heliospectra

*intelligent light for efficient growth*



# 2014 ANNUAL REPORT

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### BRIEFLY ABOUT HELIOSPECTRA

*Heliospectra specialises in intelligent light technology for plant research and greenhouse cultivation and develops complete lighting systems for the greenhouse market using the latest LED technology. Heliospectra's fixtures are advanced and save a great deal of energy compared with conventional fixtures and are also able to sense how the lit plants are growing and can adapt the light accordingly. Heliospectra products are based on in-depth knowledge of plant physiology and photosynthesis together with a unique method of assimilating modern LED technology. Heliospectra has also received numerous awards for its forward-thinking technology.*

### ANNUAL GENERAL MEETING

*The Annual General Meeting for Heliospectra will be held 10am on 22 June 2015 at the company premises at Frans Perssons Väg 6 in Gothenburg.*

## Calender

**22 JUN 2015**
ANNUAL GENERAL MEETING

**26 OCT 2015**
INTERIM REPORT JUL–SEP

**31 AUG 2015**
HALF-YEAR REPORT JAN–JUN

**26 FEB 2016**
YEAR END REPORT

# DEVELOPMENT 2014

### FIRST QUARTER

Along with a select number of customers, Heliospectra develops different versions of LX 60 and ensures security of delivery through its chosen suppliers.

A first test of an LX 60 with sensor fitted at plant level is done at the Botanical Gardens in Gothenburg. The system displayed an energy saving of a further 15 percent compared with a free-standing LX 60.

An order which will result in a first installation of 21 LX 60 at the largest grower of fresh herbs in Europe, Swedeponic, is received. The order will mean a follow-up delivery of the same size and and invoicing of a further 21 during the second quarter.

### MAY

Launch of the new generation of intelligent light systems. The patented system LX 60 is more efficient, cheaper and energy-saving compared with previous products.

Swedponic, the European leader in growing fresh pot herbs for the retail sector, has installed the new light system in some of their installations and will continue to install it in further segments.

### JUNE

Listed on NASDAQ First North on 18 June. The company receives about SEK 41 million in an oversubscribed share issue.

### JULY

Heliospectra receives its largest order in the US for 20 units of the new light system LX 60 at a value of SEK 200,000. In addition to the order, there is a declaration of intent of supplying a further 180 light systems during the second quarter of 2014.

### AUGUST

The company announces that trading in the Heliospectra share will start in the US via a so-called ADR programme.

### SEPTEMBER

Heliospectra is part of the joint venture *The Warm and Clean City 2*. The main aim of the project is to produce a comprehensive solution for cleaning waste water and for increasing the opportunities for recycling nutrients and energy extraction. Heliospectra's part in the project is to contribute with intelligent light technology and create optimal life conditions for algae which are part of an essential aspect both of cleaning waste water and energy extraction.

Heliospectra will be one of 13 new partners in a European space programme for developing secure crops at space stations. The EDEN Initiative is a research programme developed by the German space agency DLR Institute of Space Systems (ISS). Heliospectra's task in the project is to create a water-cooled LED solution based on the company's reputable expertise within horticulture (the cultivation of vegetables, fruit, flowers and ornamental plants) light technology. In total, the project has received EUR 4.5 million in EU contributions.

### OCTOBER

The company's first patent, which was previously approved in China, Russia and Hong Kong, is now approved in the US. The patent relates to methods for optimising LED lights for plants and to streamline working processes in the greenhouse environments of the future.

### NOVEMBER

Sales start online of the latest generation of lights, LX 60. The products will be sold via www.wexthuset.com, which is the largest Swedish online supplier of functional products for cultivation, and via our own website www.heliospectra.com and www.growershouse.com in North America.

## EVENTS BEYOND THIS YEAR

### JANUARY

The customer in the US who in July 2014 signed a first partial order for 20 systems signed a follow-up order for 100 systems. The patent is granted in Japan.

### FEBRUARY

Heliospectra hires Dr Sue Sisley as Head of Medical Plant Research. Dr Sisley will supply the company with industry expertise and customer feedback. Dr Sisley works with growers in order to develop scalable growing methods for medicinal plants, and monitors data collection and reporting for Heliospectra's global cultivators of medicinal plants.

Debt financing is obtained in the form of a Almi Företagslån of SEK 3 million and a bridge loan from Weland of approx. SEK 15 million.

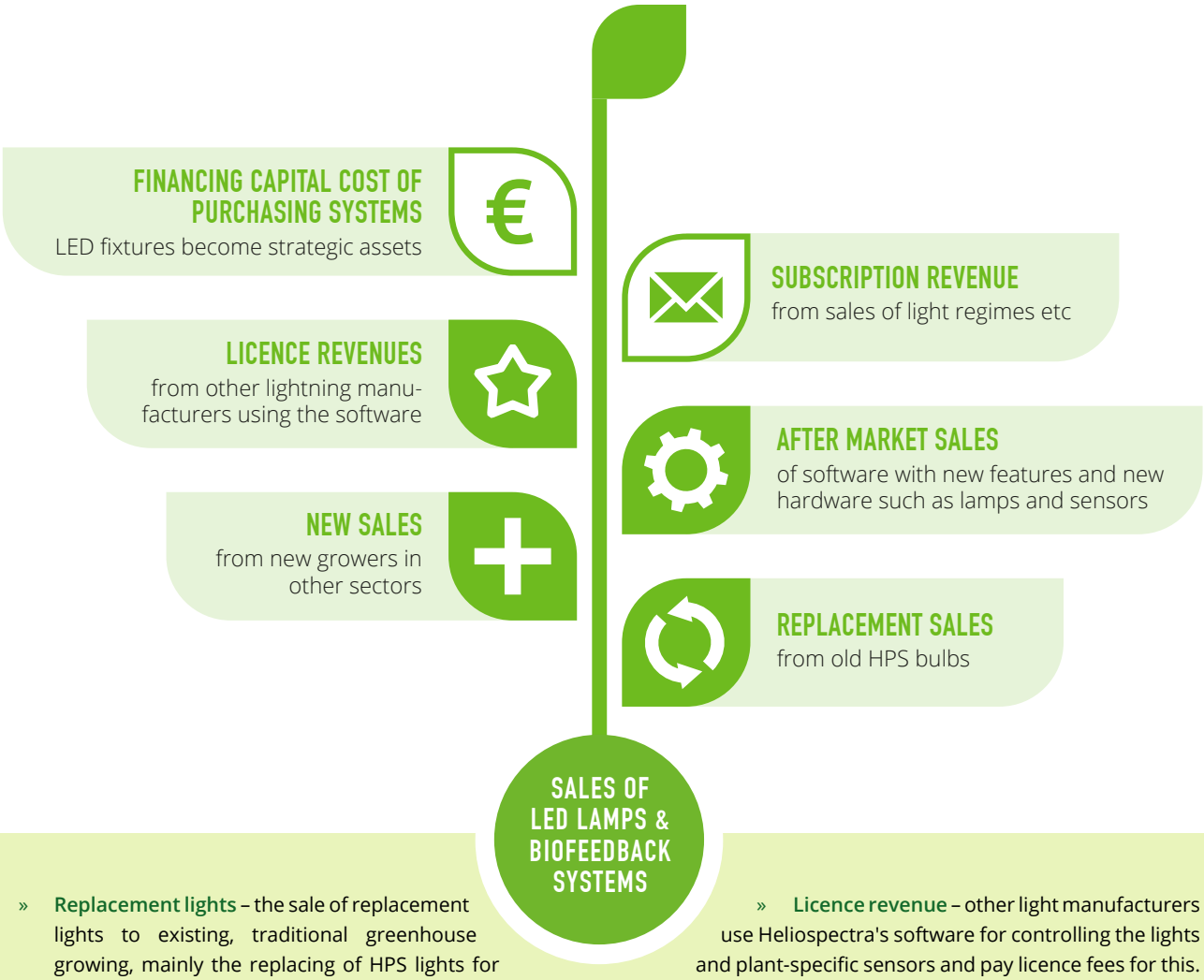
### MARCH

At an extraordinary general meeting, the board got the approval for a new issue of shares and/or subscription rights.

# BUSINESS MODEL AND STRATEGY

## Business model

*Heliospectra's business model is to develop and sell efficient systems for lighting which provide growers with the ability to check the quality and growth of plants. The products are sold as systems in which the lights are a component. Additional sales of software then takes place for new functionality as well as new units such as fixtures and sensors.*




» **Replacement lights** – the sale of replacement lights to existing, traditional greenhouse growing, mainly the replacing of HPS lights for LED lights.

» **Lights for new growing areas** – the sale of lights to new growing areas such as medicinal plants, growing of trees, botanical gardens, algae for biofuel and nutrients and to growth chambers for universities and research laboratories.

» **After-market** – when the sale of complete systems with both hard- and software gets going, i.e. both lights and advanced sensor systems, the company will be able to sell additional software, upgrades and accessories as new versions are developed. The customers will be offered subscriptions for upgrades which will provide a stable revenue flow.

» **Licence revenue** – other light manufacturers use Heliospectra's software for controlling the lights and plant-specific sensors and pay licence fees for this.

» **Subscriptions** – the database that is being created of collected data from the different sensors and for different plants is analysed, repackaged and sold.

» **Leasing of equipment** – the customers will be given help with financing and leasing of hardware. One opportunity, for example, is for energy suppliers to offer the greenhouse grower financing for the entire installation for signing a three of five-year contract for energy supply.

## Strategy

### MARKETING STRATEGY

Heliospectra's marketing is done through participating in important conferences and trade fairs, in addition to regular newsletters and traditional advertising in different media.

### SALES

The sale of Heliospectra's products is achieved through various channels: direct sales to end-customers via the distributing subsidiaries and via independent distributors. The primary markets are North America, the UK, the Netherlands, Germany, Poland and Scandinavia.

### INTELLECTUAL PROPERTY RIGHTS

Heliospectra has a clear strategy for protecting its creations. All technology that is commercial is protected. Furthermore, it protects the company's trademarks and applies for design patents.

### PRODUCTION

All Heliospectra's production is done by external suppliers. Using this model avoids the supply of the products becoming a bottleneck when sales increases.

## OBJECTIVE

*Heliospectra's objective for 2015 is to markedly increase its market penetration. Focus will be on sales activities and marketing measures.*



# A WORD FROM THE CEO



*During 2014, we have built a solid foundation for Heliospectra's expansion. We have launched the best products on the market. We dare to stick our neck out and say this, as it has been confirmed by third parties. For example, we have been made part of a large EU project alongside the German space agency DLR. The project relates to growing in space. Also, the fact that Sue Sisley, an internationally-known researcher within medicinal plants, has accepted the role as Head of Medicinal Plant Research within Heliospectra, shows that our products are of an international high quality. We work pro-actively on protecting our innovations and the first patent has been approved in the US, Canada, Russia, China and Hong Kong. We have submitted a further six patent applications.*

During 2014, we phased out our first commercial product L4A to be replaced by our new products LX60 and RX30. After launching the new products, we have started an intensive sales and marketing offensive. We've divided the market into three different areas: traditional greenhouse growing, growing of medicinal plants and research.

Within greenhouse growing, there is considerable underlying demand for new technology. All market research confirms that there is significant growth. LED lights, along with our ground-breaking technology, have just started to make their mark. Replacing existing HPS lights with LED lights is a relatively large investment and growers undertake careful assessments and tests before they are prepared to take the final step. Therefore, a sales cycle can often stretch across a couple of growing seasons and for us, the tests and assessments have taken longer than expected.

In terms of medicine, the situation is different. This is a brand new market growing fast. This is not an issue of replacement lights but new investments from scratch in a modern industry at the cutting edge of technology. Because of this, the investment processes are shorter and quicker but the market is still in its infancy.

The field of research is a small but important market. Being active and present in different research projects and within different institutions ensures that we continue to be at the forefront of our technology.

One of the most satisfying aspects of working with Heliospectra is that the whole business concept of the company is based on environmental improvements. Sustainability is not a separate part of the business – it is our core business. We develop technology that reduces energy consumption, emissions and water consumption.

The sales focus has meant that during last year, we improved our marketing organisation. We're establishing new retail channels and are working on a number of deals which we can subsequently use as references, and as a base on which to build volume sales. There are negotiations under way with a number of larger customers. Two important deals were signed off during 2014; Swedeponic who bought 42 systems and a customer in the US who bought 20 systems and made a follow-up order for 100 systems at the beginning of 2015. Through our work with external manufacturing partners, we are well positioned to start up volume production. Most of our components are purchased from China but the most important aspect of the manufacturing chain, fitting the electronic cards, takes place in Sweden at a company who are experts in LEDs and how to deal with the heat from the diodes.

2015 will be a year with a continued focus on sales and marketing but shall also remain at the cutting edge in terms of research. This means that parallel with the sales efforts we will be placing great emphasis on development projects. The development of the sensors and the bio feedback system will continue to be done in co-operation with Chalmers. At Greensys, a large international symposium for news in the greenhouse industry, we presented the first step of integrating the sensors to the light system. We have also tested this at customers together with Hoogendoorn, a large Dutch operator in this industry. We have built up a strong, competent team with international employees who are all passionate about their work. World-leading technology, a market with rapid growth, competent employees and strong main shareholders is a winning combination.

