistica in Germany.
- AcquiFlow, one of Heliospectra's resellers in North America, secures an order to one of Canada's leading producers of cannabis for medicinal purposes and recreation based in Ontario. The order value is MSEK 0.52 (USD 63,547).
- The distributor Griffin Greenhouse Supplies secures an order of around MSEK 5.8 (USD 698,000) in North America for Heliospectra's E60 series. Delivery will take place and be visible in the accounts in Q3 2018.
- Heliospectra receives an order from Kew Royal Botanic Gardens in Kew and Wakehurst for the company's intelligent LX60 series. The lamps will be installed in one of Kew's plant nurseries for tropical plants replacing traditional HPS lamps. The order is valued at MSEK 1.7 (GBP 150,000).
- Heliospectra appoints Magnus Svensson as new Chief Financial Officer (CFO). He assumes his position on May 2, 2018.
- Griffin Greenhouse Supplies expands its facility in New England with Heliospectra's intelligent LED lighting solutions. The order is the second from the customer and it includes Heliospectra's E60 series. The order value is MSEK 4.6 (USD 549,000).
- Heliospectra receives its third order from Griffin Greenhouse Supplies. The order inludes Heliospectra's E60 series for standardization of the customer's cultivation facility in New England. The order value is MSEK 5.7 (USD 686,510)
- Heliospectra officially launches HelioCORETM, the company's new light control system which is now globally available for order.
- 5 Leters DOO, Macedonia's first certified cultivation facility for cannabis, expands and standardizes its facility with Heliospectra's LED lighting solutions. The new order includes Heliospectra's E60 series and the order value is approximately MSEK 1.5 (USD 179,760).
- ABB and Heliospectra AB sign an agreement for a technical collaboration in the Middle East and Africa. The purpose is to explore innovative and sustainable solutions for the development of commercial agriculture in the region. The collaboration agreement (MoU) was signed between ABB Industries LLC and Heliospectra AB and is valied for the next two years with the goal to extend the partnership to additional markets.

Risks

Competition

The industry Heliospectra operates in is research intensive. General research and development in the areas where the company seeks to do business can negatively affect the company's ability to sell its products, as other methods or technologies may prove more successful. Moreover, several of the competitors may have greater financial resources than Heliospectra

Employees and key individuals

Heliospectra's business depends on its ability to recruit, train and retain qualified employees. If key employees leave the company, this may, at least in the short term, have a negative impact on the business.

Research and Development

Heliospectra's research in plants and light may produce unexpected and undesirable results. This may lead to a reconsideration of the concept and its development, and that additional research and development must be carried out at significant expense, or cease altogether.

Components and supplier dependency

Heliospectra is extremely dependent on one particular component and currently has production located with one specific provider. Price increases for the component or problems with the supplier can affect production negatively.

Regulatory decisions

The marketing of products based on Heliospectra's technology may require the company, its collaborative partners and/or subcontractors, to receive relevant permits from the competent authorities. There is no

guarantee that such permits will be granted, issued in time or that they have the anticipated scope.

Intellectual property rights and patents
Among the things Heliospectra's competitiveness is dependent on is the company's ability to obtain, maintain and defend patents and intellectual property rights for the protection of its products. Patentability criteria for inventions in the field of lighting technology and intelligent lighting systems are generally difficult to assess. There is a risk that Heliospectra cannot obtain patents for its technology and that patents and other intellectual property rights do not provide adequate protection. Any disputes concerning patents can be costly. Heliospectra is also dependent on its developed software and it can be difficult to protect itself fully against unauthorized dissemination of information regarding the company's trade secrets.

Product liability and production capacity
The sale of products is always associated with risks that the products do not measure up, or that customers in some other way become dissatisfied with results after using the product. Customers may well have claims for compensation based on product warranties to an extent greater than Heliospectra's calculations anticipate. Larger sales volumes in the future may cause delivery problems, as there could be a risk that the company is unable to meet a major order from a customer before industrial production is set up.

Additional financing needs
Heliospectra has reported operating losses since the business was started and cash flow is expected to remain negative until steady revenues are generated. This means additional capital injections may be needed. It is not certain that capital can be obtained and there is a risk that the terms become unfavorable.

Currency risks
Heliospectra operates in a global market with much of its sales and purchases in currencies other than SEK. The sale and purchase of raw materials takes place primarily in USD and EUR, but also in other currencies. The Group's purchases of services take place partly in SEK, but also in other currencies.

Credit risk
Heliospectra has adopted policies whereby sales may only take place to customers with satisfactory payment histories and/or who are considered to be adequately solvent. However, the risk that the company will suffer credit losses can never be excluded.

Corporate Governance

Heliospectra AB is a Swedish public company listed on NASDAQ First North Stockholm since June 18, 2014. The company is a public limited company and is regulated by Swedish law, mainly by the Swedish Companies Act and the Swedish Annual Accounts Act. Additional rules and recommendations regarding corporate governance are found above all in the Stock Exchange's regulations, the Swedish corporate governance code (the Code) as well as in the statements of the Swedish Securities Council. In addition to legislation and the rules and recommendations, it is the articles of association that form the basis for the governance of the company's operations. At present, the Code need not be applied by companies whose shares are listed on First North. While it is not mandatory for Heliospectra, the company is committed to comply with the Code's principles.

Annual General Meeting

The Annual General Meeting (AGM) must be held no later than six months from the end of the financial year. Shareholders who are registered in the shares ledger and who have notified their participation in time have the right to take part in the meeting. Heliospectra's AGM 2017 took place on July 14 in Gothenburg. The AGM passed resolutions on the approval of financial statements, the election of Board members and auditors, and a resolution on remunerations to Board members and auditors, guidelines for remunerations to the company's senior executives, guidelines for the appointment of a nomination committee. A resolution was also passed on the introduction of an incentive program, comprising share warrants, directed at management and other key employees.

Nomination committee

The Nomination Committee is tasked with preparing proposals for the following matters for submission to the AGM for resolution: Proposals for Chairman of the meeting; for Board members and Board Chairman, remunerations for Board members for committee work; proposals to auditors, fees for the company's auditors and proposals for the composition of the nomination committee.

The 2017 AGM passed a resolution on guidelines for the establishment of a nomination committee. The nomination committee must comprise four persons. Each of the company's three biggest shareholders in terms of voting rights as of September 30, 2017, is entitled to appoint one member of the Committee. None of the three people appointed in this regard may be a member of the Board. Additionally, the nomination committee must include one Board member appointed by the Board, who will also be the convener. Should any of the three members of the nomination committee leave their assignment prematurely, the shareholder must appoint a new representative. Should a shareholder sell all, but not part, of its shares in the company before the nomination committee has completed its assignment, then the fourth largest shareholder in terms of votes must appoint a new member instead. The nomination committee's mandate runs until a new nomination committee is appointed. No compensation will be paid to nomination committee members, but they have the right to reimbursement for reasonable and necessary expenses incurred for nomination committee work.

