

# smart eye

## Annual report 2019

Technology that understands, simplifies and predicts human intentions and actions.

# Contents

<b>2</b>	This is Smart Eye
<b>3</b>	2019 in brief
<b>7</b>	CEO's statement
<b>9</b>	Market
<b>13</b>	The market's distinguishing definitions and drivers
<b>15</b>	Strategy and business model
<b>19</b>	Research & development
<b>21</b>	Research Instruments
<b>23</b>	Automotive Solutions
<b>26</b>	Applied AI Systems
<b>27</b>	Sustainability
<b>29</b>	The share



# This is Smart Eye

Smart Eye's operations are organised into three business areas: Research Instruments, Automotive Solutions and Applied AI Systems (AIS). Within Research Instruments, Smart Eye delivers sophisticated eye tracking systems for measuring and analysing human behaviour. In Automotive Solutions, the company delivers eye tracking software for the automotive industry, and within AIS, also offers hardware for integration into vehicles.

Smart Eye started developing AI in the form of eye tracking technology that understands, supports and predicts individual intentions and actions as early as 1999. By closely studying eye, facial and head movements, our technology can draw conclusions about individual awareness and mental state. Smart Eye is one of few companies supplying the global automotive industry with driver monitoring systems, systems that are now rapidly becoming a new standard to improve vehicle safety. By year-end 2019, Smart Eye's eye tracking systems were present in six car models already on Europe's roads, but the company has contracts to deliver a total of 57 car models for international car manufacturers. The solutions for the research industry that Smart Eye is developing offer new potential in complex and real-life situations, paving the way towards new understandings in the aerospace, aviation and defence industries, psychology, neuroscience, medicine and technology research. Smart Eye's head office is in Gothenburg, Sweden, but the company also has offices in Detroit, USA, Tokyo, Japan and Chongqing, China. In addition to these proprietary offices, Smart Eye also operates through partners, resellers and distributors in several locations across Europe, the US and APAC. Smart Eye's solutions are used by over 700 partners and customers worldwide, leading research groups, brands and laboratories such as the US Air Force, NASA, BMW, Lockheed Martin, Audi, Boeing, Volvo and GM, to name but a few.

World-leading eye tracking  
- to save lives



# Milestones consolidating a strong market position

**24 Jan**

## **BMW X5 and BMW 8-series**

After initially being restricted by a nondisclosure agreement, Smart Eye is able to announce a customer, and the specific car models the company is delivering driver monitoring systems to for the first time - the BMW X5 and 8 series.

**1 Feb**

## **14 design wins from a global Korean OEM**

Design wins from a new South Korean customer, involving 14 mass-market car models, with planned SoP in 2020. The estimated order value based on volume forecast for full product lifecycles is SEK 150 million.

**28 Feb**

## **BMW X3 and BMW X4**

Smart Eye names another two BMW car models the company is providing driver monitoring systems for - the X3 and X4.

**9 May**

## **BMW 3-series and BMW Z4**

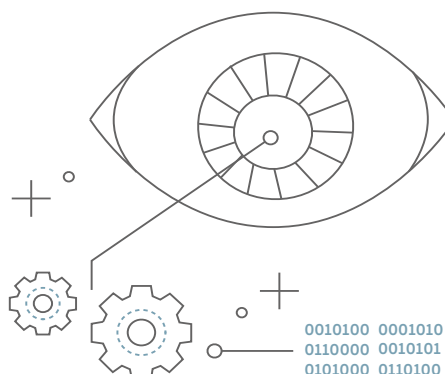
Smart Eye names another two BMW car models the company is providing driver monitoring systems for - the 3 series and Z4.

**15 May**

## **Two design wins for a Japanese/European OEM**

Design wins for two car models for a vehicle platform shared by one of Japan's and one of Europe's largest OEMs. The estimated order value based on volume forecasts over complete product lifecycles is SEK 150 million.





0010100 0001010  
0110000 0010101  
0101000 0110100

## 22 May 11 Jun 25 Sep 27 Sep 8 Nov 11 Nov

### Private placement of approximately SEK 200 million

To exploit growth opportunities, mainly on the Chinese market, Smart Eye conducts a SEK 200.2 million private placement, with a subscription price of SEK 101.50 per share. The First Swedish Pension Insurance Fund becomes a new major shareholder of the company in this issue.

### Applied AI Solutions launches on the Chinese market

The Applied AI Solutions integrated hardware and software solution for driver monitoring launches on the Chinese market to address demand growth triggered by new Chinese legislation. The first customers commenced pilot testing in late-2019.