*Staffan Hillberg*
**CHIEF EXECUTIVE DIRECTOR**

# ACTIVITIES

*In order to achieve a production that can fulfil the current increasing demand, greenhouses use supplementary lights for large parts of the year. Plant growth is dependent on light in order to stimulate the photosynthesis. In northern countries, this is mainly about compensating for the lack of sunlight but also further south, there are considerable need for increasing the number of light hours and for optimising the conditions for the plants.*



In order to achieve the desired growth and quality of the plants, the growers need to consider a number of parameters. Plants need water and nutrition which is added through an automatic watering system. Furthermore, optimising the light conditions in order to ensure photosynthesis and growth is always necessary. In combination with this, there is a need for a beneficial climate which is achieved through a sensitive interaction, mainly between temperature and air humidity, but also circulation of air in order to prevent the creation of mould spores and similar. In general, it can be said that growers prefer a homogeneous climate with an optimal supply of water and nutrients. It is also desirable to maximise growth-stimulating light at the same time as its need for rest from light must be ensured by the use of a number of hours of darkness every day. HPS lights are currently the most common technology in greenhouses but LED lights and new technology improving growing results, both in environmental and in commercial terms, have started to make their mark.

## Technology

Heliospectra offers one of the most advanced products on the market for stimulating the growth and quality of plants. This is done using LED technology (Light Emitting Diode) which makes it possible to adjust wave-length and intensity based on light recipes developed by research on light for growing. Heliospectra products are based on an in-depth knowledge of plant physiology and photosynthesis together with a unique method of assimilating modern LED technology.

Heliospectra has developed an advanced system where every light fixture uses light diodes with up to eight different wavelengths. Every wavelength can be individually controlled and can therefore create the perfect light for different plants which have different demands, depending on the type of plant and its stage of development and the characteristics being sought. In addition to the basic wavelengths for operating the photosynthesis, certain wavelengths are used to send signals to plants. For example, this might be to bring out the flavour in basil or to start off flowering.

Heliospectra's fixtures are advanced and save a great deal of energy compared with conventional fixtures; they are also able to sense how the lit plants are growing and can adapt the light accordingly. The light fixtures have built-in intelligence and communicate using a central control system. The patent also includes a further development with sensors which can sense the reflected light and the fluorescent light from the plants which means that the system can sense how the plants are feeling and how they use the light.

*For growers, a transition to Heliospectra's light system means:*

+ **Better plant quality**
+ **Hardier plants that are easier to transport and to store**
+ **Better flavour**
+ **Fewer discarded plants**
+ **More nutritional products**
+ **Higher turnover in the greenhouse**
+ **The ability to control production and growth speed to meet up with demand**

## COMPARISON BETWEEN TRADITIONAL HPS LIGHTS AND HELIOSPECTRA'S LED SYSTEM

| | TRADITIONAL HPS LIGHT | HELIOSPECTRA'S LED |
|---|---|---|
| LIGHT | Just like typical street lights, HPS lights have a yellowish light. Most growers agree that daylight is the most ideal when assessing plant health.<br>The HPS light is static and cannot be adjusted during the course of the day but either on or off. | Using Heliospectra's system with LED lights, it is possible to adjust the spectrum so that the daylight cycle is recreated. It is possible to control the intensity of the light as needed and thus impact production by, for example, slowing down the speed of growth, control the size of the plant, its height, flowering etc. by changing the light. |
| HEAT | The energy conversion in an HPS light generates approx. 70 percent heat. The heat development by the lights becomes an inefficient heat source where useful electric energy is turned into low-quality heat energy.<br>When the lights are on or off, they generate either full heat or no heat at all which makes controlling the temperature and the desired homogeneous climate more difficult. | Heliospectra's lights are heat neutral which provides the growers with the advantage of removing one factor from the equation.<br>Heliospectra's technology provides the growers with a double saving in the form of lower energy consumption, both for light and for cooling down. |
| ENERGY | HPS lights are relatively efficient by approx. 70% of the energy in the HPS light becomes heat. | The energy consumption of an LED light is approx. 50–60% of that of an HPS light. |
| LIFE EXPEC-TANCY | The life expectancy of an HPS bulb is only approx. 15,000 hours (approx. 2–3 years) but as the brightness reduces with age, the growers often replace the lights after approx. 10,000 hours and sometimes even earlier. | LED lights have a life expectancy of more than 50,000 hours. |
| ENVIRON-MENT | The HPS lights contain traces of heavy metals. | LED lights do not contain any hazardous heavy metals. |
| PRICE | The large production volumes for HPS lights has contributed to a low purchase price for complete fixtures, spare parts and lights. | LED lights are more expensive to purchase but they provide an energy saving and an increase in production. The installation of LX 60 has a repayment period of 1-3 years compared with HPS. |

## Lettuce growing at University of Akron

All-year round production of crops is now possible thanks to supplementary lighting which extends the length of the day for the crops. This has lead to an increased interest in studying artificial lights. In the winter of 2014, University of Akron undertook a study on lettuce growing. This study focused on comparative characteristics of artificial lights.

Four commercial light sources: Gavita Pro high-pressure sodium (HPS), IGrow induction compact lamps and two LED lights Lumigrow Pro and Heliospectra LX 60 were tested.

The lettuce was grown in hydroponic systems (completely in water, with no soil) indoors in a controlled environment. The growing lasted 45 days and the target weight was 170 grams per plant at harvest.

After 45 days, there was a growth variation for the different light sources. Plants grown under Heliospectra, Lumigrow and Gavita had accumulated more biomass whereas plants lit with iGrow had a lower biomass with visibly longer and less compact leaves. The shape and structure of the plant had two characteristics. Plants lit with Lumigrow, Gavita and Heliospectra had a higher density and were more compact with thicker leaves compared with iGrow. The iGrow-plant had larger and thinner leaves and a longer stem. For plants lit with Heliospectra, Lumigrow and Gavita, there were more side leaves.

In the Brix-tests, the Heliospectra plants had a rating of six which is average. Lumigrow, iGrow and Gavita were below average. Heliospectra was ranked top in terms of sensory impressions. The colour of the leaves was dark green, the flavour sweet, the consistency crisp and great freshness. iGrow was ranked average with a light green colour of the leaves, soft and brittle leaf consistency and a mild flavour. Gavita had a good leaf colour but a bitter flavour and average freshness. Lumigrow was ranked last with a dark green leaf colour, a crispy consistency and with a bitterness below average.

The result of the study was that the lettuce grown with Heliospectra's LX 60 LED light were the tastiest and most attractive.

The complete report is available at: www.heliospectra.com

| LIGHTING | WET WEIGHT | DRY WEIGHT | PERCENTAGE CHANGE | BRIX | TASTE/ CONSISTENCY |
|---|---|---|---|---|---|
| HELIOSPECTRA 600W | 170 g | 63 g | 63% | 6 | 9 |
| IGROW 400W | 176 g | 60 g | 66% | 3 | 7 |
| LUMIGROW 300W | 136 g | 54 g | 60% | 4 | 6 |
| GAVITA 1000W | 283.5 g | 74 g | 74% | 3 | 7 |












## Products

Towards the end of 2014, the launch of the new products LX60 and RX30 series commenced. They are based on the same technical platform in order to achieve economies of scale and replaced the previous L4A. The two new products have a clear cost and function focus. LX60 is aimed at the commerical market and RX30 is a product primarily aimed at the research market. LX60 has been developed for long operating times in tough environments. The light has a completely variable frequency spectrum and newly-developed optics in order to optimise the light pattern and different areas of applications. The market price for LX60 is about SEK 14,000. Heliospectra has produced a number of prototypes for consumer products but the focus remains primarily on the professional market.




The first reference installations among greenhouse growers has been done at Spis a (previously Swedeponic) which is the largest grower of fresh herbs with greenhouses in Sweden, the UK, Poland, Portugal and the Czech Republic. This installation is important because it gives us the opportunity to show potential customers how the product is installed and how it works in its own environment.



The system is made up of both hardware and software:

### HARDWARE

- **The light:** lamp with a completely variable frequency spectrum.

- **Sensors:** the sensors can be split into two types. The most advanced sensors are at the same height as the lights and are aimed down towards the plants in order to catch signals from them, and these signals are then used in the comprehensive bio feedback system. Sensors are then also fitted down by the plants which sense the intensity and the spectral distribution.

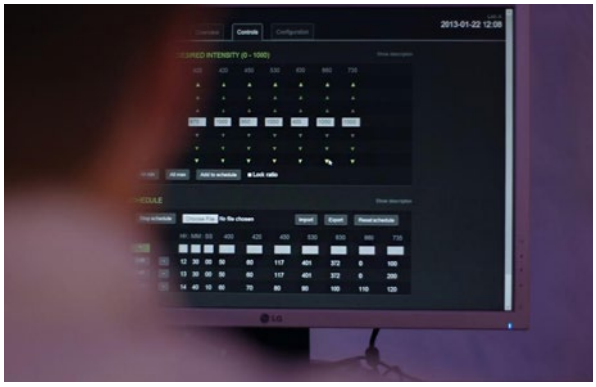


### SOFTWARE

- **Web-based user interface:** Web-based interface for controlling and guiding lights. Receives updates/light regimes from the database and implements these in the LED systems.

- **Data centres and control systems:** data centres for collection, analysis and implementation of light regimes/ recipes for different types of plants.

- **Light regimes:** Every crop has an individual preference for light and Heliospectra offers light regimes for a range of plants (which can be expressed as a manual for which characteristics a plant develops at different spectra). The advantage for the grower is the choice within areas such as the plant's growing time, flavour, size, weight and hardiness.



## Intellectual property rights

Heliospectra has a clear strategy for protecting its creations and registered the design of LX60 in 2014.

Heliospectra is also working on the development of optical sensors which are an important part of the patent. The sensors can be split into two types. The most advanced sensors are fitted at the same height as the electric fittings and the complete system for biofeedback. Sensors are then also fitted down by the plants which sense the intensity and the spectral distribution.

**Heliospectra's patent portfolio covers four areas:**

- **Spectrum optimisation** is the main process for Heliospectra's Holy Grail; that is, the use of different light regimes for different plants with the aim of controlling the features that the plant should develop or shed.
- **Stress detection** is a vital parameter in an automated light system as plants do at some point experience stress (that is, have absorbed too much light) and cannot absorb any more. Heliospectra has also developed a regime for returning the plant to a non-stressed state.
- **Tracking and controlling** the development of the plant is the main process of integrating the sensors into the light, and how the information from these sensors is to be used in order to control the light for different purposes.
- **System integration and support** is the collective group for the innovations which makes it easier for growers to use Heliospectra's lights.

## Sales

The sales process for Heliospectra's products normally cover a number of growing cycles. The growers install test systems at a few sites and then assess the result. A growing phase lasts one to three months and the grower often wants to test over several growing phases or seasons in order to be able to make a well-founded assessment. This means that the sales cycles are relatively long, sometimes up to a year.

Heliospectra's sales is mainly done via distributors. A large share of the sales are made through Conviron, based in Canada, and the largest manufacturer in the world of controlled growing environments. Such environments are made up of closed rooms or chambers and greenhouses for research. Conviron sells globally to universities, institutes and the large international agriculture companies who, for example, develop seeds for sowing. Heliospectra is also in talks with other operators similar to Conviron.

In the US, Heliospectra's subsidiary Radiant Inc. is working with Growershouse, one of the largest single online retailers of growing accessories and lights in the US. Heliospectra is also in discussion with a number of retailers of light systems for professional greenhouses.

During 2014, Swedeponic installed 42 fixtures of Heliospectra's new product LX60 at their site in Södertälje. Swedeponic is the leader in Europe in growing fresh herbs in pots for the retail sector. Twenty units were also sold in the US where the end-customer is building a new commercial greenhouse site in Seattle. The initial order was followed by a further order for 100 systems in January 2015. These installations are important references for Heliospectra. A further approximately ten potential international customers are currently testing the system. Tests of the concept with leasing and continuous revenue is currently being tested with a number of customers.



# SUSTAINABILITY

*Heliospectra's products provide a range of environmental benefits and the company has been listed as one of the world's 100 most environmental innovative companies in 2013 by the environmental organisation Sustainia. The positive environmental effects provided by Heliospectra's products for the most coincide with market forces.*

### REDUCED ENERGY REQUIREMENTS

LED lights only require 50–60 percent of the energy needed by HPS lights. This is mainly because HPS lights produce a lot of heat. LED lights are heat neutral. This results in energy savings, both in terms of running the light but also in terms of the absence of a need for cooling down due to the heat created by the lights.