The nomination committee for the 2018 AGM consists of:

- Staffan Gunnarsson, Weland group (the Chairman of the Nomination committee).
- Göran Linder, Midroc Invest AB
- Andreas Gunnarsson, convener, Chairman of Heliospectra AB.

Auditor

The company's auditor is Mikael Glimstedt, practicing at Frejs Auditors AB in Gothenburg, authorized public accountant and member of FAR.

The board

Board composition
According to the articles of association, the Board of Heliospectra AB must comprise no fewer than three and no more than nine members, with a maximum of five alternates.

Board members are appointed one year at a time. In 2017, Heliospectra's Board comprised four members and one alternate. Andreas Gunnarsson was Chairman. Of the regular Board members, four are independent of the company and company management and three are independent of the company's major shareholders.

The work of the Board
The Board oversees the work of the CEO and is responsible for ensuring that the organization, management and guidelines for the company are properly set up. The Board is also responsible for ensuring the company's compliance with laws, regulations and internal policies. Furthermore, the Board is responsible for developing and monitoring the company's strategies and major investments, and for approving the budget and annual accounts.

In 2017, the Board held six ordinary meetings and four extraordinary meetings. The work of the Board follows the rules of procedure adopted at the statutory meeting. Each ordinary Board meeting discusses the minutes from the previous meeting, business developments since the previous meeting and the company's financial position and its financial performance. The Board receives written information on an ongoing basis concerning the business and external issues that are important for the company. In 2017, the Board paid particular attention to strategy, brand and organization.

Rules of procedure
In accordance with the Swedish Companies Act, the Board has adopted written rules of procedure for its work and written instructions on reporting to the Board. The rules of procedure and reporting instructions are evaluated, updated where necessary and approved annually.
Any allocation of responsibilities among Board members must be described in the rules of procedure. The Board holds ordinary meetings that follow a program established by the rules of procedure that includes fixed decision points as well as other items as necessary. When necessary, the Board also holds extraordinary meetings upon request of a Board member or the CEO. The reporting instructions make clear when and how information that is necessary for the Board's ongoing assessment of the company's and the Group's financial situation must be assembled and reported to the Board. Reporting instructions provide the Board with data for following up plans and budgets etc. According to the current rules of procedure, the Board must, after the statutory Board meeting following the AGM, meet on at least six scheduled occasions during the fiscal year.

Processes for evaluating board performance
The Chairman is responsible for the evaluation of the work of the Board. The evaluation is performed annually. Among the items examined are the Board's working methods, the number of meetings and their effectiveness, the time for preparation, available specific expertise and opportunities for individual Board members to influence the work of the Board. The findings are taken into account in the nomination process for the subsequent year's AGM.

CEO and management

Group management in Heliospectra consists of the Chief Executive Officer, Chief Financial Officer, Head of Commercial Operations, Supply Chain Director and General Manager Americas.

The CEO is responsible for day-to-day operations, preparing and implementing strategies, addressing organizational issues and following financial developments.

Measures that are of an unusual nature or of great importance with regard to the scope and nature of the company's business, fall outside of day-to-day management and must therefore be prepared and presented to the Board for resolution. The work and role of the CEO and the division of responsibilities between the Board and the CEO are described in more detail in a written instruction approved by the Board (known as the CEO Instructions).

Together with the Board Chairman, the CEO draws up a notice to attend and a proposal for the agenda, assembles necessary decision data and participates in Board meetings.

Remunerations to senior executives
The Board as a whole has chosen to take responsibility for remuneration issues in the company.

Salary and other benefits
Remunerations to senior executives must comprise a fixed salary and a pension. The fixed salary is usually reviewed once per calendar year. No variable salaries are paid. In addition, senior executives have

the right to customary non-monetary benefits such as occupational health services. Other benefits may be offered in individual cases.

Pension
Senior management should be offered pension terms that include a defined contributions scheme with premiums based on the full basic salary. Pension provisions are individual and must be in relation to basic salary.

Severance benefits
The period of notice may not exceed one year if the termination takes place on the part of the company, or no more than six months if the termination takes place on the part of the senior executive. In case of termination on the part of the company, severance pay may also be paid in an amount equal to no more than six months' salary.

The Board has the right to deviate from the guidelines if there are particular reasons for this in individual cases. Salaries and remunerations to the CEO and other senior executives in 2017 are described in Note 6 on page 63.

Remunerations to the Board

The fee to the Board approved in 2017, amounted to SEK 537,600, distributed within the Board as shown in the table below. The 2017 AGM resolved that the remuneration to the Board Chairman will be paid as four price base amounts equivalent to SEK 179,200 per year, and to the other Board members as two price base amounts equivalent to SEK 89,600 per Board member per year.

Auditors' fees
Compensation for Heliospectra's auditors is paid at approved hourly rates. In 2017, fees paid to Frey's Revisorer AB were in the amount of SEK 140,000.

Internal controls

The Board must make sure that the company has good internal control and formalized procedures ensuring that the policies established for financial reporting and internal control are complied with and that the company's financial reporting is set up in accordance with the law, applicable accounting standards and other requirements resulting from the company's status as listed.

The company's internal control structure is based on the allocation of responsibilities between the Board and the CEO. The CEO must, through the good offices of the CFO, ensure that the members of the Board are provided with special financial reports on a monthly basis along with any other information necessary for tracking the company's financial situation.

The share

Heliospectra's share was listed on NASDAQ First North Stockholm on June 18, 2014. Registered share capital as of December 31, 2017 amounted to SEK 3,511,158, split between 35,111,576 shares at a quota value of SEK 0.10. All shares in Heliospectra carry one vote per share. All outstanding shares are common shares and confer the same right to Heliospectra's assets and profits.