### German Aerospace Centre DLR reappoints Research Instruments

German aerospace centre DLR reappoints Smart Eye by ordering a new, sophisticated Smart Eye Pro dx system. DLR is utilising Smart Eye's eye tracking system to develop vehicle, rail and traffic management systems.

### Another eight design wins from Japanese/Euro-pean OEMs

Smart Eye's expands assignment with existing Japanese/European OEMs, with an estimated order value based on volume forecasts over complete product lifecycles of SEK 200 million.

### EU legislates for driver monitoring systems

Consistent with a European Parliament bill from March 2019 stipulating driver monitoring systems being installed in cars sold in the EU, new legislation was adopted by the Council of Ministers on 8 November. Initially, the requirements only apply to new car models, but from 2024, all cars offered for sale in the EU will need to be covered.

### Three design wins, one with a new Japanese OEM

Smart Eye secured a design win from a new Japanese OEM, and another two design wins from an existing Japanese/European OEM. The estimated order value based on volume forecasts over complete product lifecycles is SEK 100 million.



# 2019 in summary

NET SALES, TSEK

**49 817**

OPERATING PROFIT, TSEK

**-105 723**

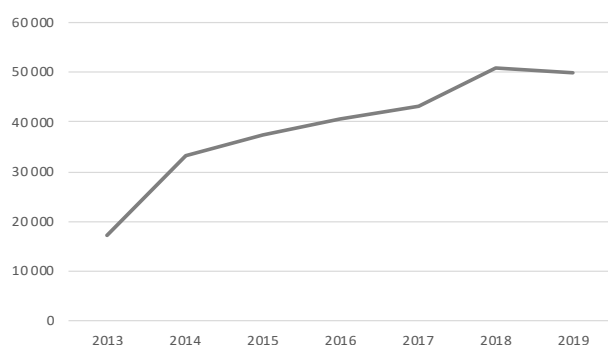
EQUITY RATIO %

**85**

NUMBER OF EMPLOYEES

**104** + 43 consultants

## NET SALES, TSEK



## BREAKDOWN OF EMPLOYEES + CONSULTANTS



## KEY FIGURES

TSEK	2019	2018	2017
Net sales, TSEK	49 817	50 778	43 199
Operating profit, TSEK	-105 723	-55 998	-41 463
Profit after tax, TSEK	-106 362	-56 404	-41 896
Shareholders equity per share, SEK	16,64	12,88	7,41
Equity ratio, %	85	83	73
Number of employees	104	74	65

- Automotive solutions, 52 %
- Research Instruments, 14 %
- Applied AI Systems, 6 %
- Research, 19 %
- Administration, 9 %



# Crowned by success

## Smart Eyes highlights

If 2019 was the year when we reaped great success in the automotive industry, 2018 was the year we sowed. In late summer 2018, there was a shift in the market where we noticed that the premium segment was no longer the focus. There were still requests from there, but more and more demanding RFQs came from the middle-class segment, by far the largest in the automotive industry. As a company, we realized that this was a critical time in the development of the DMS market. We made an active decision to fully invest in the fact that there really had been a shift in the market. This meant that we had to quickly prioritize resources in terms of both sales and marketing as well as how and what we developed. We realized that we should continue to invest in having a scalable software solution that can be executed on several hardware platforms. In addition, it must be classified for safety-critical vehicle applications.

This hardware agnostic approach gives our customers the opportunity to optimize the products in terms of both performance and system cost as well as utilizing the latest hardware technology, which is developing rapidly. The engineers at Smart Eye have done a fantastic job and have been able to develop a quality product in record time. It is nothing less than a feat of ingenuity that we are now reaping the fruits of.

In February 2019, we were able to tell about our first success in the middle-class segment, a Korean manufacturer with a total of 14 new car models. In March, signals came from the European Parliament on new legislation that included DMS. In May, the announcement was made of the next middle-class manufacturer, a Japanese-European car alliance. So far, a total of 13 car models have been announced from this alliance with the potential for more models in the future. In order to be able to continue the beaten path with an offensive business plan, SEK 200 million was raised through a directed new share issue at the end of May. Interest was great and the issue was heavily oversubscribed.

During the second half of the year, the real battle for the middle-class segment in the automotive industry started.

Parallel purchasing processes took place in the US, Europe and Asia in both the premium and middle class. The outcome for the Smart Eye has been quite excellent, since we have reported the success of five car manufacturers so far after the end of the period. First one in China in January, then one in the US and three in Europe in March. A total of 25 new car models have been reported so far in 2020. We now have a total of 81 design wins, significantly more than all competitors overall.

Both the European Parliament through legislation as well as EuroNCAP have put focus on DMS in new cars. Some procurement is still ongoing, but we have crossed the line in terms of first-generation mass market systems (as well as second-generation premium systems). In many ways, the dust has settled, and the stage is set from today until at least 2025.