### REDUCED WATER REQUIREMENT

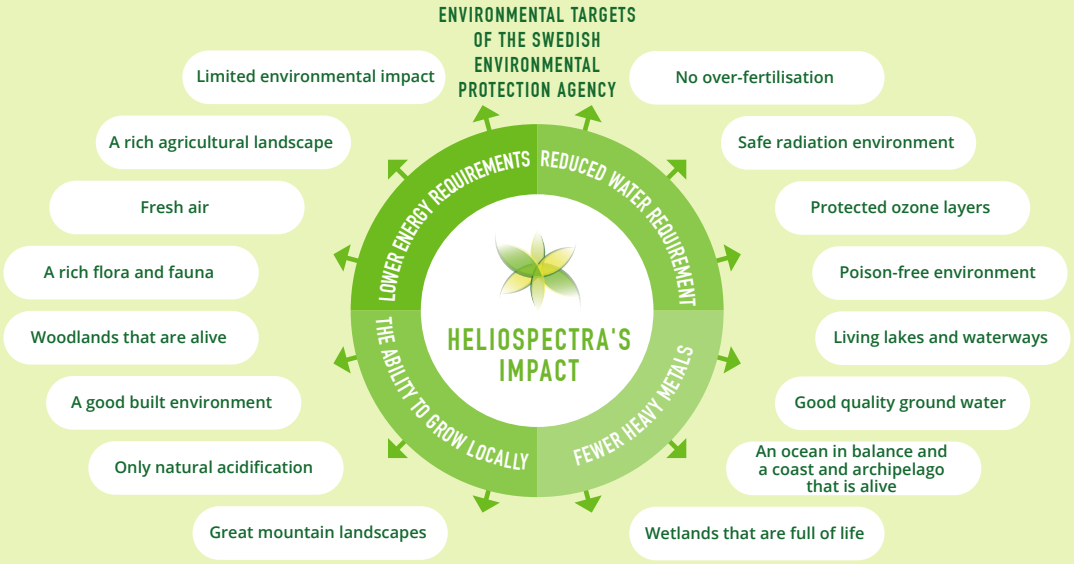
The lack of water is an ever-growing global problem. Being able to grow in a way which uses water efficiently is becoming more and more important. For example, Heliospectra is in discussions with companies in sun-intense and water-poor countries in the Middle East about starting cultivations under ground.

### THE ABILITY TO GROW LOCALLY

Growing locally reduces the need for transports and the emission of carbon dioxide. By using Heliospectra's products, the cultivations are no longer dependent on location, weather, season or supply of sunlight. It is possible to grow anywhere where a greenhouse can be erected.

### FEWER HEAVY METALS

The composition of an HPS light is very similar to that of a light-bulb and it contains traces of heavy metals. LED lights do not contain any hazardous heavy metals such as mercury. They are also very durable and do not need to be replaced as often.




## Environmental targets of the Swedish Environmental Protection Agency

The Swedish Environmental Protection Agency has set a number of environmental targets. The government carries the overall responsibility for the environmental quality targets but everyone in society must take their responsibility for achieving the targets. Authorities, county councils, municipalities, companies, voluntary organisations and individuals must all help. Heliospecta's products have a beneficial impact on several of the 16 environmental quality targets set.

There are also other environmental areas of application for Heliospectra's technology than just those associated with traditional growing. For example, the company is part of a joint venture *The warm and clean city 2*. The main aim of the project is to produce a comprehensive solution for cleaning waste water and for increasing the opportunities for recycling nutrients and energy extraction. Heliospectra's part in the project is to contribute with intelligent light technology and create optimal life conditions for algae which are part of an essential aspect both of cleaning waste water and energy extraction.

# HISTORY

## 2006 – 2011

Heliospectra was set up in 2006 by plant researches in co-operation with Inkubatorn in Borås and a number of investors aimed at developing cultivation lights based on bio feedback systems.

The strategy was always to develop a comprehensive light system for the large-scale greenhouse market for vegetables, fresh herbs and ornamental plants. The development work has been carried out in close co-operation with Chalmers University of Technology. A test series was produced for internal use. The company was initially financed by a number of business angels, and Weland Stål who came on board in 2009 was one of the first investors. During 2011, Midroc New Technology and the Industrifonden foundation came on board as owners. The Swedish Energy Agency also contributed with capital.

## 2012

Continued product development of a flexible light system for plants. Considerable development of light recipes adjusted for different plants. An initial series production of the L4A-S10 product was started and the development of more product versions commenced. The development of advanced sensors for the analysis of plants started. Sales and delivery to international customers in Australia, the Netherlands, the UK, Sweden and elsewhere. Two new patent applications were made in addition to the patent which had already been granted in a number of countries. The project Intelligent Light receives contributions corresponding to MSEK 6.5 for four years from Mistra Innovation where Heliospectra, alongside Chalmers University of Technology, is developing algorithms for bio feedback.

## 2013

The development of a volume product for plant cultivation was initiated in partnership with suppliers. The fixtures were equipped with light diodes, LED, with different light frequencies (colour). The different light frequencies can be individually adjusted wirelessly using a central system and can therefore create different light spectra. With the help of different light recipes, the growers can produce plants of a greater quality, better flavour, longer durability, fewer rejections and also save energy. The development of sensors in co-operation with Chalmers University of Technology and with contributions from Mistra and a business development loan from the Swedish Energy Agency.

The sales for the year amounted to SEK 0.5 million and was entirely made up of the sale of the research lamp. This has been supplied to customers in, inter alia, Australia where it is used with great results. Further deliveries were made to customers in the UK, France, the US, Denmark, Japan, Ireland and Germany. For example, the German equivalent to NASA (DLR) has bought the product in order to look into growing in space. A smaller number of research lights are also in use for testing at a leading greenhouse growing company in the US. A subsidiary has been set up in the US to work on the US market. Up until 2013, the company had been financed through new share issues of approx. SEK 65.5 million as well as with some sales revenue.

## AWARDS

During 2012, Heliospectra received a number of awards. The company was, for example, awarded one of the most exciting technology companies in Sweden by the magazines Affärsvärlden and Ny Teknik, received the award Swedish Embedded Award for its advanced technology and was also awarded Ones to Watch Cleantech Companies in Europe 2012 by GP Bullhound Cleantech Connect. The World Wide Fund for Nature, WWF, awarded the WWF Climate Solver 2012 award for the company's technology which can save considerable amounts of energy.

During 2013, the company was noticed in Swedish and international media and received the award SACC New York Deloitte Green Award 2013 presented by HRH Princesse Madeleine at a gala dinner in New York in October.



# MARKET AND COMPETITORS

*In order to grow in greenhouses all year round in many countries in Northern Europe and North America, extra lights are needed. During the winter, the fixtures are permanently left on. Depending on the type of plant, time of year and where in the world you are, the lights are switched on for most of the day, often from early in morning to late at night and sometimes all day and night. A greenhouse has many thousands of light fittings. Every conventional light consumes approx. 600W. The cost for running all the lights is a noticeable part of the grower's cost base and this is why there is a considerable incentive for reducing the energy consumption.*



Heliospectra's strategy and business plan is based on a number of internal and external market studies. The company has also consulted external operators and co-operated with Business Sweden which has performed studies of the market globally as well as specific studies for the US, Japan and South Korea. The conclusion is that Heliospectra's market is extensive. The driving forces for an increased use of LED lights are related to profitability and to sustainability:

- **Grow more and closer to the consumer** – there are more and more humans and they tend to move into the cites to a greater and greater extent. By growing indoors, cultivations can be located closer to the consumer without having to consider the climate, access to sunlight or season.
- **Save energy** – energy is one of the greatest cost items for growers. By eliminating the heat radiating from the lights, the ability to control the temperature of the greenhouses in an optimal and efficient manner is increased, and the cost of cooling the heat generated by the lights is thus avoided.
- **Save water** – the lack of water is an ever-growing global problem. This is driving the practice of cultivations using water in an efficient manner.
- **Indoor cultivation** – the need to grow indoors is increasing with the legalisation of controlled growing of medicinal plants currently taking place mainly in the US. Indoor cultivations also increase production as they produce all year round.

## Market segments

*Heliospectra mainly focus on three market segments:*

### 1. TRADITIONAL GREENHOUSE GROWERS OF VEGETABLES AND FLOWERS

Herbal plants such as basil, parsley, dill, chives and mint are suitable for the light from Heliospectra's technology. Flowers are also often grown using external lights. The greenhouse market is changing, with a need for an increase in automation and in qualitative productivity at the same time as production is moving closer to, and into, cities. The majority of this market is in the northern hemisphere where the winters are cold, relatively long and dark.

The market study World Greenhouse Vegetable Production Statistics 2012 has estimated that there are some 55 million fixtures in greenhouses (excluding China) for high pressure sodium lights which is the same type of light used in street lights. With a life-expectancy of 5–10 years for existing products, the reachable market is 5.5–11 million light fixtures per year. Based on a price of SEK 7,000 per light fixture, this corresponds to a potential market of SEK 38.5–77 billion per year. 1 thousandth of that market represents sales of approx. SEK 70 million per year.

### 2. MEDICINAL PLANTS

In the US, medicinal plants have been established as a fast-growing market from approx. USD 1.4 billion in 2013 to more than USD 10 billion 2018, a growth of some 700 percent. The growing and sales of medicinal plants has been approved in 23 states and this development will grow further due to upcoming decisions in further states.

There are also pharmaceutical companies in Europe that are manufacturing plant-based medicines, which are available at pharmacies in Sweden and the rest of Europe. One example is GW Pharma in the UK which has large cultivations of medicinal plants in greenhouses, which are then processed and sold to MS patients in Sweden and the rest of Europe under the trademark Sativex. They are also developing other products for, for example, diabetes and pain in cancer patients.

Growers of medicinal plants are at the cutting edge in terms of investing in new technology, lights and growing methods in order to ensure a high quality and high profitability. Heliospectra can see great potential in capitalising in particular on the US market as the company's products, for example, offer a direct energy saving and enable control of the growing in order to shorten the growing period and improve the quality.

### 3. RESEARCH

The research market consists of plant researchers who study plants at universities, institutes and large agro-technical companies. It's typical for these customers to use controlled plant environments. Examples of large companies that are developing crops, fertilisers etc. are Monsanto, Syngenta, Bayer, Dupont and BASF. All these companies have large research installations which include greenhouses. In addition to these companies, there are a large number of universities which focus on research and development of agriculture. The relationships with these companies and institutions do not just result in sales but also drives innovation and development.

Heliospectra is, for example, part of a joint venture with DLR (the German space agency) regarding cultivations in space, NASA uses Heliospectra's equipment when simulating a Mars expedition and MIT (Massachusetts Institute of Technology) in the US uses Heliospectra's lights in a research project.

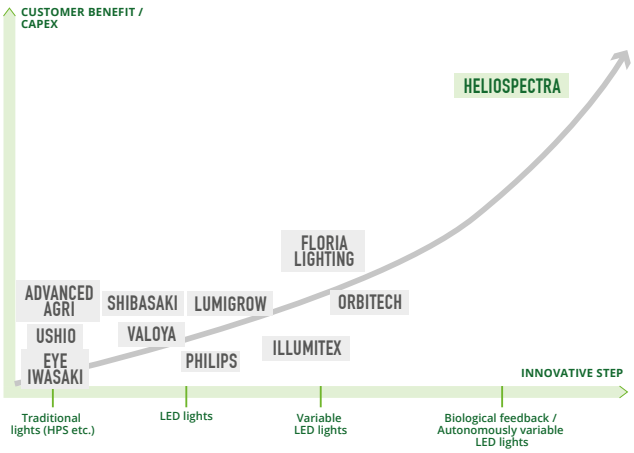
In addition to these markets, there is further potential for Heliospectra's products for lighting of forest plants, in botanical gardens and for algae growing for biofuels and nutrients.

## Competitors and competing technologies

The market for LED lights is fragmented with a large number of smaller manufacturers but no-one has as extensive a range as Heliospectra. Given the growth that is expected in this field, more operators will appear on the market. Heliospectra's competitive edge is that the company offers a complete system with software and sensors in order to optimise the cultivations.

In terms of the market overall, the competitors have chosen various routes. Some invest in simpler LED solutions to complement the HPS light. Such solutions are relatively cheap but also limited in their functionality. Others, like Heliospectra, invest in products with the aim of completely replacing the HPS light. This segment contains a greater spread in terms of technical level, height and functionality of the products which means somewhat higher prices. The simplest products offer a static light spectra which is on or off. More advanced products allow dimming of the various wave lengths in order to be able to completely control the light mixture.

The largest operators on the market today are Philips (the Netherlands), Orbitech (the US), Fionia (Denmark) and Valoya (Finland). Osram, GE Lightning, Eye Hortilux/Iwasaki and a number of other operators are also competitors in the traditional lighting sector.