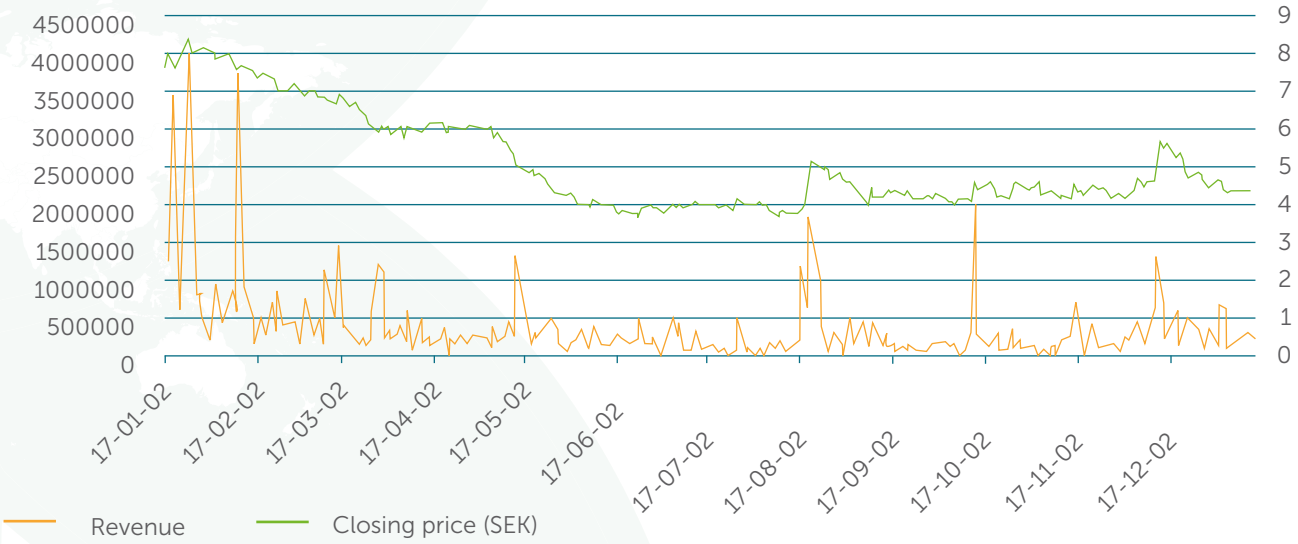
Share statistics 2017 (Nasdaq First North)

Heliospectra's share closed at SEK 7.60 on the first day of trading in 2017. The last price paid in 2017 was SEK 4.38, corresponding to a market capitalization of SEK 153,8 million. The highest price paid in 2017 was SEK 8.3 and was noted on January 9, and the lowest was SEK 3.65 on June 8. Heliospectra shares were traded for approximately SEK 90.7 million during the year. Average trading in the share was approximately SEK 361,000 per day and the turnover rate was 46.8 percent.

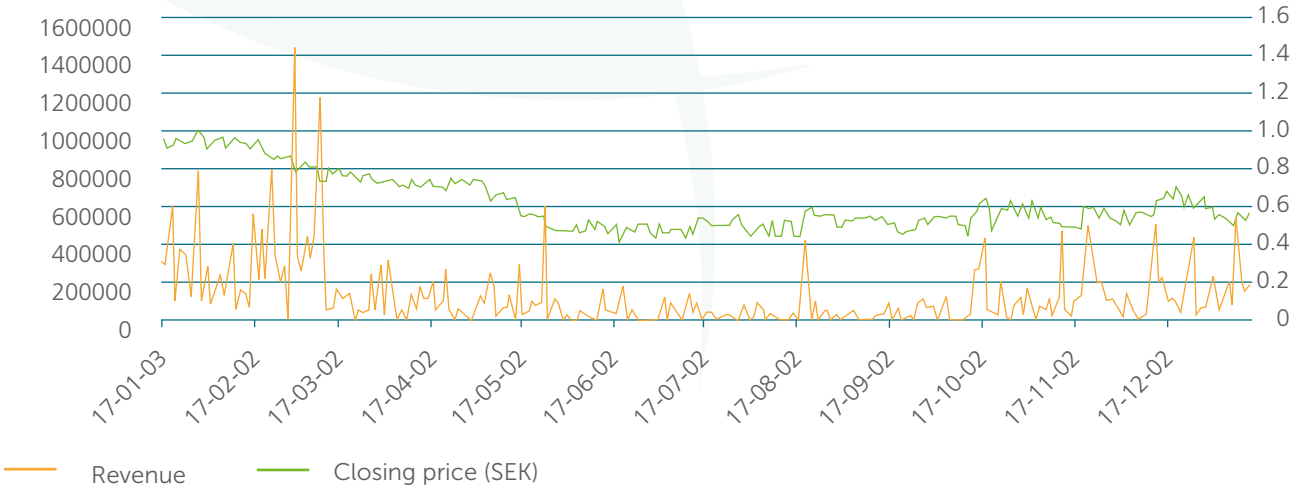
American Deposit Receipts (ADR)

Heliospectra has established an American Deposit Receipt (ADR) program in the USA with the Bank of New York Mellon as depositary. The company's ADR is traded in the USA on the OTC market under the ticker symbol HLSPY. An ADR program allows U.S. investors to trade in the company's shares through a special depository held by the depositary. Each ADR corresponds to a share issued in the Swedish market. The Bank of New York Mellon has hired a special asset manager to hold the underlying share In the Swedish market.

Share price development in 2017 (the stock, listed on First North)



Share price development in 2017 (ADR, listed on the OTC market in the US)



Share capital development

Since the beginning of 2005 until December 31, 2017, parent company share capital developed as shown in the table below.

	Registration date	Share capital	Accumulated Share capital	Number of shares	Number of accumulated shares	Quota value
The company's formation	12/27/2005	100,000	100,000	1,000	1,000	100
New share issue	1/10/2007	36,000	136,000	360	1,360	100
New share issue	3/12/2009	82,500	218,500	825	2,185	100
New share issue	3/23/2011	47,100	265,600	471	2,656	100
New share issue	9/29/2011	180,500	446,100	1,805	4,461	100
New share issue	8/20/2012	105,900	552,000	1,059	5,520	100
New share issue	5/13/2013	61,000	613,000	610	6,130	100
New share issue	8/6/2013	61,000	674,000	610	6,740	100
New share issue	10/8/2013	59,100	733,100	591	7,331	100
New share issue	12/9/2013	47,300	780,400	473	7,804	100
New share issue	1/30/2014	15,600	796,000	156	7,960	100
New share issue	2/28/2014	72,000	868,000	720	8,680	100
New share issue	4/7/2014		868,000		8,680,000	0.1
New share issue	6/16/2014	511,120	1,379,120	5,111,195	13,791,195	0.1
New share issue	8/22/2015	100,000	1,479,120	1,000,000	14,791,195	0.1
New share issue		150,000	1,629,120	1,500,000	16,291,195	0.1
New share issue	9/10/2015	8,000	1,637,120	80,000	16,371,195	0.1
New share issue	9/30/2015	225,100	1,862,220	2,251,001	18,622,196	0.1
New share issue	12/28/2016	1,648,938	3,511,158	16,489,380	35,111,576	0.1

Ownership structure

Below are the 10 largest shareholders in Heliospectra as of December 31, 2017.
The total number of shareholders are around 3 286.