It is software from Smart Eye that will sit in most cars. Of course, we are keen to pin down as many of the remaining car brands as we can, and of course we have plans for how the next generation of DMS should be just as successful for Smart Eye.

## Electrification and digitization

Two very strong trends that are fundamentally transforming the automotive industry are the electrification and digitization of the vehicle fleet. Both of these trends can be considered disruptive in the sense that there will be both winners and losers once the transition is complete. Electrification is driven by the need to change from fossil to sustainable and today, most electric cars are in the premium sector. There are many exciting development projects going on around the world where the price of electric cars is going down, so that the cost of car ownership including the fuel cost becomes very competitive. Furthermore, the automotive industry is less and less about hardware and more and more about software. In the automotive industry, experienced software engineers are in short demand and anyone who can serve the automotive industry with high-quality software expertise generally has a bright future ahead.

## Not just headwind - sobering in self-driving

If 2018 was a year when the hype for fully self-driving cars was at its peak, 2019 was the year when many sobered and realized that it is a very difficult problem to solve having a fleet of cars where fully or partially autonomous cars should be mixed with ordinary vehicles and pedestrians. There were some very noticeable accidents and the optimistic forecasts of several car manufacturers abated. It can be said that reality caught up with the most unrealistic future visions / scenarios during the year, including that autonomous driving does not need DMS. Another event that also affected the mood in the industry was the so-called Dieselgate. Some manufacturers took shortcuts to achieve tougher exhaust requirements, which were penalized when it was discovered. Both of these things have, together, influenced some plans for new platforms, albeit to a lesser extent. This allowed us to see some tendencies for possible delays even before the Corona virus struck.

## Corona - dramatic in the short term, dent in the curve in the long term

It is beyond any reasonable doubt that Corona will affect the plans of the automotive industry, we just don't know how. Although it is dramatic to be in the middle of the process, the high value of having access to "personal mobility" remains, a need that the car meets. Public transport is vulnerable in its own way, we have seen that now when social distance is desirable. The world's middle class continues to grow, and the car remains as a sought-after property. The automotive industry post Corona will remain and continue to be a central pillar of the global industry and Smart Eye will be an important albeit small cog in this huge machinery. It is likely to be as after the financial crisis. The long-term trend is dominated by structurally underlying growth overlaid with a short-term decline in world production. All in all, the conclusion is that, despite external factors of uncertainty, Smart Eye has secured its position for a long time to come thanks to the automotive industry's long product cycles. We will try to continue to win as many contracts as possible and to refine our technology even more so that our customers can continue to save lives with today's and tomorrow's technology.

### Smart Eye's Research department excels

Systems for measuring inside cars are more than just DMS. There will also be more sensors that detect everything that is important that is happening inside the car. There will be measurements based on cameras, radar and ultrasound. Such an evolution of today's technology was carried out throughout 2019. The work was done by the Smart Eye research department's dedicated group for development of advanced AI. At the beginning of January 2020, it was time to show the results in connection with the launch of CES in Las Vegas, the world's largest high-tech trade show. The concept, which we call multimodal interior sensing, was very well received and has led to many exciting opportunities with industry partners. In the future, the protection will include children in the back seat, pets and passengers.

### Aftermarket for professional traffic and heavy vehicles

In 2018, it emerged that there will be a strong opportunity to manufacture products for the aftermarket and in small series. We formed a new business area that was launched after the summer of 2019. It's called AIS, which stands for Applied Artificial Intelligence Systems. The products will be manufactured in China. The new business area that sells to the aftermarket benefits from Chinese legal initiatives. We expect to start on a small scale at the end of 2020 or the beginning of 2021. The business opportunities that exist in the aftermarket may be realized at a faster pace than the DMS market for new cars.

### Research Instruments

When Smart Eye was founded, measurement systems were the company's focus. For many years we were able to hone the technology in collaboration with some of the most skilled scientists in the field. When it was time for the car companies to industrialize the technology, we could ride on many years of experience. Now we see the same happening again in new industries and we rely on Research Instruments' well-documented ability to capture that type of customers and to help getting the industrialization process started. For the business area, 2019 can be described as something of a middle year as we have worked to broaden our product range. We expect the results of this work to be visible as early as 2020.

### The aviation industry is knocking on the door

In 2019, the airline industry has started to move. We are in the same position as we were in terms of the automotive industry in 2014. We believe that the first Pilot Monitoring Systems may be in use around 2025 or shortly thereafter. We have not yet established a strategy for how to proceed in this market but are currently keeping all doors open. In conclusion, never before has there been a year in Smart Eye's history that has been as successful as 2019. The foundation is laid for many years to come.