### HELIOSPECTRA'S PRODUCT RANGE COMPARED WITH THE COMPETITORS

| | HELIO-SPECTRA | HELIO-SPECTRA | ORBITECH | FIONIA | LUMIGROW | PHILIPS | ILUMITEX | USHIO/ EYE |
|---|---|---|---|---|---|---|---|---|
| PRODUCT | LX 60 | L4A series 10 | Sunbow Science Research Lamp | FL300 | LumiGrow Pro 650 | Green-Power LED flowering | Eclipse NeoSol | HPS |
| LIFE EXPECTANCY | ● | ● | ● | ● | ◑ | ◑ | ◑ | ◔ |
| COST/UNIT | ◔ | ◑ | ◑ | ◔ | ◑ | ◔ | ◑ | ◔ |
| PLUG & PLAY | ● | ● | ◕ | ● | ◕ | ◑ | ◕ | ◑ |
| WAVE-LENGTH SPECTRUM | ● | ● | ◑ | ◑ | ◑ | ◔ | ◕ | ○ |
| ELECTRICAL EFFICIENCY | ● | ● | ● | ● | ◕ | ◑ | ◕ | ◔ |

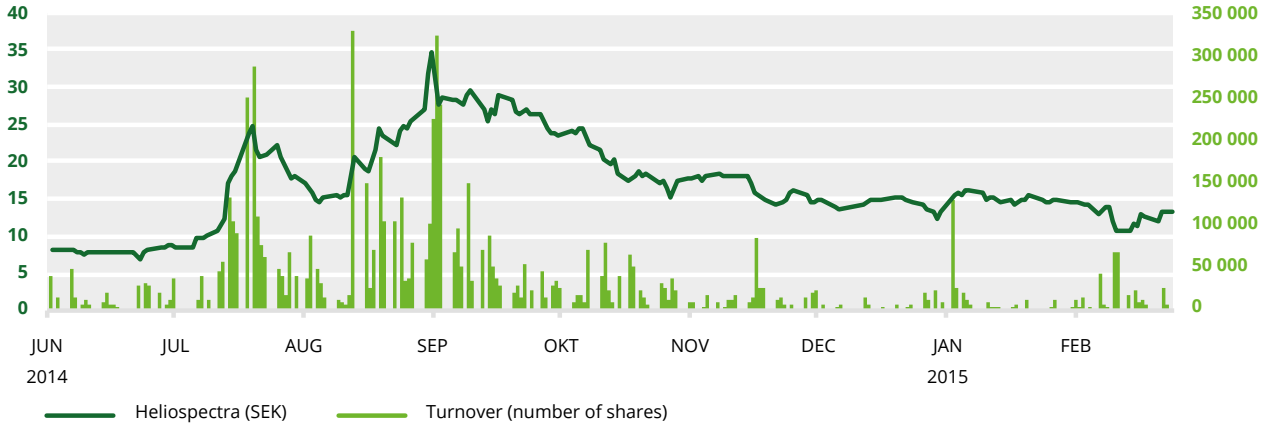
The tables above show Heliospectra's views on competitive solutions

# THE SHARE

*Heliospectra's share is listed on NASDAQ First North Stockholm since 18 June 2014. The registered share capital as per 31 December 2014 was SEK 1,379,119.50 distributed over 13,791,195 shares with a par value of SEK 0.10. All shares in Heliospectra correspond to one vote per share. All issued shares are ordinary shares and hold the same rights to Heliospectra's assets and profit.*

## Share statistics 2014

The first day of trading for Heliospectra was 18 June 2014. The share closed that day at SEK 8.15. The last closing price for 2014 was SEK 14.80 which corresponds to a market value of SEK 204 million. The highest closing price for 2014 was SEK 37.50 and was noted on September 18 and the lowest was SEK 6.50 on 9 July. Over the year, Heliospectra shares for approx. SEK 15.2 million were sold and bought. The average trade in the share was around SEK 1 million per day and the turnover ratio was 104 percent.




## The growth of the share capital

Since the start in 2005 until 31 December 2013, the share capital has grown as per the table below:

| | REGISTRATION DATE | SHARE CAPITAL | ACCUMULATED SHARE CAPITAL | NUMBER SHARES | ACCUMULATED NUMBER OF SHARES | PAR VALUE |
|---|---|---|---|---|---|---|
| Company start date | 2005-12-27 | SEK 100,000 | SEK 100,000 | 1,000 | 1,000 | SEK 100 |
| New share issue | 2007-01-10 | SEK 36,000 | SEK 136,000 | 360 | 1,360 | SEK 100 |
| New share issue | 2009-03-12 | SEK 82,500 | SEK 218,500 | 825 | 2,185 | SEK 100 |
| New share issue | 2011-03-23 | SEK 47,100 | SEK 265,600 | 471 | 2,656 | SEK 100 |
| New share issue | 2011-09-29 | SEK 180,500 | SEK 446,100 | 1,805 | 4,461 | SEK 100 |
| New share issue | 2012-08-20 | SEK 105,900 | SEK 552,000 | 1,059 | 5,520 | SEK 100 |
| New share issue | 2013-05-13 | SEK 61,000 | SEK 613,000 | 610 | 6,130 | SEK 100 |
| New share issue | 2013-08-06 | SEK 61,000 | SEK 674,000 | 610 | 6,740 | SEK 100 |
| New share issue | 2013-10-08 | SEK 59,100 | SEK 733,100 | 591 | 7,331 | SEK 100 |
| New share issue | 2013-12-09 | SEK 47,300 | SEK 780,400 | 473 | 7,804 | SEK 100 |
| New share issue | 2014-01-30 | SEK 15,600 | SEK 796,000 | 156 | 7,960 | SEK 100 |
| New share issue | 2014-02-28 | SEK 72,000 | SEK 868,000 | 720 | 8,680 | SEK 100 |
| Share split | 2014-04-07 | | SEK 868,000 | | 8,680,000 | SEK 0.1 |
| New share issue | 2014-06-16 | SEK 511,119.50 | SEK 1,379,119.50 | 5,111,195 | 13,791,195 | SEK 0.1 |

In May 2014, Heliospectra carried out a new share issue which increased the share capital in the company by SEK 511,119.50. After the share issue, the share capital is SEK 1,379,119.50. The number of shares after the new share issue is 13,791,195. The subscription price was SEK 8.00 and the share issue provided the company with approx. SEK 41 million before issuing costs. In conjunction with the issue, 5,111,195 warrants were distributed. Two (2) warrants entitle the holder during the period 1 September to 30 September 2015, to subscribe for one additional new share at SEK 10.00 each up to and including 30 September 2015.

## Ownership structure

The number of shareholders on 31 December 2014 was 1,189. The 20 largest shareholders in Heliospectra on 31 December 2014.

| SHAREHOLDERS | NUMBER OF SHARES | SHARE-HOLDING |
|---|---|---|
| Weland Stål AB | 2,866,500 | 20.8% |
| The Industrifonden foundation | 2,034,000 | 14.7% |
| Midroc New Technology AB | 1,958,500 | 14.2% |
| Gösta Welandsson | 1,000,000 | 7.2% |
| Weland Värdepapper AB | 973,052 | 7.1% |
| B.C.L.M.Ä. 2 Förvaltnings AB | 797,000 | 5.8% |
| Insurance Company Avanza Pension | 450,309 | 3.3% |
| B.C.L.M.Ä. 6 Förvaltnings AB | 419,000 | 3.0% |
| PIBA AB | 311,000 | 2.3% |
| Inkubator i Borås AB | 260,000 | 1,9% |
| Kristian Wiman | 168,183 | 1.2% |
| Jan Tufvesson | 114,000 | 0.8% |
| Aktieinvest FK AB/ Emittentservice | 112,950 | 0.8% |
| Henry Dunkers | 97,543 | 0.7% |
| Wood & Hill SPV7 AB | 91,000 | 0.7% |
| Nordnet Pensionsförsäkring AB | 90,964 | 0.7% |
| Lena Olsson | 65,870 | 0.5% |
| Kennerth Thulin | 62,000 | 0.4% |
| Zebub Förvaltnings AB | 50,000 | 0.4% |
| Wood & Hill Ventures AB | 47,437 | 0.3% |
| *Other shareholders* | *1,821,887* | *13.2%* |
| **SUM** | **13,791,195** | **100.0%** |

## Dividend policy

Heliospectra has yet to establish a dividend policy as the growing of the operations has been prioritised until greater profitability has been reached. It is the ambition of the board to propose a dividend policy as soon as this is considered possible.

## Distribution of share holdings

Distribution of share holdings in Heliospectra as per 30 December 2014.

| HOLDINGS | NUMBER OF SHAREHOLDERS |
|---|---|
| 1 – 500 | 559 |
| 501 – 1,000 | 252 |
| 1,001 – 5,000 | 273 |
| 5,001 – 10,000 | 52 |
| 10,001 – 15,000 | 18 |
| 15,001 – 20,000 | 8 |
| 20,001 – | 27 |
| **Sum** | **1189** |

## Share-based bonus programmes, subscription rights and convertibles.

A resolution was made at the AGM on 7 April 2014 for a subscription rights programme for senior management and employees. It is made up of 770,000 options where each option entitles the holder to subscribe to one new share at a subscription price of SEK 12 per share during the period from 7 March to 7 May 2016. The dilution from this will be approximately 6 percent.

The Annual General Meeting of 7 April 2014 authorised the board to hold a new issue of shares and subscription rights up to a total of 8,000,000 shares. In May 2014, Heliospectra carried out a new share issue which increased the share capital in the company by SEK 511,119.50. After the share issue, the share capital is SEK 1,379,119.50. The number of shares after the new share issue is 13,791,195. The subscription price was SEK 8.00 and the share issue provided the company with approx. SEK 41 million before subscription costs. In conjunction with the issue, 5,111,195 warrants were distributed. Two (2) warrants entitle the holder during the period 1 September to 30 September 2015, to subscribe for one additional new share at SEK 10.00 each up to and including 30 September 2015.

# MANAGEMENT REPORT

**HELIOSPECTRA AB (PUBL)**
**COMPANY NO. 556695-2205**

*The Board and the Chief Executive Director of Heliospectra AB, domiciled in Gothenburg, hereby submit the annual accounts for the financial year 2014.*

## Activities

Heliospectra develops, manufactures, produces and sells light systems for the growing of plants in greenhouses and indoor environments. The lights are equipped with light diodes, LED, with different light frequencies (colour). The different light frequencies can be wireless adjusted individually from a central system and can therefore create different light spectra. With the help of different light recipes, the growers can produce plants of a greater quality, better flavour, longer durability, fewer rejections and also save energy.

## The share and ownership relationships

On 18 June 2014, Heliospectra's share is listed on NASDAQ First North Stockholm. The main owner of the company is Weland Stål AB, Industrifonden and Midroc New Technology. Heliospectra's share capital is SEK 1,379,119.50 and is made up of 13,791,195 shares with a par value of SEK 0.1. In August, trade in the Heliospectra share started in the US via a so-called ADR programme.

## Significant events during the financial year

Along with a select number of customers, Heliospectra develops different versions of LX60 and ensures security of delivery through its chosen suppliers. A first test of a LX60 with sensor fitted at plant level is done at the Botanical Gardens in Gothenburg. The system displayed an energy saving of a further 15 percent compared with a free-standing LX60.

After the launch, a first installation of 42 LX60 was carried out at the largest grower of fresh herbs in Europe, Swedeponic. A large order from the US of 20 units at an order value of SEK 200,000 was received. In addition to the order, there was a declaration of intent for the delivery of a further 180 light systems. Sales of LX60 also started online. The products will be sold via www.wexthuset.com, which is the largest Swedish online supplier of functional products for cultivation and via our own website.

The company's first patent, which was previously approved in China, Russia and Hong Kong, is now approved in the US. The patent relates to methods for optimising LED lights for plants and to streamline working processes in the greenhouse environments of the future.

During the year, Heliospectra participated in two external research project. One of these is the joint venture *The warm and clean city 2*. The main aim of the project is to produce a comprehensive solution for cleaning waste water and for increasing the opportunities for recycling nutrients and energy extraction. Heliospectra's part in the project is to contribute with intelligent light technology and create optimal life conditions for algae which are part of an essential aspect both of cleaning waste water and energy extraction.

The other project is an European space project to develop secure crops at space stations. Heliospectra is one of 13 partners. The EDEN Initiative is a research programme developed by the German space agency DLR Institute of Space Systems (ISS). Heliospectra's task in the project is to create a water-cooled LED solution based on the company's reputable expertise within horticulture (the cultivation of vegetables, fruit, flowers and ornamental plants) light technology. In total, the project has received EUR 4.5 million in EU contributions.

## Financial growth

### TURNOVER AND PROFIT/LOSS

Net turnover was SEK 3,110,000 (486,000) Operating profit/loss was SEK -32,901,000 (-17,141,000), involving a negative operating margin (neg). Proft/loss after tax was, SEK- 33,670,000 (-17,117,000) or SEK -2 (-2,150) per share.

### FINANCIAL POSITION

At the end of the period, the company's cash assets were SEK 6,127,000 (3,531,000). The cash flow from operating activities was negative for the whole year and was SEK -32,498,000 (-14,690,000). On 31 December 2014, the solidity was 51 percent (40).