SHAREHOLDERS	NUMBER OF SHARES	EQUITY INTEREST, %
Weland Värdepapper AB	6,952,841	19.8%
Weland Stål AB	5,114,811	14.6%
Midroc New Technology AB	3,547,686	10.1%
Stiftelsen Industrifonden	2,393,409	6.8%
Insurance company, Avanza Pension	1,900,991	5.4%
Bank of New York Mellon, corp. W9	1,777,992	5.1%
PIBA AB	386,000	1.1%
Magowny Invest AB	340,689	1.0%
Belmondo AB	260,800	0.7%
Chrilotte AB	260,800	0.7%
Other owners	12,175,557	34.7%
TOTAL:	35,111,576	100.0%

Share-Based Incentive Programs, Share Warrants and Convertibles

The 2015 AGM resolved to implement a share warrant program for senior executives and personnel. It comprises 400,000 warrants, where each warrant confers the right to subscribe for one new share at the price of SEK 20 during the period January 1, 2018 through June 30, 2018. At full subscription, the dilution effect may amount to around 2.8 percent.

The Extraordinary General Meeting on March 30, 2015, resolved to issue no more than 137,912 warrants. The subscription right to the warrants, with the exception of shareholders' preferential rights, belongs to Viridian Capital & Research, LLC. Each warrant confers the right to subscribe for one new share at the price of SEK 17.88 during the period February 27, 2015 through February 27, 2020. At full subscription, the dilution effect may amount to around 0.7 percent.

The Annual General Meeting of June 14, 2017 approved a stock warrant program for senior executives and personnel. It comprises 770,000 warrants, where each warrant confers the right to subscribe for one new share during the period September 1, 2019 through October 31, 2019. Based on this, dilution will be around 2%.

Authorizations

At the annual general meeting on June 14, 2017, the AGM resolved, in accordance with the proposal from the board of directors, to authorize the board of directors to decide to issue shares and/or warrants, and/or convertibles for payment in cash and/or with terms regarding set-off or issue in kind or otherwise with terms and thereby deviate from the preferential right of the shareholders. Such decision can be made up until the next annual general meeting.

The share issues may be subscribed for at a price on market terms adopted by the board of directors in consultation with the company's financial advisers, taking into consideration any market issue discount where applicable.

The number of shares that could be issued, or the number of shares that could be subscribed for through warrants, or the number of shares that convertibles could be converted into shall amount to a total of 3,511,150 new shares.

Dividend Policy

Heliospectra's Board does not intend to propose any dividend in the next few years. The intention is for any future profits to be reinvested in the business.

Distribution of shareholdings

Holdings	Number of shareholders
1 – 500	1296
501 – 1000	613
1001 – 5000	966
5001 – 10000	211
10001 – 15000	56
15001 – 20000	41
20001 –	103

Change in equity

		Share capital	Other capital contributed	Other s.c. Incl. profit for the year
GROUP				
Opening balance	2017-01-01	3,511	239,575	-161,612
Profit/loss for the year				-33,171
Total equity	2017-12-31	3,511	239,575	-194,783

		Share capital	Share premium reserve	Profit brought forward
PARENT COMPANY				
Opening balance	2017-01-01	3,511	97,441	-19,209
Profit/loss for the year				-33,434
Changes in carrying amounts recognized directly in equity Retained share premium reserve			-97,441	97,441
Total equity	2017-12-31	3,511	0	44,798

Proposal for the allocation of the company's profit or loss

The Board and CEO propose that non-restricted equity

Profit brought forward	78,232,023
Loss for the year	-33,434,309
Total	44,797,714
To be appropriated as follows	
Carried forward	44,797,714
Total	44,797,714

With regard to the company's financial position and performance in other respects, refer to the following income statement and balance sheet, as well as the accompanying notes.

CONSOLIDATED BALANCE SHEET (KSEK)

Amount (KSEK)	Note	2017	2016
Operating income			
Net sales		36,039	23,053
Other operating income		729	3,189
Total operating income		36,768	26,242
Operating expenses			
Goods for resale		-22,347	-15,763
Other external expenses	3–4	-22,993	-30,742
Personnel expenses	5-6	-19,476	-18,147
Depreciation of tangible and and amortization of intangible assets	7	-4,319	-4,338
Other operating expenses		-722	-36
Operating profit/loss		-33,089	-42,784
Profit/loss from financial items			
Interest income and similar profit/loss items	8	0	58
Interest expenses and similar profit/loss items	9	-82	-3,037
Profit/loss before tax		-33,171	-45,763
Tax		0	0
Profit/loss for the year		-33,171	-45,763
Of which attributable to			
Parent company's shareholders		-33,171	-45,763
Minority shareholding		0	0

Consolidated balance sheet (KSEK)

Amount (KSEK)	Note	12/31/2017	12/31/2016
ASSETS	1		
Non-current assets			
Intangible assets			
Capitalized expenditure for development and similar items	10	14,934	16,519
Total intangible assets		*14,934*	*16,519*
Tangible assets			
Property, plant and equipment	11	1,148	1,586
Total tangible assets		*1,148*	*1,586*
Total assets		16,082	18,105
Current assets			
Inventories			
Finished goods and goods for resale		7,589	8,178
Total inventories		*7,589*	*8,178*
Current receivables			
Accounts receivable		6,017	1,908
Current tax assets		78	78
Other receivables		1,940	2,587
Prepaid expenses and accrued income	13	1,986	1,427
Total current receivables		*10,021*	*6,000*
Cash and cash equivalents		*40,633*	*72,940*
Total current assets		58,243	87,118
TOTAL ASSETS		74,325	105,223

Consolidated balance sheet (KSEK)

Amount (KSEK)	Note	12/31/2017	12/31/2016
EQUITY AND LIABILITIES			
Equity			
Share capital	14	3,511	3,511
Other capital contributions		239,575	239,575
Other equity		-161,612	-115,849
Profit/loss for the year		-33,171	-45,763
Equity attributable to parent company shareholders		48,303	81,474
Minority shareholding		0	0
Total equity		48,303	81,474
Non-current liabilities	16.18		
Other liabilities		10,400	10,900
Total non-current liabilities		10,400	10,900
Current liabilities			
Advance payments from customers		4,292	642
Accounts payable		7,895	3,534
Other liabilities	18	1,020	1,106
Accrued expenses and deferred income	17	2,415	7,567
Total current liabilities		15,622	12,849
TOTAL EQUITY AND LIABILITIES		74,325	105,223