**Martin Krantz**  
CEO Smart Eye

”A total of 25 new car models have been reported so far in 2020. We now have a total of 81 design wins, significantly more than all competitors overall...In many ways, the dust has settled, and the stage is set from today until at least 2025 is quite a given. It is software from Smart Eye that will sit in most cars.





# Leading position on an expansive global market

*The market for eye tracking systems is in high growth, with many applications. In vehicle interior environments, for research purposes in the academic world, behavioural analysis and neuroscience, the aviation and aerospace industries, as well as human-computer interaction and gaming. Eye tracking systems become really powerful when combined with AI (artificial intelligence), opening up a wealth of new applications.*

Smart Eye is at the epicentre of the development of eye tracking technology. In its Automotive Solutions and Applied AI Systems business areas, the company focuses on applications for vehicle interior environments, especially driver monitoring systems. In its Research Instruments business area, Smart Eye is developing eye tracking systems for use in R&D in the aviation, aerospace and defence industries, as well as the academic world, and for behavioural analysis in other R&D-focused activities.

## Quality that satisfies exacting standards

Smart Eye was founded in Gothenburg, Sweden in 1999, and its first customer was Saab Automobile. The automotive industry has remained a priority target group ever since, with very exacting standards on quality, safety, reliability, durability and delivery capability. The technical operational environment in vehicles is also very demanding in terms of sunlight, darkness and vibration, for example. Additionally, any robust eye tracking systems must be able to deal with tracking individuals wearing sunglasses, hats or facemasks, as is common in Asia.

Smart Eye is now one of only a few manufacturers worldwide capable of delivering eye tracking technology to the global automotive industry.

Smart Eye enjoys another key competitive advantage in the company offering a platform-independent solution that is open and flexible, and accordingly, fully compatible with customers' other system components.

The development of Smart Eye's eye tracking solution is based on the automotive industry's exacting quality standards, and many of the customer categories the company currently addresses have similar needs. The aviation and aerospace industries are an example of this kind of target group. Smart Eye's leadership with these target groups is protected by the high barriers to entry in its market. The lengthy and involved qualification for vehicle software obstructs new market participants, who need to adopt a very long-term and persistent approach to gain OEMs' trust. Smart Eye has achieved strong market positioning thanks to its proven capability to satisfy exacting safety and quality standards, while also offering very strong delivery capability.

## Three business areas with differing eye tracking offerings

Smart Eye's operations are conducted through three business areas: Research Instruments, Automotive Solutions and Applied AI Systems.

The eye tracking systems were developed within Research Instruments, and this business area sells full-scale eye tracking systems for R&D and educational environments, mainly in the automotive, aviation and aerospace industries, but also to customers in the academic community.

In Automotive Solutions, Smart Eye provides eye tracking algorithms and software for vehicle interior environments. Typically, customers are Tier 1 automotive industry suppliers, who install Smart Eye's software with other components that are then shipped to automotive industry OEMs. Automotive Solutions is Smart Eye's business area currently in the highest growth. Automakers use eye tracking for various types of driver monitoring system, although there are several application segments. By combining AI, facial recognition and more sensors, other functionality for vehicle interior environments can be developed to improve the safety and comfort of drivers and passengers. In the coming years, it is likely that the demand for this type of functionality will accentuate.

On 1 July 2019, Smart Eye created the new Applied AI Systems business area to address the rising demand for complete driver monitoring systems. This business area's offering firstly targets vehicles that are often commercial, and manufactured in shorter production runs, and secondly, the after-market segment for vehicles already marketed. Applied AI Solutions' driver monitoring systems integrate Smart Eye's eye tracking software with hardware to create complete systems.

**” Automotive Solutions is Smart Eye's business area currently in the highest growth.**





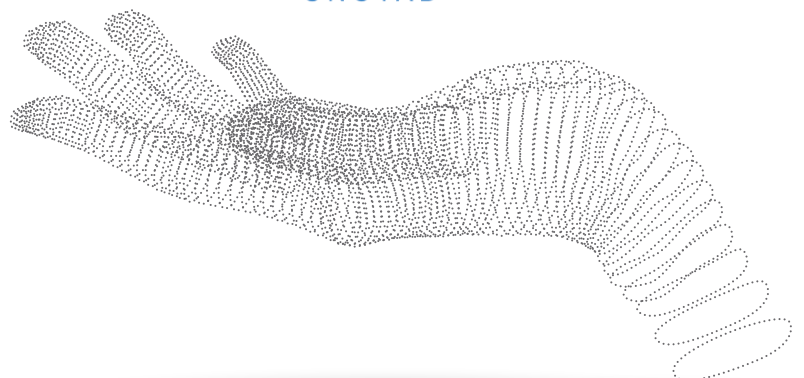
### A market defined by initiatives and legislation

Each year, 1.3 million traffic-related deaths occur worldwide.