### INVESTMENTS

During the year, investments amounted to SEK 5,934,000 (7,619,000). The investments can be split into intangible SEK 5,088,000 (7,357,000) and tangible SEK 846,000 (262,000). The intangible investments are made up of capitalised R&D costs and patents. The tangible investments relate to inventories.

## Research and development

During 2014, the company has continued its work with the patented sensor technology. The development has taken place both internally and in co-operation with its customers. Part of the project is done alongside researchers from Chalmers University of Technology within the project iLight which in part is financed by the Mistra Innovation foundation where Heliospectra owns all the rights to the project results. In addition, there is continuous development, both of the hardware and the software for lights and for associated systems. Heliospectra has access to its own plant laboratory where the company grows different types of plants under different conditions in order to examine the effect of different types of light.

## Staff

The number of employees was 19 (14) at the end of the financial year.

## Outlook

In the upcoming period, the company will focus on the sales and marketing side. Supply capacity that can meet substantial volumes has been secured, negotiations are taking place directly with large strategic customers and the company is building up an international distributor and retail network. The priority markets worked on are Europe and North America where very strong growth can be seen in particular in North America. The cooperation with a number of strategic partners that will provide the company with greater market presence and more routes to market will be deepened. Overall, the company is well positioned to begin to capitalize on the market potential that the products have.

## Significant events after the end of the financial year

In January 2015, the same customer in the US who signed a first partial order for 20 systems in July 2014, signed a follow-up order for 100 systems.

In February, Heliospectra hired Dr Sue Sisley as Head of Medical Plant Research. Dr Sisley will supply the company with industry expertise and customer feedback. Dr Sisley works with growers in order to develop scalable growing methods for medicinal plants, and monitors data collection and reporting for Heliospectra's global cultivators of medicinal plants. Debt financing is obtained in the form of a five-year Almi Företagslån of SEK 3 million and a bridge loan from Weland of approx. SEK 15 million maturing on 31 October 2015.

At an extraordinary general meeting, the board got the approval for a new issue of shares and/or subscription rights. The number of additional shares may not exceed 8,000,000 shares.

## Proposal for profit allocation

The board proposes that unappropriated profits, SEK 14,890,355, of which this year's loss, -33,585,766, are carried over.

## Risks

### COMPETITION/ALTERNATIVE TECHNOLOGIES

Heliospectra may be exposed to competition from a number of other companies making investments in the corresponding segment. Several of these companies may have greater financial resources than Heliospectra. General research and development within the areas in which the company intends to operate may have a negative impact on the company's ability to sell its products as other methods and technologies may turn out to be more beneficial to the company's customers.

### STAFF AND KEY PEOPLE

Heliospectra's operations are dependent on the ability to recruit, develop and keep qualified employees. If key people leave the company that may, at least in the short term, have a negative impact on the operations.

### PRODUCT DEVELOPMENT/LACK OF COMPETENCE

Heliospectra develops products using its own resources and has partnerships with other companies in terms of product development. The main focus is currently on starting volume sales of the light systems that the company has developed. Should the company's growth activities not achieve acceptable results, Heliospectra may not be able to successfully develop or commercialise its products.

### AUTHORITY DECISIONS

In order to be permitted to market products based on Heliospectra's technology, it may be necessary for the company, its partners and/or suppliers to obtain the relevant permits from the authorities. There is no guarantee that these will be granted, not delayed or that the permits are as extensive as expected.

### PATENTS AND INTELLECTUAL PROPERTY RIGHTS

Heliospectra's competitive force is, among other things, dependent on the company's ability to obtain, maintain and defend patents and intellectual property rights in order to protect its products. There is no guarantee that patent applications result in approved patents, that approved patents can be maintained or that the patents, the trademarks or other intellectual property rights provide a sufficiently comprehensive protection to have commercial significance. Even if the company obtains a satisfactory patent protection, the costs for maintaining this protection can be considerable, as can the costs for defending the patent in the event of any infringement by third parties. Other companies within the industry may also hold intellectual property rights which in theory could be claimed as infringing on Heliospectra's intellectual property rights.

### PRODUCT LIABILITY

The sale of products is always associated with the risk that the product is deficient or that customers in other ways are dissatisfied with the result of the use of the product. It cannot be ruled out that customers make demands based on product warranties to a greater extent than what has been included in the forecasts made by Heliospectra.

### COMPETITORS

It cannot be ruled out that the competition within the areas where Heliospectra is operating turns out to be harder than currently expected. Future competition can come from well-established global operators with considerably greater ability to reach the market quickly.

### THIRD-PARTY RISKS

Once an order has been received, there is a risk that there is no financing available for these products. Procurements are often done with financing from public funds, insurance companies and, to some extent, private funds and it may be sometimes difficult to access these. The aim of the company is to enter into financing agreements with potential larger partners but it cannot be guaranteed that these agreements are fulfilled as agreed.

### JOINT VENTURES

Heliospectra currently has a few joint ventures and might sign future such joint ventures. There is a risk in all partnerships that one party fails to fulfil its obligations.

### EARNING POTENTIAL AND CAPITAL REQUIREMENTS

It cannot be ruled out that it will take longer than expected for Heliospectra to reach the margins and cash flows that the company is aiming for. In all likelihood, Heliospectra will require further capital in addition to the current fully guaranteed initial issue in the offering before a positive cash flow can be achieved. It can also not be ruled out that in the future Heliospectra will need to find more external capital. There are no guarantees that, at this point, it will be possible to obtain this at conditions beneficial to shareholders. A failure to generate profit to a sufficient extent can impact the company's market value. Future capital raising measures may cause a dilution of the ownership of the company for those shareholders who choose not to participate in any future new share issues.

### FOREIGN CURRENCY RISKS

Heliospectra operates on a global market with large shares of its sales and purchases in currencies other than SEK. Sales and raw material purchases is mainly done in USD and EUR but also in other currencies. The group's purchases of services is in part done in SEK but also in other currencies.

### CREDIT RISK

Heliospectra has established policies to ensure that sales are only done to customers with a satisfactory payment histories and/or who are deemed to be sufficiently solvent. However, it can never be ruled out that the company will suffer credit losses.

## Management

*Staffan Hillberg*
**CHIEF EXECUTIVE DIRECTOR**
**Born**: 1964
**Education**: Studies at Chalmers University of Technology, MBA from Insead
**Employed**: 2010
**Shareholding**: 2,000 shares, 2,000 subscription rights

*Håkan Bengtsson*
**CHIEF FINANCIAL OFFICER**
**Born**: 1963
**Education**: MSc Gothenburg School of Business, Law and Economics
**Employed**: 2014
**Shareholding**: -

*Gilley, Anthony*
**TECHNICAL MANAGER**
**Born**: 1971
**Education**: Studies at Chalmers University of Technology and Gothenburg University
**Employed**: 2010
**Shareholding**: 10,000 shares

*Christopher Steele*
**OPERATIONS MANAGER**
**Born**: 1982
**Education**: MSc Gothenburg University and BSB Indiana University
**Employed**: 2012
**Shareholding**: 1,200 shares, 1,200 subscription rights

*Chris Walker*
**USA REGIONAL MANAGER**
**Born**: 1972
**Education**: BoA, University of Arizona
**Employed**: 2011
**Shareholding**: -

# Board



*The board: from left: Göran Linder, Anders Ludvigsson, Martin Skoglund, Jan Tufvesson, Andreas Gunnarsson (Kennerth Thulin absent)*

## *Jan Tufvesson*
**CHAIRMAN OF THE BOARD**

**Born**: 1938
**Elected**: 2011
**Education**: MSc KTH, Business IMD
**Other posts**: Chairman of the Board at Optisting Technologies AB, HeatCore AB, Ekoproffsen i Norrort AB
**Shareholding**: 116,500 shares and 27,500 subscription rights

## *Anders Ludvigson*
**BOARD MEMBER**

**Born**: 1970
**Elected**: 2007
**Education**: MSc Production Management and Investment Analysis from LiTH
**Other posts**: Board member at Ludvigson Holding AB,
**Shareholding**: -

## *Göran Linder*
**BOARD SUBSTITUTE**

**Born**: 1962
**Elected**: 2011
**Education**: MSc Electrical engineering, KTH in Stockholm
**Other posts**: Board member at Airgrinder AB, Jensen Devices AB, Lamera AB, Midroc Invest AB, Crossborder Technologies AB, Minesto AB, Powercell Sweden AB, Pergamum AB, M&J by Malin & Johanna AB
**Shareholding**: -

## *Andreas Gunnarsson*
**BOARD MEMBER**

**Born**: 1974
**Elected**: 2011
**Education**: Studies at Jönköping International Business School
**Other posts**: Board member at Solarwave AB, (Heliospectra Personal AB), Chairman of the Board at Air to Air Sweden AB, board substitute at Lamera AB, crossborder technologies AB, Pergamum AB, Powercell AB (publ), Minesto AB, Jensen Devices AB,
**Shareholding**: 8,750 shares, 8,750 subscription rights

## *Martin Skoglund*
**BOARD MEMBER**

**Born**: 1966
**Elected**: 2006
**Education**: MSc Gothenburg School of Business, Law and Economics
**Other posts**: Chairman of the Board at Stallet Fastighets AB, East Village Trading AB, board member at Haga Hem Holding AB, AB Blåbergsholmen, Ell Ess IPR AB, Wood & Hill Investment AB, M Teknik E-handel AB and Oakridge AB.
**Shareholding**: 47,437 shares, 65,100 subscription rights

## *Kennerth Thulin*
**BOARD SUBSTITUTE**

**Born**: 1945
**Elected**: 2009
**Education**: Economist
**Other posts**: Chairman of the Board at Borås Inkubator AB, PS Onlineauktioner AB, Sohlberg Buss AB, Hillerstorp Trä AB, Kind Holding AB, board member at Swedbank Sjuhärad AB
**Shareholding**: 62,000 shares

# Corporate governance

Heliospectra AB is a Swedish public limited company listed on NASDAQ First North Stockholm since 18 June 2014. The company is a public limited company and is subject to Swedish law, in particular by the provisions of the Companies Act and the Annual Accounts Act. There are further rules and recommendations in terms of corporate governance in the stock exchange rules, Swedish Code for Corporate Governance and in statements by the Stock Market Committee. In addition to legislation, rules and recommendations, the Articles of Association form the base for the governance of the company's operations.

The Code is not currently mandatory for companies listed on First North. It is thus not mandatory for Heliospectra but the company is still striving to adhere to the basic principles of the Code.

## SHAREHOLDERS

The share capital in Heliospectra amounts to SEK 1,379,119.50 distributed as 13,791,195 shares with a par value of SEK 0.10. All shares correspond to one vote per share. The number of shareholders on 31 December 2014 was 1,189.

## ANNUAL GENERAL MEETING

The Annual General Meeting shall be held six months from the end of the financial year. The shareholders who are registered in the share register and who have registered their attendance in time have the right to participate at the general meeting. Heliospectra's first annual general meeting as a listed company will take place on 22 June in Gothenburg.

## THE NOMINATION PROCESS

Under the latter part of the autumn, Heliospectra's chairman of the board has been in contact with larger owners and initiated a discussion on the needs, composition and compensations of the board. The discussions have led to the following proposals for the annual general meeting:

- Proposal for an election of a chairman for the annual general meeting
- Proposal for elections for board members
- Proposal for an election of a chairman of the board
- Proposal for compensations for board members with allocations between the chairman and other board members and compensation for committee work
- Proposal for compensation for auditors

## THE BOARD AND ITS WORK

### The composition of the board

According to the Articles of Association, the board in Heliospectra shall consist of no fewer than three and no more than nine board members and no more than five substitutes. The board members are appointed for no more than one year at a time. Heliospectra's board elected at the annual general meeting in May in 2014 consisted of four ordinary board members and two substitutes. Jan Tufveson has been the chairman of the board. Four board members are independent in relation to the company and the company management and three board members are independent from the largest shareholders of the company.

### Rules of procedure

In accordance with the Companies Act, the board has adopted written rules of procedure for its work and written instructions on the reporting to the board. Both the rules of procedure and the reporting instructions are assessed, updated as needed and adopted annually.

Any allocation of work between the board members shall be stated in the rules of procedure. The board holds regular meetings in accordance with a schedule stipulated in the rules of procedure which include fixed agenda items and items as needed. Furthermore, the board holds extraordinary board meetings as needed and at the request of a board member or the chief executive director.

The reporting instruction states when and how to collect and report such information needed for the board's ongoing assessment of the board and the group's financial position to the board. The reporting instruction provides the board with information for the following up of plans, budgets etc.

The current rules of procedure stipulate that the board shall hold at least six planned board meetings during the financial year in addition to the constituent board meeting after the annual general meeting.

### The board's work during 2014

During 2014, the board had six ordinary board meetings and seven extraordinary board meetings. (see table below)

The board complies with rules of procedure adopted annually at the first board meeting. At every ordinary board meeting, the minutes of the previous meeting, the growth of the operations since the previous meeting and the company's financial position and profit growth are discussed. The board is continuously informed in writing on the business operations and external issues of importance to the company.