Parent company income statement (KSEK)

Amount (KSEK)	Note	2017	2016
Operating income			
Net sales	2	36,662	23,302
Other operating income		520	2,734
Total operating income		37,182	26,036
Operating expenses			
Goods for resale	2	-22,347	-15,763
Other external expenses	2–4	-29,762	-37,166
Personnel expenses	5-6	-13,161	-11,731
Depreciations, amortizations and impairments of and amortization of intangible assets	7	-4,319	-4,338
Other operating expenses		-722	-36
Operating profit/loss		-33,129	-42,998
Profit/loss from financial items			
Interest income and similar profit/loss items	8	0	217
Interest expenses and similar profit/loss items	9	-305	-3,037
Profit/loss before tax		-33,434	-45,818
Tax		0	0
Profit/loss for the year		-33,434	-45,818

Parent company balance sheet (KSEK)

Amount (KSEK)	Note	12/31/2017	12/31/2016
ASSETS	1		
Non-current assets			
Intangible assets			
Capitalized expenditure for development and similar items	10	14,934	16,519
Total intangible assets		*14,934*	*16,519*
Tangible assets			
Property, plant and equipment	11	1,148	1,586
Total tangible assets		*1,148*	*1,586*
Financial assets			
Participations in subsidiaries	12	82	82
Total financial assets		*82*	*82*
Total assets		16,164	18,187
Current assets			
Inventories			
Finished goods and goods for resale		7,589	8,178
Total inventories		*7,589*	*8,178*
Current receivables			
Accounts receivable		6,016	2,174
Receivables from subsidiaries		1,821	1,270
Other receivables		2,019	2,659
Prepaid expenses and accrued income	13	1,986	1,427
Total current receivables		*11,842*	*7,530*
Cash and cash equivalents		*38,735*	*71,597*
Total current assets		58,166	87,305
TOTAL ASSETS		74,330	105,492

Parent company balance sheet (KSEK)

Amount (KSEK)	Note	12/31/2017	12/31/2016
EQUITY AND LIABILITIES			
Equity			
Restricted equity			
Share capital	14	3,511	3,511
Ongoing share issue		0	0
Total restricted equity		3,511	3,511
Non-restricted equity	15		
Share premium reserve		0	97,441
Profit brought forward		78,232	26,609
Profit/loss for the year		-33,434	-45,818
Total non-restricted equity		44,798	78,232
Total equity		48,309	81,743
Non-current liabilities	16.18		
Other liabilities		10,400	10,900
Total non-current liabilities		10,400	10,900
Current liabilities			
Advance payments from customers		4,292	642
Accounts payable		7,894	3,534
Other liabilities	18	1,020	1,106
Accrued expenses and deferred income	17	2,415	7,567
Total current liabilities		15,621	12,849
TOTAL EQUITY AND LIABILITIES		74,330	105,492

Statement of cash flows (KSEK)

	Group		Parent company	
Amount (KSEK)	2017	2016	2017	2016
OPERATING ACTIVITIES				
Profit/loss after financial items	-33,171	-45,763	-33,434	-45,818
Adjustments for items not included in the cash flow Impairment, depreciation and amortization, assets	4,319	4,338	4,319	4,338
Cash flow from operating activities before changes in working capital	-28,852	-41,425	-29,115	-41,480
Cash flow from changes in working capital				
Change in inventories	589	-1,332	589	-1,332
Change in operating receivables	-4,021	930	-4,312	519
Change in operating liabilities	2,773	2,450	2,772	2,358
Cash flow from operating activities	-29,511	-39,377	-30,066	-39,935
INVESTMENT ACTIVITIES				
Activation of capitalized expenditures	-2,173	-3,971	-2,173	-3,971
Acquisition of property, plant and equipment	-123	-1,187	-123	-1,187
Disposals of property, plant and equipment	0	37	0	37
Cash flow from investing activities	-2,296	-5,121	-2,296	-5,121
FINANCING ACTIVITIES				
New share issue	0	99,090	0	99,090
Change in non-current liabilities	-500	-500	-500	-500
Cash flow from financing activities	-500	98,590	-500	98,590
Cash flow for the year (Cash and cash equivalents)	-32,307	54,092	-32,862	53,534
Cash and cash equivalents at the beginning of the year	72,940	18,848	71,597	18,063
Cash and cash equivalents at the end of the year	40,633	72,940	38,735	71,597

Notes

NOTE 1 | Accounting Policies

This annual report has been prepared in accordance with the Swedish Annual Accounts Act and also in accordance with the Swedish Accounting Standards Board's general guidelines BFNAR 2012:1 Annual Accounts and Consolidated Accounts (K3). The accounting policies are unchanged from those of the preceding year.

All amounts are presented in thousands of SEK (KSEK) unless specified. Assets, provisions and liabilities have been valued at cost unless otherwise stated.

Consolidated accounts

Subsidiaries
Subsidiaries are companies in which the parent company, either directly or indirectly, has more that 50 percent of the votes, or in some other way has a controlling influence. Control exists when the parent company has a right to affect the financial and operating policies of a company in order to gain benefits from its activities. Accounting for business combinations based on the unit principle. This means the acquisition analysis is prepared at the time the acquirer gains a controlling influence. As of this point in time, the acquirer and the acquired unit are regarded as an accounting unit. Applying the unit principle means that all assets (including goodwill), liabilities, income and expenses are included in their entirety even in the case of partly-owned subsidiaries.

The cost of the subsidiary is estimated to be the sum of the fair value at the acquisition date for paid assets with the addition of incurred and assumed debt and equity instruments, expenditures that are directly attributable to the acquisition, and any additional purchase sum. Fair value is determined in the acquisition analysis, with some exceptions, at the time when the identifiable assets, liabilities and minority interest are acquired. Minority interest is measured at fair value at the acquisition date. The acquired company's earnings and expenditure, identifiable assets and liabilities, and any goodwill or negative goodwill, are included in the consolidated financial statements as of the date of acquisition.

Elimination of transactions between Group companies and associated companies
Intra-group receivables and liabilities, income or expenses, and unrealized gains or losses arising from transactions between Group companies, are eliminated in their entirety.

Intangible assets and property plant and equipment

Intangible assets and tangible assets are reported at cost less accumulated amortization, depreciation and impairment charges. Cost also includes expenses directly attributable to the acquisition in addition to the actual purchase price.