The annual averages of accidents involving personal injury per 100,000 cars are 231 in the Nordic region, 498 in Europe and 1,450 in North America (source: UNECE, 2015). Passive safety systems like seatbelts and airbags are insufficient. So to improve road safety, the focus is now on active safety systems, like driver monitoring systems. There are four key initiatives currently driving development, from Euro NCAP, the EU, UNCTAD (the UN Conference on Trade & Development) and China.

- Euro NCAP, world's most respected vehicle safety classification body, has an agenda to introduce driver monitoring systems in 2025. As early as 2020, Euro NCAP will require new car models to be equipped with driver monitoring in order to attain their highest classification. At present, many tendering processes for driver monitoring systems include a requirement of systems satisfying Euro NCAP standards. Smart Eye's software satisfies all these standards.
- In 2019, the EU adopted new legislation stipulating that all car models launched in Europe from 2022 are equipped with systems that can detect whether drivers are tired or inattentive. From 2024, this requirement will be extended to also cover all new cars sold in Europe.
- In its agenda "Considerations in Support of the 2030 Agenda for Sustainable Development," UNCTAD has adopted a position to encourage the development of technology that improves vehicle safety.
- In late-2018, the Chinese Ministry of Transport decided that newly manufactured vehicles used for transporting hazardous freight, long-distance and tourist coaches should be equipped with driver monitoring systems. This decision also requires operators of large vehicle fleets to equip existing vehicles with driver monitoring systems.

No initiative similar to those above has been adopted on the US market. However, discussions by the US counterpart to Euro NCAP, the NHTSA (National Highway Traffic Safety Administration) are ongoing. It is likely that in future, this organisation will also pursue an initiative in driver monitoring systems.



### Large-scale tenders driving global growth

Accordingly, the growing demand for eye tracking technology is backed by strong drivers. A yearly growth rate of 31% is forecast for 2017 to 2021, and by 2021, the forecast value of the eye tracking market for the automotive and transportation sector is USD 221 million (source: Technavio). This growth is expected to accelerate further between 2021 and 2025, with the number of vehicles equipped with driver monitoring systems forecast to grow by some 70% or more per year in this period, to reach an annual rate of some 30-50 million vehicles by 2025 (source: Euromonitor and Smart Eye forecasts). Demand growth is mainly driven by the aforementioned initiatives, legislation, and a rising level of self-driving characteristics in forthcoming car model generations. This demand initially relates to models in the premium and mid-class segments, estimated to make up some 60-70% of all vehicles sold.

In the short term, Smart Eye estimates that car makers whose share of total global production exceeds 20% of all vehicles will complete their tendering for driver monitoring systems. Initially, it anticipates these tenders only involving specific models in their ranges. But in the somewhat longer term, Smart Eye expects car manufacturers whose tendering processes are in a slightly later phase to make up at least 20% of global production. Smart Eye also estimates that the Japanese/European and Korean OEMs that the company secured design wins from in 2019 control a global production share exceeding 15%. Smart Eye's estimates are founded on insights from its positioning as an internationally established vendor of eye tracking technology.

” A yearly growth rate of 31% is forecast for 2017 to 2021, and by 2021, the forecast value of the eye tracking market for the automotive and transportation sector is USD 221 million.

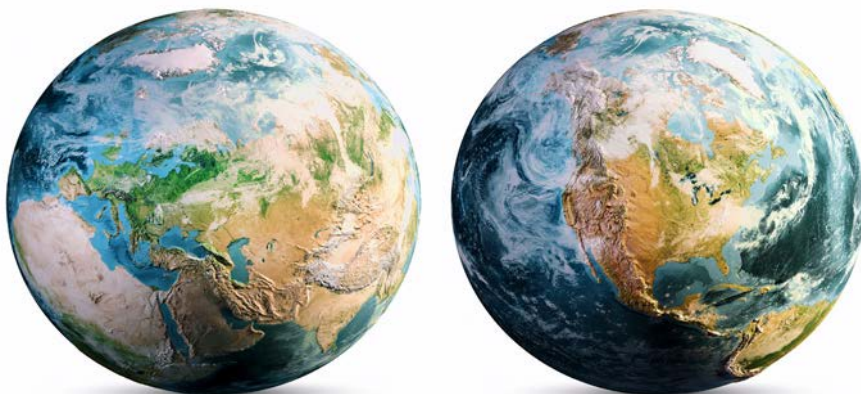
(Source: Technavio).