The board has, during 2014, paid particular attention to the following issues: marketing and sales strategy, capital raising and the listing on NASDAQ First North.

| NAME | INDEPENDENT OF THE COMPANY | INDEPENDENT OF LARGER SHAREHOLDERS | BOARD MEETINGS | FEE, SEK | HOLDINGS, NUMBER OF SHARES AND SUBSCRIPTION RIGHTS |
|---|---|---|---|---|---|
| Jan Tufvesson | Yes | Yes | 13/13 | 177 600 | 116,500 shares, 27,500 subscription rights |
| Andreas Gunnarsson | Yes | No | 13/13 | 0* | 8,750 shares, 8,750 subscription rights |
| Anders Ludvigson | Yes | Yes | 13/12 | 88 800 | 0 |
| Martin Skoglund | Yes | Yes | 13/13 | 88 800 | 47,437 shares, 65,100 subscription rights |

Andreas Gunnarsson represents Midroc Holding, one of Heliospectra's largest owners and does not receive any compensation for his board position.

**Attendance of board members**
In addition to the ordinary board members, there are also two substitutes on the board, Göran Linder (0 shares) and Kennerth Thulin (62,000 shares). The substitutes have attended some of the ordinary board meetings.

**Assessment of the board's work**
The chairman of the board is responsible for the assessment of the board's work. The assessment is done annually. The assessment focuses on the board's working methods, the number of meetings and how effective they were, the availability of specific competence, the ability of individual board members to influence the board's work and more. The result is considered when making nominations for the following annual general meeting.

## AUDITORS

The company's auditor is Mikael Glimstedt who works at Frejs Revisorer AB in Gothenburg. He is a chartered accountant and a member of FAR.

## CHIEF EXECUTIVE DIRECTOR AND MANAGEMENT

The management group of Heliospectra is made up of the chief executive director, the chief financial officer, the operative manager, the technical manager and the US regional manager.

The CEO is responsible for the day-to-day operations of the company and shall take such measures as are necessary in order that the company's bookkeeping is completed in compliance with the law and in order that the management of funds is managed satisfactorily.

Measures that are of an exceptional character or size, given the scope and the nature of the company's operations, fall outside the day-to-day operations and must therefore the presented to the board and are for the board to decide. The work and role of the CEO as well as the division of work between the board and the CEO is specified in further detail in a written instruction established by the board (a so-called CEO instruction).

The CEO prepares, together with the chairman of the board, a notification of the meeting and a proposal for an agenda, puts together necessary documentation for decisions and participates in board meetings.

## COMPENSATION TO BOARD AND SENIOR MANAGEMENT

The compensation to senior management may consist of a fixed salary, variable salary, pension benefits and other benefits and redundancy pay. Salaries and other employment benefits to senior management are considered to be in line with market conditions and are based on the importance of the work task, the required competence, experience and performance.

**Fixed salary**
The basic salary shall be based on the market conditions, be competitive and consider the scope and the responsibility associated with the post, as well as the skills, experience and performance of any individual senior manager.

**Variable salary**
From 2014, the company does not pay any variable salaries. A resolution was made at the AGM on 7 April 2014 for a subscription rights programme for senior management and employees. It is made up of 770,000 options where each option entitles the holder to subscribe to one new share at a subscription price of SEK 12 per share during the period from 7 March to 7 May 2016.

**Pension conditions**
The pension conditions include a defined plan for provisions of premiums based on the entire basic pay. The pension provisions are individual and shall be made in relation to the basic pay.

**Redundancy pay**
The notice period and redundancy pay are individual and regulated in employment contracts.

**Compensation to the CEO Staffan Hillberg**

| | |
|---|---|
| Basic salary, SEK thousands | 946 |
| Variable compensation | 78* |
| Other benefits | – |
| Pension costs | 104 |
| **Sum 2014** | **1,128** |
| *Sum 2013* | *1,152* |

* Bonus relating to 2013 but which was only paid in 2014.

**Compensation to the board during 2014**
The agreed compensation for the board for 2014 was a total of SEK 355,200, distributed within the board in accordance with that stated in the table below. The annual general meeting decided in 2014 that the compensation for the chairman of the board is payable at SEK 177,600 per annum and to other board members at SEK 88,800 per board member and annum.

| COMPENSATION TO THE BOARD | 2014 | 2013 |
|---|---|---|
| Sum of agreed compensation | SEK 355,200 | SEK 100,000 |
| Chairman of the Board | SEK 177,600 | SEK 100,000 |
| Board Member | SEK 88,800 | |

**Compensation to auditors**
Heliospectra's auditors are compensated based on approved accounts. For 2014, the compensation paid to Frejs Revisorer AB was SEK 148,000.

## INTERNAL CONTROLS

The board shall ensure that the company has good internal controls and formalised procedures which ensure that established principles for financial reporting and internal controls are complied with and that the company's financial reporting has been prepared in compliance with the law, generally accepted accounting standards and other requirements which follow from the company shares being listed.

The company's internal control structure is based on the division of work between the board and the CEO. The CEO shall, through the agency of the CFO, ensure that the board members are provided with individual financial reports on a monthly basis, and in general are provided with the information needed in order to monitor the company's financial situation.

# ACCOUNTS

## Profit and loss account

### THE GROUP

| AMOUNTS IN SEK THOUSANDS | NOTE: | 2014 | 2013 |
|---|---|---|---|
| **OPERATING INCOME** | 2 | | |
| Net turnover | | 3,110 | 486 |
| Other operating income | | 1,217 | 722 |
| **Total operating income** | | **4,327** | **1,208** |
| | | | |
| **OPERATING EXPENSES** | 2 | | |
| Commodities | | -2,484 | -301 |
| Other external costs | 3-4 | -20,030 | -8,444 |
| Staffing costs | 5-6 | -11,097 | -6,919 |
| Depreciation of tangible and intangible assets | 7 | -3,617 | -2,685 |
| **Earnings before interest and taxes** | | **-32,901** | **-17,141** |
| | | | |
| **Income from financial items** | | | |
| Interest income and similar items | 9 | 16 | 49 |
| Interest expenses and similar items | 10 | -785 | -25 |
| | | | |
| **Profit/loss before tax** | | **-33,670** | **-17,117** |
| | | | |
| Tax | | 0 | 0 |
| | | | |
| **NET PROFIT/LOSS** | | **-33,670** | **-17,117** |
| | | | |
| *Of which relates to* | | | |
| The shareholders of the parent company | | -33,670 | -17,117 |
| Minority interests | | 0 | 0 |

# Balance sheet

## THE GROUP

| AMOUNTS IN SEK THOUSANDS | NOTE: | 31/12/2014 | 31/12/2013 |
|---|---|---|---|
| **ASSETS** | 1 | | |
| **Fixed assets** | | | |
| **Intangible assets** | | | |
| Capitalised costs for development and similar work | 11 | 15,116 | 12,867 |
| **Intangible assets** | | **15,116** | **12,867** |
| **Tangible assets** | | | |
| Inventories, tools and installations | 12 | 1,990 | 1,951 |
| **Tangible assets** | | **1,990** | **1,951** |
| **Financial assets** | | | |
| Other long-term receivables | | 0 | 2 |
| **Total financial assets** | | **0** | **2** |
| **Total fixed assets** | | **17,106** | **14,820** |
| **Current assets** | | | |
| **Inventories** | | | |
| Finished goods | | 4,249 | 1,481 |
| Advances to suppliers | | 0 | 509 |
| **Total inventories** | | **4,249** | **1,990** |
| **Current receivables** | | | |
| Accounts receivable | | 479 | 79 |
| Current tax debt | | 78 | 12 |
| Other receivables | | 2,929 | 600 |
| Prepayments and accrued income | 14 | 615 | 532 |
| **Sum current receivables** | | **4,101** | **1,223** |
| **Cash and bank** | | **6,127** | **3,531** |
| **Total current assets** | | **14,477** | **6,744** |
| **TOTAL ASSETS** | | **31,583** | **21,564** |

# Balance sheet

## THE GROUP

| AMOUNTS IN SEK THOUSANDS | NOTE: | 31/12/2014 | 31/12/2013 |
|---|---|---|---|
| **EQUITY AND LIABILITIES** | | | |
| **Equity** | 15 | | |
| Share capital (13,791,195 shares) | | 1,379 | 796 |
| Other contributed capital | | 94,307 | 53,845 |
| Other equity | | -45,917 | -28,800 |
| Net profit/loss | | -33,670 | -17,117 |
| **Equity relating to the shareholders of the parent company** | | **16,099** | **8,724** |
| Minority interests | | 0 | 0 |
| **Total equity** | | **16,099** | **8,724** |
| **Long-term liabilities** | 16 | | |
| Other liabilities | | 9,704 | 9,752 |
| **Sum long-term liabilities** | | **9,704** | **9,752** |
| **Short-term liabilities** | | | |
| Accounts payable | | 3,690 | 1,624 |
| Other liabilities | | 240 | 93 |
| Prepayments and accrued income | 17 | 1,850 | 1,371 |
| **Total short-term liabilities** | | 5,780 | 3,088 |
| **TOTAL EQUITY AND LIABILITIES** | | **31,583** | **21,564** |
| Pledge assets | 18 | 50 | 0 |
| Contingent liabilities | 19 | 0 | 150 |

# Profit and loss account

## PARENT COMPANY

| AMOUNTS IN SEK THOUSANDS | NOTE: | 2014 | 2013 |
|---|---|---|---|
| **OPERATING INCOME** | 2 | | |
| Net turnover | | 3,307 | 486 |
| Other operating income | | 1,113 | 722 |
| **Total operating income** | | **4,420** | **1,208** |
| | | | |
| **OPERATING EXPENSES** | 2 | | |
| Commodities | | -2,484 | -301 |
| Other external costs | 3-4 | -20,039 | -8,444 |
| Staffing costs | 5-6 | -11,097 | -6,919 |
| Depreciation and amortisation of tangible and intangible assets | 7 | -3,617 | -2,685 |
| **Earnings before interest and taxes** | | **-32,817** | **-17,141** |
| | | | |
| **Income from financial items** | | | |
| Income from shares in group companies | 8 | -122 | 0 |
| Interest income and similar items | 9 | 16 | 49 |
| Interest expenses and similar items | 10 | -663 | -25 |
| **Profit/loss after financial items** | | **-33,586** | **-17,117** |
| | | | |
| **Profit/loss before tax** | | **-33,586** | **-17,117** |
| | | | |
| Tax | | 0 | 0 |
| | | | |
| **NET PROFIT/LOSS** | | **-33,586** | **-17,117** |

# Balance sheet

## PARENT COMPANY

| AMOUNTS IN SEK THOUSANDS | NOTE: | 31/12/2014 | 31/12/2013 |
|---|---|---|---|
| **ASSETS** | 1 | | |
| **Fixed assets** | | | |
| **Intangible assets** | | | |
| Capitalised costs for development and similar work | 11 | 15,116 | 12,867 |
| **Intangible assets** | | **15,116** | **12,867** |
| **Tangible assets** | | | |
| Inventories, tools and installations | 12 | 1,990 | 1,951 |
| **Tangible assets** | | **1,990** | **1,951** |
| **Financial assets** | | | |
| Shares in group companies | 13 | 82 | 82 |
| Other long-term receivables | | 0 | 6 |
| **Total financial assets** | | **82** | **88** |
| **Total fixed assets** | | **17,188** | **14,906** |
| **Current assets** | | | |
| **Inventories** | | | |
| Finished goods | | 4,249 | 1,481 |
| Advances to suppliers | | 0 | 509 |
| **Total inventories** | | **4,249** | **1,990** |
| **Current receivables** | | | |
| Accounts receivable | | 479 | 79 |
| Receivables from group companies | | 146 | 147 |
| Current tax debt | | 78 | 57 |
| Other receivables | | 2,929 | 600 |
| Prepayments and accrued income | 14 | 615 | 532 |
| **Sum current receivables** | | **4,247** | **1,415** |
| **Cash and bank** | | **6,069** | **3,531** |
| **Total current assets** | | **14,565** | **6,936** |
| **TOTAL ASSETS** | | **31,753** | **21,842** |

# Balance sheet

## PARENT COMPANY

| AMOUNTS IN SEK THOUSANDS | NOTE: | 31/12/2014 | 31/12/2013 |
|---|---|---|---|
| **EQUITY AND LIABILITIES** | | | |
| **Equity** | 15 | | |
| **Restricted equity** | | | |
| Share capital (13,791,195 shares) | | 1,379 | 780 |
| On-going new share issue | | 0 | 16 |
| **Total restricted equity** | | **1,379** | **796** |
| | | | |
| **Unrestricted equity** | | | |
| Share Premium Reserve | | 94,224 | 53,845 |
| Retained earnings | | -45,748 | -28,714 |
| Net profit/loss | | -33,586 | -17,117 |
| **Total unrestricted equity** | | **14,890** | **8,014** |
| | | | |
| **Total equity** | | **16,269** | **8,810** |
| | | | |
| **Long-term liabilities** | 16 | | |
| Other liabilities | | 9,704 | 9,752 |
| **Sum long-term liabilities** | | **9,704** | **9,752** |
| | | | |
| **Short-term liabilities** | | | |
| Accounts payable | | 3,690 | 1,624 |
| Other liabilities | | 240 | 162 |
| Prepayments and accrued income | 17 | 1,850 | 1,494 |
| **Total short-term liabilities** | | **5,780** | **3,280** |
| | | | |
| **TOTAL EQUITY AND LIABILITIES** | | **31,753** | **21,842** |
| | | | |
| Pledged assets | 18 | 50 | 0 |
| Contingent liabilities | 19 | 0 | 150 |