	Useful Life
Capitalized expenditure for development and similar items	5 YEARS
Property, plant and equipment	5 YEARS

Capitalized expenditure for development and similar items
Development expenses calculated as an average cost in the operation are capitalized and booked by project (new product/projects). Once sales of an object begin, its capitalized expenditures are depreciated. Depreciation continues during the object's sales life, however no more than 5 years. In the event of the withdrawal/termination of an object, and an impairment charge is made for the entire remaining balance for the object and its cost is reversed to the income statement.

Subsequent expenditure
Subsequent expenditure that fulfills the asset criterion is included in the asset's carrying amount. Expenses for ongoing maintenance and repairs are recognized as costs when incurred.

Depreciation
Straight-line depreciation is made over asset's estimated useful life since it reflects the expected depletion of the asset's future financial distributes. Depreciation is recognized as a cost in the income statement. Consideration has been given to the estimated residual value, determined at the time of acquisition at the then prevailing price level.

Impairments – property, plant and equipment; intangible assets and participations in Group companies
At each closing date, appraisals are made as to whether there is any indication that an asset's value is lower than its carrying amount. If such an indication exists, the recoverable amount of the asset is calculated.

The recoverable amount is the higher of fair value less selling expenses or value-in-use. When calculating value-in-use, the present value is calculated based on the future cash flows that the asset is expected to generate in operating activities as well as when it is sold off or scrapped. The discount rates used are pre-tax and reflect current market assessments of the time value of money and the risks relating to the asset. A previous impairment loss is reversed only if the reasons that formed the basis for the calculation of the recoverable value at the latest impairment have changed.

Foreign currency

Monetary items denominated in foreign currencies are translated at the closing rate. Non-monetary items are not restated but presented at the price at the time of acquisition.
Foreign currency differences that arise when settling or translating monetary items are reported in the income statement for the financial year during which they arise.

Inventories

Inventories are entered at cost or net realizable value, whichever is the lower. Obsolescence is thus taken into account. Cost is calculated according to the first-in, first-out principle. In addition to expenditures for the purchase, cost also includes expenses for bringing the goods to their present location and condition.

Financial assets and liabilities

Financial assets and liabilities are reported in accordance with Chapter 11 (Financial instruments valued at cost) of BFNAR 2012:1.

Recognition and derecognition on the balance sheet
A financial asset or financial liability is recognized in the balance sheet when the company becomes a party to the contractual provisions of the instrument. A financial asset is derecognized in the balance sheet when the contractual right to the cash flow from the asset has ceased or been settled. The same applies when the bulk of the risks and benefits associated with the holding are transferred to another party and the company no longer exerts control over the financial asset. A financial liability is derecognized in the balance sheet when the agreed obligation has been fulfilled or ceased.

Valuation of financial assets
Financial assets are measured at cost at initial recognition, including any transaction expenses that are directly attributable to the acquisition of the asset. Accounts receivable and other receivables that constitute current assets are valued individually at the amount expected to be received. Financial assets are valued after initial recognition at cost less any impairment losses and plus any appreciation.

Valuation of financial liabilities
Non-current financial liabilities are measured at accrued cost. Expenditures directly attributable to the raising of loans have been used to adjust loan costs. Current liabilities are recognized at cost.

Remunerations to employees

Employee benefits Post-employment

Classification

Post-employment benefits are classified as defined contribution plans.

In defined contribution plans fixed fees are paid to another company, usually an insurance company, and [Heliospectra] no longer has any obligation to the employee once the fee is paid. The size of the employee's post-employment benefits is dependent on the fees paid to the plan and the return on capital generated by the contributions.

Defined contribution plans

The charges for defined contribution plans are expensed. Unpaid fees are reported as liabilities.

Provisions

A provision is recognized in the balance sheet when the company has a legal or informal obligation resulting from a previous event and it is likely that an outflow of resources is required to settle the obligation and a reliable estimate of the amount can be made.

At initial recognition, provisions are measured at the best estimate of the amount required to settle the obligation on closing day. Provisions are reviewed on each closing date.

A provision is measured at the present value of the future payments necessary to settle the commitment.

Income

The inflow of economic benefits that the company has received or will receive for its own account is recognized as revenue. Income is recognized at the fair value of the consideration received or which will be received, less any discounts.

Sale of goods

When goods are sold, revenue is recognized when the following criteria are met:

- it is probable that the economic benefits associated with the transaction will flow to the company,
- the revenue can be calculated in a reliable way,
- the company has transferred the significant risks and benefits associated with ownership of the goods to the purchaser,
- the company no longer has a level of involvement in day-to-day management usually associated with ownership and nor does it exercise any real control over the goods sold, and
- the expenditures incurred or which can be anticipated to occur as a result of the transaction can be measured reliably.

Note 2 | Group Disclosures

Intra-group sales and purchases

Of the parent company's total purchases and sales measured in SEK, 16.1 percent (18.2) of purchases and 0 percent (0) of sales were with other companies in the entire group of companies to which the company belongs.

Note 3 | Auditor's Fees And Compensation

	Group		Parent company	
	2017	2016	2017	2016
Audit assignment	127	121	127	121
Tax advice	10	9	10	9
Other services	3	65	3	65
Total	140	195	140	195

Note 4 | Operational leasing

	12/31/2017	12/31/2016	12/31/2017	12/31/2016
Leasing contracts where the company is the lessee Future minimum lease charges in respect of non-cancelable operating leases				
Within 1 year	755	755	755	755
Between one and five years	0	0	0	0
Later than five years	0	0	0	0
Total	755	755	755	755
The financial year's expensed leasing fees including rent	911	941	911	941

The company's most significant leasing agreements consist of rental agreements for premises.

Note 5 | Employees And Company Management

	Group		Parent company	
	2017	2016	2017	2016
Average number of employees				
Men	12	19	11	17
Women	11	11	7	7
Total	23	30	18	24
The gender balance in senior management				
Board members			5	4
Of whom men			5	4
CEO and company management	5	5	4	4
Of whom men	4	4	4	4

Note 6 | Salaries, Other Remunerations And Social Costs, Including Pension Costs

	Group		Parent company	
	2017	2016	2017	2016
Pay and other remunerations				
Members of the Board and CEO	1,254	1,039	1,254	1,039
Other employees	13,260	12,781	7,918	7,440
Total salaries and benefits	14,514	13,820	9,172	8,479
Pension costs in respect of members of the Board and CEO	306	111	306	111
Pension costs relating to other	282	175	258	175
Other social security charges	3,169	2,651	2,741	2,365
Total social security charges	3,760	2,937	3,305	2,305
Obligations for pensions and similar benefits to Board members and the CEO	0	0	0	0

Note 7 | Amortization Of Intangible Assets And Depreciation Of Tangible Assets

	Group		Parent company	
	2017	2016	2017	2016
Capitalized expenses for development and similar items	3,758	3,535	3,758	3,535
Property, plant and equipment	561	803	561	803
Total	4,319	4,338	4,319	4,338