### Automotive Solutions - world-leading positioning with good growth potential

Smart Eyes' and Automotive Solutions' world leadership as a producer of eye tracking technology is secured by its design wins (see page 13). Smart Eye's opinion is that there is no other producer of eye tracking for vehicle interior environments with as many design wins and technology installed in as many vehicles in production as Smart Eye. Smart Eye is often prevented from naming its customers by nondisclosure agreements, but of vehicles already in production, Smart Eye has been able to name the BMW X3, X4, X5, Z4, 3 series and 8 series.

In 2019, Smart Eye secured 27 design wins (13 in 2018). By year-end 2019, Smart Eye had a total of 56 design wins (29 at year-end 2018). Major design wins were secured in South Korea and Japan in the year. With its previous major design wins from European and Chinese producers, Smart Eye clearly consolidated its market positioning in the year. Smart Eye now provides eye tracking technology for a total of ten OEMs, and a total of eight car platforms. Apart from Smart Eye, there is only a small cluster of players capable of delivering the type of eye tracking software that the automotive industry requires. Smart Eye issues press releases whenever it secures new design wins, and states them in its quarterly reports.

” In 2019, Smart Eye secured 27 design wins. By year-end 2019, Smart Eye had a total of 56 design wins.



### **Applied AI Systems**

Primarily, Applied AI Systems will address the Chinese market. The combination of Chinese legislation and fragmented vehicle market, with a large number of small manufacturers, makes this market especially relevant for the complete driver monitoring systems that this business area will offer. If, for example, a European or US vehicle manufacturer produces models in short runs, as is sometimes the case especially for commercial vehicles, other markets may also be considered. Competition in vehicle monitoring systems in China is intense. However, Smart Eye sees few other players with such long-term experience of delivering sophisticated eye tracking technology to precisely the automotive sector that are active in China. Smart Eye's opinion is that this technology head-start will favour the company on this market.

### **Research Instruments - unique positioning in a niche segment**

Research Instruments has high strategic significance to Smart Eye, and its operations offer early insights into the type of functionality, and for what purposes, eye tracking technology will evolve for in a few years' time.

The business area has a strong and stable positioning as a producer of sophisticated eye tracking systems for R&D and educational environments. Smart Eye's opinion is that the current annual global market value for this type of eye tracking system is approximately SEK 500 million, with a yearly growth rate of over 10%.

First and foremost, growth potential for this business area is expected from applying eye tracking technology in new segments, flight simulators and general interior aircraft environments being one. Neuroscientific research, and consumer electronics, IT and marketing are others. Smart Eye also sees good potential to increase the business area's market share through its partnership with iMotions, as well as sales & marketing initiatives.





### Eye tracking

Eye tracking is a technology for measuring gaze and eye movement. Sensors enable the eye to be detected, the gaze calculated and eye movements to be tracked. By studying individual eye movements, alertness, attentiveness and focus can be assessed, thus gaining an impression of an individual's awareness and mental state.

One common form of eye tracking are systems that combine eye tracking with ordinary computers and monitors, with eye tracking either integrated into the monitor or implemented as a free-standing device by the display. There are also more sophisticated eye tracking systems that employ several cameras to track more than one individual in larger environments, such as a flight simulator. This is the type of eye tracking that Smart Eye's Research Instruments business area works on. Smart Eye's Automotive Solutions business area focuses exclusively on the software and algorithms necessary for eye tracking in vehicle interior environments. Smart Eye's software and algorithms also use AI to become more precise and reliable, which can be critical when eye tracking in environments with challenging conditions, in terms of light, or when the eye is partly obscured.

Portable eye tracking, with technology integrated with a forward-looking camera, is also available, but Smart Eye has chosen to concentrate on a different type of solution. Eye tracking is now an established technology used across a raft of segments. In vehicle interior environments, it is used for functionality associated with the driver. In research and neuroscience, eye tracking is used for diagnosing Alzheimer's and Parkinson's diseases, for example. The aviation and aerospace industries use eye tracking for R&D purposes, and for training. Eye tracking can also replace computer mice, so it can be applied to computer interaction and gaming to enhance user experiences.

- **Eye tracking has several purposes:**  
Analysing and understanding human behaviour and
- interaction with surroundings.
- Enabling human-machine interaction.  
Hands-free computer interaction.

### Design wins and car model product lifecycles

When automotive industry OEMs procure components based on products such as Smart Eye's eye tracking software, the process is conducted through subcontractors known as Tier 1 suppliers. Smart Eye then becomes a Tier 2 supplier to these Tier 1 suppliers.