## Cash flow analysis

| AMOUNTS IN SEK THOUSANDS | THE GROUP 2014 | THE GROUP 2013 | PARENT COMPANY 2014 | PARENT COMPANY 2013 |
|---|---|---|---|---|
| **OPERATING ACTIVITIES** | | | | |
| Profit/loss after financial items | -33,670 | -17,117 | -33,586 | -17,117 |
| *Adjustments for items outside the cash flow analysis* | | | | |
| Depreciations and amortisations of assets | 3,617 | 2,685 | 3,617 | 2,685 |
| Tax | | | | |
| **Cash flow from daily operations before changes to operating capital** | **-30,053** | **-14,432** | **-29,969** | **-14,432** |
| *Cash flow from changes in operating capital* | | | | |
| Changes in stocks held | -2,259 | -800 | -2,259 | -800 |
| Changes to operating receivables | -2,878 | 206 | -2,832 | 206 |
| Changes to operating liabilities | 2,692 | 336 | 2,500 | 336 |
| **Cash flow from operating activities** | **-32,498** | **-14,690** | **-32,560** | **-14,690** |
| **INVESTMENT ACTIVITIES** | | | | |
| Activation of capitalised expenses | -5,088 | -7,357 | -5,088 | -7,357 |
| Acquisition of inventories, tools and installations | -846 | -262 | -846 | -262 |
| Sale inventories, tools and installations | 29 | 0 | 29 | 0 |
| Acquisition of financial assets | 0 | -31 | 0 | -31 |
| Sale financial assets | 2 | 0 | **6** | **0** |
| **Cash flow from investment activities** | **-5,903** | **-7,650** | **-5,899** | **-7,650** |
| **FINANCING ACTIVITIES** | | | | |
| New share issue | 40,962 | -20,007 | 40,962 | -20,007 |
| Subscription rights | 83 | 0 | 83 | 0 |
| Changes to long-term liabilities | -48 | -30 | -48 | -30 |
| **Cash flow from financing activities** | **40,997** | **19,977** | **40,997** | **19,977** |
| **NET CASH FLOW (CASH AND BANK)** | **2,596** | **-2,363** | **2,538** | **-2,363** |
| **Cash and cash equivalents at start of year** | **3,531** | **5,894** | **3,531** | **5,894** |
| **Cash and cash equivalents at year-end** | **6,127** | **3,531** | **6,069** | **3,531** |

# NOTES

## NOTE 1 ACCOUNTING PRINCIPLES

The company's annual accounts have been prepared in accordance with the Annual Accounts Act and the Swedish Accounting Standards Board's general advice, BFNAR 2012:1 Annual Report and Consolidated Financial Statements (K3).

The transition to K3 has not given rise to any changes in accounting principles compared with the principles applied last year.

Assets, provisions and liabilities are valued at cost unless otherwise stated.

**Group accounts**

***Subsidiaries***

Subsidiaries are companies in which the parent company, directly or indirectly, holds a share of the vote greater than 50% or otherwise has a controlling influence. Controlling influence refers to a right to prepare a company's financial and operative strategies with the aim of obtaining financial benefits. The reporting of operational acquisitions is based on the uniform approach. That means that the acquisition analysis prepared as per the point when the acquiring party obtains a controlling influence. From that point onwards, the acquiring party and the acquired unit is considered as one reporting unit. The application of the uniform approach further means that all assets (including goodwill) and liabilities as well as revenue and costs are included in their entirety, also for part-owned subsidiaries.

The acquisition value for subsidiaries is calculated as the sum of the fair value at the point of acquisition for assets paid adding arisen and assumed liabilities as well as equity instruments issued, costs directly attributable to the operating acquisition and any additional purchase sums. The fair value is determined in the acquisition analysis, with some exceptions, at the point of the acquisition of identifiable assets and assumed liabilities as well as minority interests. The minority interests are valued at their fair value at the point of acquisition. The acquired company's revenue and costs, identifiable assets and liabilities as well as any arisen goodwill or negative goodwill are included in the consolidated accounts from the point of acquisition.

***Elimination of transactions between group companies and associated companies***

Group-internal receivables and liabilities, revenue and costs and unrealised profits or losses arisen from transactions between group companies [and jointly managed companies reported according to the split method] are entirely eliminated. Unrealised profits arisen from transactions with associated companies [and jointly managed companies reported according to the capital share method] are eliminated to the extent which corresponds to the group's share of the company. Unrealised losses are eliminated in the same way as unrealised profits, but only to the extent that there are no indications of a need for any amortisations.

**Intangible and tangible assets**

Intangible and tangible assets are reported at their acquisition value less accrued depreciations and amortisations. The acquisition value also includes, in addition to the purchase price, costs directly associated with the acquisition.

***Capitalised costs for development and similar work***

The costs for developments calculated as an average operating cost are capitalised and are reported per project (new products/ projects). Once sales starts per unit, a depreciation of capitalised costs is commenced. This depreciation continues during the sales period of the unit, however for no more than five years.

In the event of a closure/termination of units, an amortisation of the entire remaining balance for the unit is done simultaneously and the costs are returned to the profit and loss statement.

***Additional expenses***

Additional expenses which fulfil the asset criteria are included in the reported value of the asset. Expenses for regular maintenance and repairs are reported as costs as they occur.

***Depreciations***

Depreciations are linear across the asset's estimated useful life as this reflects the expected consumption of the asset's future financial benefits. The depreciation is reported as a cost in the profit and loss statement.

The estimated residual value has been taken account of as determined at the point of acquisition at the price levels at the time.

| | USEFUL LIFE |
|---|---|
| Capitalised costs for development and similar work | 5 years |
| Inventories, tools and installations | 5 years |

***Amortisations – tangible and intangible assets and shares in group companies***

An assessment is made every balance sheet day if there are any indications that the value of an asset is lower than its reported value. If there is such an indication, the asset's recoverable value is calculated.

The recoverable value is the greater of the fair value less sales costs and the utility value. When calculating the utility value, the current value is calculated of the future cash flows that the asset is expected to provide to the operating activities and when it is sold or disposed of. The discount applied is before tax and reflects market assessments of the time value of money and the risks associated with the asset. Any previous amortisation is only returned if the grounds for the calculation of the recoverable value at the last amortisation have changed.

**Foreign currency**
Monetary items in foreign currency are converted at the exchange rate on the balance sheet day. Non-monetary items are not converted but are reported at the rate at the point of acquisition.

The exchange rate difference that occurs due to adjustments or conversions of monetary items is reported in the profit and loss statement in the year it occurs.

**Inventories**
The inventory is reported at the lowest of the acquisition value and the net sales value. The risk of obsolescence has been taken into account. The acquisition value is calculated using the first in, first out principle. The acquisition value includes, in addition of the expenses for purchase, expenses for bringing the goods to their current location and condition

**Financial assets and liabilities**
Financial assets and liabilities are reported in compliance with chapter 11 (Financial instruments valued at the acquisition value) in BFNAR 2012:1.

***Reporting in and removal from the balance sheet***
A financial asset or a financial liability is reported in the balance sheet when the company becomes party to the contractual conditions of the instrument. A financial asset is removed from the balance sheet when the contractual right to cash flows from the asset has ceased or has been settled. This also applies when the risks and benefits associated with the holding have essentially been transferred to another party and the company no longer controls the financial asset. A financial liability is removed from the balance sheet when the agreed obligation has been fulfilled or has ceased.

***Valuation of financial assets***
Financial assets are valued at the first reporting date at the acquisition value including any transaction expenses directly associated with the acquisition of the asset.

Accounts receivables and other receivables which are current assets are valued individually at the amounts expected to flow in.

After the first reporting date, financial assets are valued at their acquisition value less any amortisations and including any write-ups.

***Valuation of financial liabilities***
Long-term financial liabilities are reported at their amortised acquisition value. Expenses directly associated to the raising of loans have corrected the acquisition cost of the loan. Short-term liabilities are reported at their acquisition value.

**Compensation to employees**
***Compensation to employees after completed employment***
**Classification** – Plans for compensations after completed employment are classified as defined contribution.

For defined contribution plans, set fees are paid to another company, normally an insurance company, and Heliospecta no longer holds any liabilities to the employee once the fee has been paid. The size of the employee's compensation after completed employment is dependent on the fees paid and the capital return that the fees have provided.

**Defined contribution plans** – The fees for defined contribution plans are reported as costs. Unpaid fees are reported as a liability.

**Provisions**
A provision is reported on the balance sheet when the company has a legal or informal obligation due to an event occurred and it is probable that an outflow of resources is required in order to settle the obligation and it is possible to make a reliable estimation of the amount.

At the first reporting date, provisions are valued at the best estimate of the amount required to settle the obligation on the balance sheet date. The provisions are reassessed every balance sheet date.

The provision is reported at the current value of any future payments required for the settling of the obligation.

**Contingent liabilities**
A contingent liability is reported above the line when there is:

- A possible liability associated with events occurred and the existence of such will only be confirmed if one or more uncertain future events, which are not entirely within the control of the company, occur or does not occur, or

- An existing obligation caused by events occurred, but which is not reported as a liability or a provision as it is not probable that an outflow of resources will be required in order to settle the obligation or the size of the obligation cannot be calculated sufficiently satisfactorily.

**Revenue**
The inflow of financial benefits that the company has received or will receive on its own account is reported as revenue. Revenue is reported at the fair value of what has been received or will be received less any discounts.

***Sale of goods***
When goods are sold, a revenue is reported when the following criteria have been fulfilled:

- The financial benefits associated with the transaction are likely to fall to the company,

- The income can be calculated satisfactorily,

- The company has transferred all essential risks and benefits associated with the ownership of the goods to the buyer,

- The company no longer has such involvement in the daily management as is normally associated with ownership and does not exercise any real control over the goods sold, and

- The costs which have occurred or are expected to occur as a consequence of the transaction can be calculated satisfactorily.

## NOTE 2 GROUP DATA

***Purchases and sales within the group***

Total purchases and sales made by the parent company measured in SEK concerns 0% (0%) of the purchases and 0% (0%) of the sales relate to other companies within the entire group of which the company is a part.

## NOTE 3 COMPENSATION AND REIMBURSEMENTS TO AUDITORS

| | GROUP | | PARENT COMPANY | |
|---|---|---|---|---|
| *SEK thousands* | 2014 | 2013 | 2014 | 2013 |
| Audit task | 83 | 50 | 83 | 50 |
| Tax advice | 0 | 0 | 0 | 0 |
| Other services | 65 | 0 | 65 | 0 |
| **Sum** | **148** | **50** | **148** | **50** |

## NOTE 4 OPERATIONAL LEASING

***Leasing agreements where the company is the lessee***

Future minimum leasing fees regarding non-cancellable operational leasing agreements

| | GROUP | | PARENT COMPANY | |
|---|---|---|---|---|
| *SEK thousands* | 2014 | 2013 | 2014 | 2013 |
| Within one year | 755 | 755 | 755 | 755 |
| Between one and five years | 0 | 0 | 0 | 0 |
| Later than five years | 0 | 0 | 0 | 0 |
| **Sum** | **755** | **755** | **755** | **755** |
| The expensed leasing costs for the financial year including rent | 767 | 654 | 767 | 654 |

## NOTE 5 EMPLOYEES AND COMPANY MANAGEMENT

| | GROUP | | PARENT COMPANY | |
|---|---|---|---|---|
| | 2014 | 2013 | 2014 | 2013 |
| *Average number of employees* | | | | |
| Men | 13 | 10 | 13 | 10 |
| Women | 6 | 4 | 6 | 4 |
| **Total** | **19** | **14** | **19** | **14** |
| *Gender distribution within the company management* | | | | |
| Board members | 3 | 3 | 3 | 3 |
| Of which men | 3 | 3 | 3 | 3 |
| CEO and company management | 5 | 4 | 4 | 3 |
| Of which men | 5 | 4 | 4 | 3 |