Note 8 | Interest income and similar items

	Group		Parent company	
	2017	2016	2017	2016
Interest income, other	0	1	0	1
Exchange rate differences	0	57	0	216
Total	0	58	0	217

Note 9 | Interest expenses and similar profit/loss items

	Group		Parent company	
	2017	2016	2017	2016
Income statement items				
Interest expenses, others	82	3,036	305	3,036
Other income statement items	0	1	0	1
Total	82	3,037	305	3,037

Note 10 | Capitalized expenditure for development and similar works

	Group		Parent company	
	12/31/2017	12/31/2016	12/31/2017	12/31/2016
Opening cost	27,850	23,879	27,850	23,879
Acquisitions	2,173	3,971	2,173	3,971
Closing accumulated cost	30,023	27,850	30,023	27,850
Opening depreciations	-11,331	-7,796	-11,331	-7,796
Acquisitions	-3,758	-3,535	-3,758	-3,535
Closing accumulated cost	-15,089	-11,331	-15,089	-11,331
Closing carrying amount	14,934	16,519	14,934	16,519

Note 11 | Property, plant and equipment

	Group		Parent company	
	12/31/2017	12/31/2016	12/31/2017	12/31/2016
Opening cost	6,615	5,654	6,615	5,654
Acquisitions	123	1,187	123	1,187
Disposals and retirements	-956	-226	-880	-226
Closing accumulated cost	5,782	6,615	5,858	6,615
Opening depreciations	-5,029	-4,415	-5,029	-4,415
Disposals and retirements	956	189	861	189
Depreciation for the year	-561	-803	-542	-803
Closing accumulated depreciation	-4,634	-5,029	-4,710	-5,029
Closing carrying amount	1,148	1,586	1,148	1,586

Not 12 | Shares and participations in group companies

	The parent company	
	12/31/2017	12/31/2016
Opening cost	82	82
Closing accumulated cost	82	82
Closing carrying amount	82	82

The corporate ID numbers and registered offices of subsidiaries are set out below.

Company, corporate id number, head office

	Number of shares	Participation %	Carrying amount
Heliospectra Personal AB, 556904-7243, Gothenburg	1,000	100	50
Heliospectra Inc, 5290422, USA	5,000,000	100	32

Refers to the equity interest of capital, which also corresponds to the percentage of votes of the total number of shares.

Note 13 | Prepaid expenses and accrued income

	Group		Parent company	
	12/31/2017	12/31/2016	12/31/2017	12/31/2016
Prepaid rents/leasing	213	189	213	189
Other items	1,773	1,238	1,773	1,238
Total	1,986	1,427	1,986	1,427

Note 14 | Share capital

	The parent company	
	12/31/2017	12/31/2016
Number of shares	35,111,576	35,111,576
Quota value	SEK 0.10	SEK 0.10

Note 15 | Proposed appropriation of profits

The Board and CEO propose that non-restricted equity, SEK 44,797,714, is to be appropriated as follows:

	The parent company
	12/31/2017
To be appropriated as follows	44,797,714
Total	44,797,714

Note 16 | Non-current liabilities

	Group		Parent company	
	12/31/2017	12/31/2016	12/31/2017	12/31/2016
With maturities longer than five years from closing date	8,600	9,000	8,600	9,000
Total	8,600	9,000	8,600	9,000

Note 17 | Accrued expenses and deferred income

	Group		Parent company	
	12/31/2017	12/31/2016	12/31/2017	12/31/2016
Salaries and vacation pay	1,025	1,521	1,025	1,521
Accrued social security charges	459	547	459	547
Other items	931	5,499	931	5,499
Total	2,415	7,567	2,415	7,567

Note 18 | Pledged assets

	Group		Parent company	
	12/31/2017	12/31/2016	12/31/2017	12/31/2016
Other pledged assets	6,050	6,050	6,050	6,050
Total pledged assets	6,050	6,050	6,050	6,050

Gothenburg, May 23, 2018

Andreas Gunnarsson
Chairman
Member of the Board

Ali Ahmadian
Chief Executive Officer

Martin Skoglund

Anders Ludvigson
Member of the Board

Göran Larsson
Member of the Board

Staffan Hillberg
Member of the Board

Our audit report was issued on May 23, 2018

Frejs Revisorer AB

Mikael Glimstedt
Certified Public Accountant

Audit report

To the annual general meeting of Heliospectra AB (publ)

Corporate ID number 556695-2205

Report on the annual accounts and consolidated financial statements

Opinion

We have audited the annual accounts and consolidated financial statements of Heliospectra AB (publ) for the financial year 2017.

The company's annual accounts and consolidated financial statements are included in the printed version of this document on pages 41–67.

In our opinion, the annual accounts and consolidated financial statements have been prepared in accordance with the Swedish Annual Accounts Act and in all material respects fairly present the parent company's and Group's financial position as of 12/31/2017 and their financial performance and cash flows for the year in accordance with the Swedish Annual Accounts Act. The administration report is consistent with the other sections of the annual accounts and the consolidated accounts.

We, therefore, recommend that the AGM adopt the income statement and balance sheet for the parent company and the Group.

Basis for our opinion

We have conducted the audit in accordance with International Standards on Auditing (ISA) and auditing standards generally accepted in Sweden. Our responsibility according to these standards is described in more detail in the section entitled Auditor's responsibility. We are independent of the parent company and the Group in accordance with professional ethics in Sweden and we have otherwise fulfilled our professional ethical responsibilities under these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate as a basis for our opinions.

Information other than financial statements and consolidated financial statements

The annual accounts are drawn up in two versions; a formal version that only contains the statutory sections and a printed version, which in addition to the statutory sections also contains other information on pages 1–40. The formal version is sent to the Swedish Companies Registration Office and registered. The printed version is communicated to the market through printed documents and via the website. The Board and the CEO are responsible for the other information.

Our opinion in respect of the annual accounts and consolidated financial statements does not cover this information, and we make no substantiating statement concerning this other information.

In the context of our audit of the annual accounts and consolidated financial statements, it is our responsibility to read the information identified above and consider whether the information is materially inconsistent with the annual accounts and consolidated financial statements. In this review, we also take into account the knowledge we otherwise obtained during the audit as well as assesses whether the information otherwise seems to contain material misstatements. If, based on the work that has been done with regard to this information, we conclude that the second information contains a material misstatement, we are obliged to report it. We have nothing to report in this regard.