In some cases, OEMs can then specify that Tier 1 suppliers supply components that contain a specific subcontractor's (or Tier 2 supplier's) products. In other cases, Tier 1 suppliers can select the subcontractors they want to partner with themselves. When an OEM selects a supplier for a functional component in a vehicle, this is preceded by a procurement process with a Tier 1 supplier, who in turn, contracts a Tier 2 supplier. Procurements can be for all vehicles of a specific model at once, or for all cars and models on a complete production platform at once. Such procurement processes normally take 9 to 20 months. When the OEM decides which supplier is to be contracted, this is called a 'design win', and one design win means for one car model.

After a design win, it often takes between one and three years before shipments to the designated car model begin. In turn, the model is often in production for up to seven years. However, car platforms often remain in production for up to 14 years, with the bulk of vehicles produced mid-timeframe. The useful life of the car platform is usually termed a product lifecycle.

The procurements that precede a design win are international and involve procedures and stringent qualification standards. The potential to become selected as a supplier increases the earlier in the process a relationship with the procurement party can be established. In return, the potential can be substantial, with as many as a million units produced in certain mid-class segment models. In the premium class segment, runs are usually shorter, often between 30,000 and 300,000 units.

*When an OEM selects a supplier for a functional component in a vehicle, this is called a 'design win.'*

*The timeframe that a car platform remains in production, often up to 14 years, is called a 'product lifecycle.'*

## Driver monitoring systems

Integrating eye tracking in driver monitoring systems improves safety, and the risk of traffic accidents reduces. Driver monitoring systems with integrated eye tracking detect when a driver is tired, falling asleep, or just generally inattentive.

A driver monitoring system linked to other vehicle functionality can then stimulate driver attention by generating impulses, or in its most advanced form, take over control and stop the vehicle. The demand for driver monitoring systems is now so high that in a few years it is likely that this technology will become as common as airbags and seatbelts are today. When a driver monitoring system is based on eye tracking technology, functionality not directly associated with road safety can also be added. This technology can enable drivers to control vehicle interior functionality with the gaze or gestures, such as infotainment systems. This also enables the control of functionality that improves driver and passenger comfort and safety.

Driver monitoring systems (DMSs) have been developed to improve road safety. By integrating eye tracking software, systems can detect whether a driver is inattentive, drowsy, or actually falling asleep. These systems can then generate impulses to alert the driver's attention, or if the driver fails to react, take control and stop the vehicle.

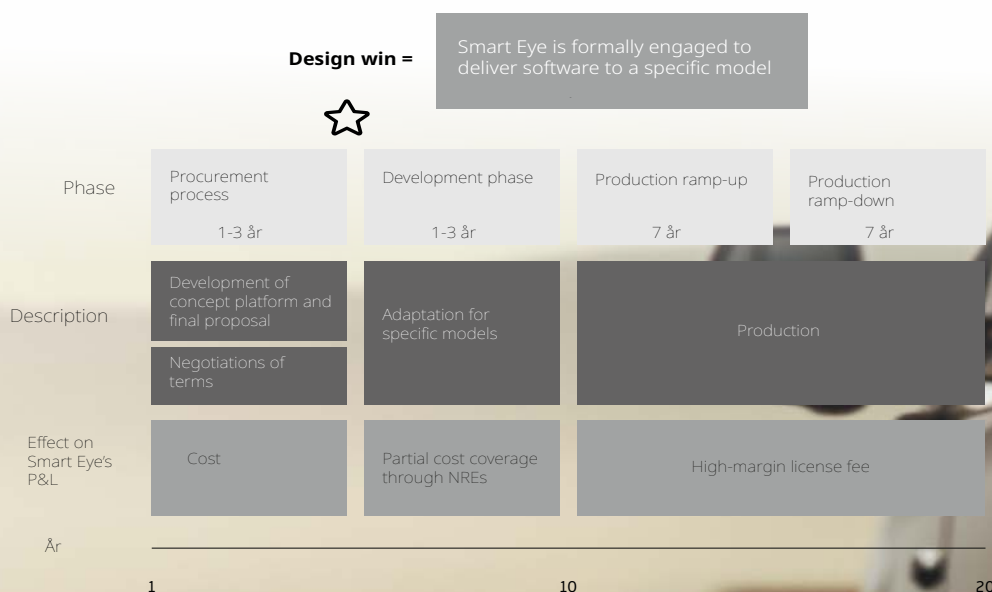
## Active safety for self-driving cars

Self-driving cars have long been a utopian vision, but are now approaching reality. There are already models with autonomous driving functionality in production, and in the coming years, several manufacturers are expected to launch a variety of models with autonomous driving functionality.