## NOTE 6 SALARIES AND OTHER COMPENSATION AS WELL AS SOCIAL CONTRIBUTIONS INCLUDING PENSION COSTS

| | GROUP | | PARENT COMPANY | |
|---|---|---|---|---|
| *SEK thousands* | 2014 | 2013 | 2014 | 2013 |
| *Salaries and other compensation* | | | | |
| Board members and CEO | 1,364 | 1,010 | 1,364 | 1,010 |
| Other employees | 7,248 | 5,919 | 7,248 | 5,919 |
| **Total salaries and compensations** | **8,612** | **6,936** | **8,612** | **6,929** |
| | | | | |
| Pension costs for board members and CEO | 139 | 102 | 139 | 102 |
| Pension costs for others | 170 | 218 | 170 | 218 |
| Other social contributions | 2,145 | 2,183 | 2,145 | 2,183 |
| **Total social costs** | **2,454** | **2,503** | **2,454** | **2,503** |
| | | | | |
| Obligations relating to pensions or similar benefits to board members and CEO | 0 | 0 | 0 | 0 |

## NOTE 7 DEPRECIATION OF TANGIBLE AND INTANGIBLE FIXED ASSETS

| | GROUP | | PARENT COMPANY | |
|---|---|---|---|---|
| *SEK thousands* | 2014 | 2013 | 2014 | 2013 |
| Capitalised costs for development and similar work | 2,839 | 1,817 | 2,839 | 1,817 |
| Inventories, tools and installations | 778 | 868 | 778 | 868 |
| **Sum** | **3,617** | **2,685** | **3,617** | **2,685** |

## NOTE 8 INCOME FROM SHARES IN GROUP COMPANIES

| | PARENT COMPANY | |
|---|---|---|
| *SEK thousands* | 2014 | 2013 |
| Amortisations | 122 | 0 |
| **Sum** | **122** | **0** |

## NOTE 9 INTEREST INCOME AND SIMILAR ITEMS

| | GROUP | | PARENT COMPANY | |
|---|---|---|---|---|
| *SEK thousands* | 2014 | 2013 | 2014 | 2013 |
| Interest income, other | 16 | 49 | 16 | 49 |
| **Sum** | **16** | **49** | **16** | **49** |

## NOTE 10 INTEREST EXPENSES AND SIMILAR ITEMS

| | GROUP | | PARENT COMPANY | |
|---|---|---|---|---|
| *SEK thousands* | 2014 | 2013 | 2014 | 2013 |
| Interest costs, other | 784 | 25 | 662 | 25 |
| Exchange rate differences | 1 | 0 | 1 | 0 |
| **Sum** | **785** | **25** | **663** | **25** |

## NOTE 11 CAPITALISED COSTS FOR DEVELOPMENT AND SIMILAR WORK

| | GROUP | | PARENT COMPANY | |
|---|---|---|---|---|
| *SEK thousands* | 2014 | 2013 | 2014 | 2013 |
| Acquisition value carried over | 14,684 | 7,327 | 14,684 | 7,327 |
| Acquisitions | 5,088 | 7,357 | 5,088 | 7,357 |
| **Accrued acquisition values carried forward** | **19,772** | **14,684** | **19,772** | **14,684** |
| Depreciations carried over | -1,817 | 0 | -1,817 | 0 |
| This year's depreciations | -2,839 | -1,817 | -2,839 | -1,817 |
| **Accrued depreciations carried forward** | **-4,656** | **-1,817** | **-4,656** | **-1,817** |
| **Closing balance** | **15,116** | **12,867** | **15,116** | **12,867** |

## NOTE 12 ACQUISITION OF INVENTORIES, TOOLS AND INSTALLATIONS

| | GROUP | | PARENT COMPANY | |
|---|---|---|---|---|
| *SEK thousands* | 2014 | 2013 | 2014 | 2013 |
| Acquisition value carried over | 4,860 | 4,598 | 4,860 | 4,598 |
| Acquisitions | 846 | 262 | 846 | 262 |
| Sales/disposals | -30 | 0 | -30 | 0 |
| **Accrued acquisition values carried forward** | **5,676** | **4,860** | **5,676** | **4,860** |
| Depreciations carried over | -2,909 | -2,041 | -2,909 | -2,041 |
| Sales/disposals | 1 | 0 | 1 | 0 |
| This year's depreciations | -778 | -868 | -778 | -868 |
| **Accrued depreciations carried forward** | **-3,686** | **-2,909** | **-3,686** | **-2,909** |
| **Closing balance** | **1,990** | **1,951** | **1,990** | **1,951** |

## NOTE 13 SHARES IN GROUP COMPANIES

| | PARENT COMPANY | |
|---|---|---|
| *SEK thousands* | 2014 | 2013 |
| Acquisition value carried over | 82 | 50 |
| Acquisitions | 0 | 32 |
| **Accrued acquisition values carried forward** | **82** | **82** |
| **Closing balance** | 82 | 82 |

Information about company numbers and registered offices of subsidiaries are stated below.

| *Company, company number, registered office* | NUMBER OF SHARES | SHARE (%) | REPORTED VALUE |
|---|---|---|---|
| Heliospectra Personal AB, 556904-7243, Gothenburg | 1,000 | 100 | 50 |
| Heliospectra Inc., 5290422, USA | 5,000,000 | 100 | 32 |

This relates to the capital share, which also corresponds to the share of votes for the total number of shares.

## NOTE 14 PREPAYMENTS AND ACCRUED INCOME

| | GROUP | | PARENT COMPANY | |
|---|---|---|---|---|
| *SEK thousands* | 2014 | 2013 | 2014 | 2013 |
| Prepaid leasing fees | 213 | 198 | 213 | 198 |
| Other items | 402 | 334 | 402 | 334 |
| **Sum** | **615** | **532** | **615** | **532** |

## NOTE 15 EQUITY

| *SEK thousands* | SHARE CAPITAL | OTHER CONTRIBUTED CAPITAL | OTHER FINANCIALS INC. NET PROFIT/ LOSS |
|---|---|---|---|
| **Group** | | | |
| Opening balance, 1/1/2014 | 796 | 53,845 | -45,917 |
| Net profit/loss | | | -33,670 |
| *Transactions with group owners* | | | |
| New share issue | 583 | 40,379 | |
| Subscription rights | | 83 | |
| **Total equity, 31/12/2014** | **1,379** | **94,307** | **-79,587** |

| *SEK thousands* | SHARE CAPITAL | RETAINED EARNINGS |
|---|---|---|
| **parent company** | | |
| Opening balance, 1/1/2014 | 796 | 8,014 |
| Net profit/loss | | -33,586 |
| *Transactions with group owners* | | |
| New share issue | 583 | 40,379 |
| Subscription rights | | 83 |
| **Total equity, 31/12/2014** | **1,379** | **14,890** |

## SUM LONG-TERM LIABILITIES

| | GROUP | | PARENT COMPANY | |
|---|---|---|---|---|
| *SEK thousands* | 2014 | 2013 | 2014 | 2013 |
| *With expiry as from balance sheet date* | | | | |
| – later than after one year | 96 | 96 | 96 | 96 |
| – later than after five years | 9,608 | 9,656 | 9,608 | 9,656 |
| **Sum** | **9,704** | **9,752** | **9,704** | **9,752** |

## NOTE 17 ACCRUED EXPENSES AND DEFERRED INCOME

| | GROUP | | PARENT COMPANY | |
|---|---|---|---|---|
| *SEK thousands* | 2014 | 2013 | 2014 | 2013 |
| Salaries and holiday pay | 1,001 | 871 | 1,001 | 871 |
| Other accrued expenses and deferred income | 849 | 500 | 849 | 623 |
| **Sum** | **1,850** | **1,371** | **1,850** | **1,494** |

## NOTE 18 PLEDGED ASSETS

| | GROUP | | PARENT COMPANY | |
|---|---|---|---|---|
| *SEK thousands* | 2014 | 2013 | 2014 | 2013 |
| Other pledged assets | 50 | 0 | 50 | 0 |
| **Total pledged assets** | **50** | **0** | **50** | **0** |

## NOTE 19 CONTINGENT LIABILITIES

| | GROUP | | PARENT COMPANY | |
|---|---|---|---|---|
| *SEK thousands* | 2014 | 2013 | 2014 | 2013 |
| Warranty liabilities | 0 | 150 | 0 | 150 |
| **Sum contingent liabilities** | **0** | **150** | **0** | **150** |

## NOTE 20 DEFINITIONS OF KEY RATIOS

*Operating margin*
Operating profit/loss / Net turnover

*Return on employed capital*
Profit/loss before financial costs / average employed capital

*Employed capital*
Total assets – non-interest carrying liabilities

*Return on equity*
Net profit/loss relating to the parent company's shareholders / Average equity relating to the parent company's shareholders

*Solidity*
Total equity / Total assets

*Gothenburg 5 May 2015*

**Jan Tufvesson**
CHAIRMAN OF THE BOARD

**Staffan Hillberg**
CHIEF EXECUTIVE DIRECTOR

**Martin Skoglund**

**Andreas Gunnarsson**

**Anders Ludvigson**

*Our audit report was submitted on 5 May 2015*

FREJS REVISORER AB

**Mikael Glimstedt**
CHARTERED ACCOUNTANT

# AUDIT REPORT

**For the Annual General Meeting in Heliospectra AB (publ)**
**Company No. 556695-2205**

## REPORT ON THE ANNUAL ACCOUNTS AND THE CONSOLIDATED ACCOUNTS.

We have carried out an audit of the annual accounts and consolidated accounts for Heliospectra AB (publ) for the financial year 2014.

The company's annual accounts and consolidated accounts are part of the printed version of this document on pages 18-38.

**The board and the CEO are responsible for the annual accounts and the consolidated accounts.**
The board and the CEO are responsible for preparing annual accounts and consolidated accounts which provide a true and fair picture in accordance with the Annual Accounts Act and for those internal controls which, in the assessment of the board and the CEO, are necessary for preparing annual accounts and consolidated accounts which do not contain any significant errors, whether these are due to irregularities or errors.

**The auditor's responsibility**
It is our responsibility to make a statement on the annual accounts and the consolidated accounts on the basis of our audit. We have carried out this audit in compliance with International Standards on Auditing and generally accepted accounting principles in Sweden. These standards require us to comply with professional requirements and that we plan and perform the audit with a view to obtain a reasonable certainty that the annual accounts and consolidated accounts do not contain any significant errors.

An audit entails the gathering of audit proof on amounts and other information in the annual accounts and the consolidated accounts using various measures. The auditor chooses what measures to take for example by assessing the risks for significant errors in the annual accounts and consolidated accounts, whether these are due to irregularities or errors. In this risk assessment, the auditor consider those parts of the internal controls that are relevant for how the company prepares the annual accounts and the consolidated accounts in order to provide a true and fair picture with a view to design review measures that are suitable given the circumstances but not with a view to make a statement on the efficiency of the company's internal controls. An audit also entails an assessment of the suitability in the accounting principles that have been used and the reasonableness of the assessments made in the report by the board and the CEO as well as an assessment of the overall presentation in the annual accounts and the consolidated accounts.

We believe that the audit proof that we have obtained is sufficient and suitable as support for our statements.

**Statements**
In our opinion, the annual accounts and the consolidated accounts have been drawn up in accordance with the Annual Accounts Act and do, in all essential aspects, provide a true and fair account of the financial position of the parent company and the group as per 31/12/2014 and of its financial profit/loss for the year in accordance with the Annual Accounts Act. The management report is compliant with the other parts of the annual accounts and the consolidated accounts.

We therefore recommend that the annual general meeting adopts the profit and loss statement and the balance sheet for the parent company and the group.

**Other information**
The audit of the annual accounts and the consolidated accounts for the financial year 2013 was performed by a different auditor who submitted an audit report dated 25/3/2014 with unmodified statements in the Report on the Annual Accounts and Consolidated Accounts.

## REPORT COMPLIANT WITH OTHER STATUTORY AND REGULATORY REQUIREMENTS

In addition to our audit of the annual accounts and the consolidated accounts, we have also carried out a review of the company's proposals for disposals of the company's profit or loss and the board and the CEO's management of Heliospectra AB (publ) for the financial year 2014.

**The responsibility of the board and the CEO**
The board is responsible for the proposal for disposals of the company's profit or loss and the board and the CEO are responsible for the management in accordance with the Companies Act.

**The auditor's responsibility**
It is our responsibility to, with reasonable certainty, make a statement on the proposals for disposals of the company's profits or loss and on the management based on our audit. We have carried out this audit in compliance with generally accepted accounting principles in Sweden.

As support for our statement on the board's proposal for disposals of the company's profit or loss, we have reviewed whether the proposal is in compliance with the Companies Act.

As support for our statement on the discharge of liability we have, in addition to our audit of the annual accounts and the consolidated accounts, also reviewed significant decisions, measures and conditions within the company in order to be able to determine whether any board member or the CEO is liable for compensation to the company. We have also reviewed whether any board member or the CEO in any other way has acted in breach of the Companies Act, the Annual Accounts Act or the Articles of Association.

We believe that the audit proof that we have obtained is sufficient and suitable as support for our statements.

**Statements**
We propose that the annual general meeting disposes of the profit as per the proposal in the management report and discharges the board members and the CEO from liability for the financial year.

***Gothenburg 5 May 2015***

FREJS REVISORER AB



Mikael Glimstedt
CHARTERED ACCOUNTANT

WWW.HELIOSPECTRA.COM

DESIGN www.catino.se