Responsibilities of the Board and the Chief Executive Officer

The Board and CEO are responsible for ensuring the annual accounts and the consolidated financial statements are prepared and that they give a true and fair view in accordance with the Swedish Annual Accounts Act.

The Board and the CEO are also responsible for the internal control they deem necessary for the preparation of annual accounts and consolidated financial statements that do not contain material misstatement, whether due to fraud or error.

In preparing the financial statements, the Board and the CEO are responsible for assessing the ability of the company and the Group to continue operations. They inform, as appropriate, on the conditions that may affect the ability to continue operations and to make a going concern assumption. However, the going concern assumption does not apply if the Board and CEO intend to liquidate the company, cease operations or have no realistic alternative but to do so.

Auditor's responsibility

Our goal is to achieve a reasonable degree of certainty as to whether the annual accounts and consolidated financial statements as a whole do not contain any material misstatement, whether due to fraud or error, and to submit an audit report that contains our opinions. Reasonable assurance is a high degree of certainty, but there is no guarantee that an audit performed in accordance with ISA and other generally accepted auditing standards in Sweden will always detect a material misstatement, should such be present. Misstatements may occur due to fraud or error, and are considered to be material if they severally or jointly

can be reasonably expected to affect the economic decisions that users make on the basis of the annual accounts and the consolidated financial statements.

As part of an audit under ISA, we use professional judgment and maintain a professionally skeptical attitude throughout the audit. We also:

- identify and assess the risks of material misstatement in the annual accounts and consolidated financial statements, whether due to fraud or error; draw up and carry out audit procedures, inter alia on the basis of these risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our audit opinion. The risk of failing to detect a material misstatement due to fraud is greater than for a material misstatement due to error, because the fraud may include conduct in collusion, falsification, deliberate omissions, incorrect information or waived internal controls.
- gain an understanding of the part of the company's internal controls that is relevant to our audit in order to draw up audit measures that are appropriate with regard to the circumstances, but not in order to express an opinion on the effectiveness of the internal controls.
- evaluate the suitability of the accounting policies used and the reasonableness of the Board and CEO's assumptions in the annual accounts and their related disclosures.
- draw a conclusion concerning the suitability of the Board and CEO's use of the going concern assumption when preparing the annual accounts and the consolidated financial statements. We also draw a conclusion based on the audit evidence obtained, as to whether there is any material uncertainty factor relating to events or conditions that may cast significant doubt on the company's and the Group's ability to continue operations. If we conclude that there is a significant uncertainty factor, we must use the audit report to draw attention to the information in the annual accounts and consolidated financial statements about the significant uncertainty factor or, if such information is insufficient, modify our opinion on the annual accounts and the consolidated financial statements. Our conclusions are based on the audit evidence obtained up to the date of the audit report. However, future events or circumstances main mean that a company and a group can no longer continue operations.
- evaluate the overall presentation, structure and content of annual accounts and consolidated financial statements, including the information, and whether the annual accounts and consolidated financial statements reflect the underlying transactions and events in a way that gives a true and fair view.
- obtain sufficient and appropriate audit evidence with respect to the financial information for the units or business activities within the group in order to provide an opinion with regard to the consolidated financial statements. We are responsible for the control, supervision and execution of the Group audit. We are solely responsible for our opinion.

We have to inform the Board about, inter alia, the date, planned scope and direction of the audit. We must also inform about significant observations made during the audit, including any significant weaknesses in internal control that we may identify.

Report on other legal and regulatory requirements

Opinion

In addition to our audit of the annual accounts and the consolidated financial statements, we have also audited the Board and CEO's management of Heliospectra AB (publ) for the year 2017 and also the proposed appropriation of the profit or loss. We recommend to the AGM that the profit be allocated in accordance with the proposal in the administration report and that the members of the Board and the Chief Executive Officer be discharged from liability for the financial year.

Basis for our opinion

We have conducted the audit in accordance with auditing standards generally accepted in Sweden. Our responsibility in this regard is described in detail in the section entitled Auditor's responsibility. We are independent of the parent company and the Group in accordance with professional ethics in Sweden and we have otherwise fulfilled our professional ethical responsibilities under these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate as a basis for our opinions.

Responsibilities of the Board and the Chief Executive Officer

The Board is responsible for the proposal for the appropriation of the company's profit or loss. Among the things considered in the proposal are an assessment of whether the dividends are justified with regard to the requirements that the company's and Group's business nature, scope and risks place on the size of the parent company's and the Group's equity, the need for consolidation, liquidity and general position.

The Board is responsible for the company's organization and the administration of its affairs. This includes ongoing assessment of the company's and the Group's financial situation and ensuring that the company's organization is structured such that bookkeeping, asset management and the company's financial affairs are otherwise monitored in a reliable way. The CEO takes care of day-to-day administration under the Board's guidelines and instructions and must, among other things, take measures necessary for ensuring that the company's accounting is completed in compliance with legislation and that assets are managed in a satisfactory manner.

Auditor's responsibility

Our goal with regard to the management audit, and therefore our opinion concerning discharge from liability, is to obtain audit evidence that with a reasonable degree of certainty enables us to determine whether any member of the Board or the CEO in any material respect:

- has carried out any act or been guilty of any omission that could give rise to liability for damages against the company, or
- has in some other way acted in contravention of the Swedish Companies Act, the Swedish Annual Accounts Act or the articles of association.

Our goal in regard to the proposal for the allocation of the company's profit or loss, and thus our opinion on this, is to assess with a reasonable degree of certainty whether the proposal is in compliance with the Swedish Companies Act.

Reasonable assurance is a high degree of certainty, but no guarantee that an audit performed in accordance with generally accepted auditing standards in Sweden will always detect the actions or omissions that may give rise to liability for damages against the company, or to a proposal for allocation of the company's profit or loss that is not in accordance with the Swedish Companies Act.

As part of an audit under ISA and good auditing practice, we use professional judgment and maintain a professionally skeptical attitude throughout the audit. The management review and the proposed appropriations of the company's profit or loss are based mainly on the audit of the accounts. Any additional procedures are performed according to our professional judgement based on risk and materiality. This means we focus our examination on such measures, areas and conditions as are essential for the operation and where deviations and non-compliance would have special significance for the company's situation. We review and examine decisions, decision support data, actions taken and other conditions that are relevant for our opinion concerning discharge from liability. As the basis for our opinion on the Board of Directors' proposed appropriations of the company's profit or loss, we assessed whether the proposal is in accordance with the Swedish Companies Act.

Gothenburg, Friday, May 23, 2017

Frejs Revisorer AB

Mikael Glimstedt
Certified Public Accountant

This annual report has been produced by **Honeybadger** together with **Heliospectra**
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