But there is a long way to go before we reach fully self-driving cars that can get to a destination completely without driver involvement. Although much of the technology already exists, more progress is needed towards greater reliability, the formulation of standards and legislative reform to make fully autonomous vehicles possible.

The first phase is semi-autonomous driving, where vehicles manage specific functions, but the driver participates actively and has overall responsibility. The level of autonomy is expected to increase over time, to finally transferred to fully autonomous vehicles.

The transition is from passive to active road safety. The automotive industry is migrating from protecting drivers and passengers to preventing accidents. At present, most accidents are due to the human factor, and accordingly, active safety solutions such as sophisticated vehicle assistance systems, vehicles with higher automation content, and eventually, fully autonomous vehicles, are in development. Forthcoming generations will employ online and offline-based machine learning, with information from multiple data sources to develop a relationship with the individual driver. The transition is from passive to active road safety. The automotive industry is migrating from protecting drivers and passengers to preventing accidents.



# World-leading technology in three application segments

*Smart Eye develops and markets eye tracking systems that can measure and determine a person's gaze. The company has three business areas: Research Instruments, Automotive Solutions and Applied AI Systems.*

Within Research Instruments, Smart Eye develops sophisticated eye tracking systems for measuring and analysing human behaviour. In Automotive Solutions, the company develops eye tracking software for the automotive industry. Within Applied AI Systems, Smart Eye is developing a complete driver monitoring system that integrates hardware and software for the after-market. By following and interpreting the movements of the gaze, eye, head, mouth and face, Smart Eye's technology can understand, support and predict human actions and intentions.

## Strategy

Smart Eye's strategy is based on the company's extensive and long-term experience of developing sophisticated eye tracking technology for demanding applications. The Research Instruments business area has high strategic significance because its operations generate early insights into the type of functionality and applications that will be in demand in a few years' time. In the Automotive Solutions business area, these insights are used to develop eye tracking technology specifically tailored for the automotive industry, and it is this business area that has the high growth potential. The AIS business area, created in 2019, develops the type of complete driver monitoring systems that Automotive Solutions' software is otherwise a sub-component of. AIS's driver monitoring systems are intended for car models produced in short runs, and for the after-market.

## Vision

The leading interface between human and artificial intelligence.

## Mission

To contribute to sustainable development for everyone through science and technology.

## Objective

To be the leading player in eye tracking for vehicles and retain positioning as the leading provider of sophisticated research systems for eye tracking.

**With its 57 secured design wins, on eight different platforms and with [six] cars in series production, Smart Eye is the player perceived as the world leader in eye tracking for the car industry.**

*\* Number of design wins as of 31 December 2019, for current figures, refer to quarterly reports and press releases.)*





### **Automotive Solutions business area - a leading partner in active automotive industry safety**

Within Automotive Solutions, Smart Eye mainly supplies eye tracking algorithms and software for cameras and other types of hardware that automotive industry Tier 1 manufacturers assemble into complete systems, mainly for driver monitoring. Smart Eye's algorithms and software are also used in systems that control car infotainment systems and tailor vehicle interior environments, for example. However, Automotive Solutions' technology has only gone into series production within driver monitoring to date. Apart from software, Automotive Solutions also provides some hardware for Tier 1 manufacturers for a range of development projects.

#### **Central technology for vehicle-human interaction**

Driver monitoring and automated driving are necessary to achieve the vision of zero road accidents. Eye tracking is a crucial technology for the interaction between the human and vehicle to function in safety systems, and for partially or fully self-driving driving cars to respond and react to the driver's intentions and state.

#### **A sustainable lead in innovation**

Smart Eye has been developing pioneering eye tracking technology since the early 2000s, and now enjoy status as the technology leader in the segment. Basically, the first eye tracking systems were limited to ensuring that the driver was paying attention, and not falling asleep. Second-generation systems can also assist in operating the vehicle's internal functions. In 2017, Smart Eye launched the world's first eye tracking system, which can offer even more accurate data on individual actions and intentions with the aid of AI technology. With its 57 secured design wins, on eight different platforms and with [six] cars in series production, Smart Eye is the player perceived as the world leader in eye tracking for the car industry (number of design wins as of 31 December 2019, for current figures.)

#### **An established partner**

Smart Eye has long-term, well-established customer relationships, and development work ongoing for most Tier 1 automotive industry OEMs. Smart Eye has recognised capability in satisfying the automotive industry's exacting performance, accuracy, reliability, availability, safety, durability and delivery capability standards for safety-critical systems. In most cases, Smart Eye is not permitted to name the customers it secures design wins from. Those customers it has been able to name to date are BMW and Geely refer to quarterly reports and press releases.)

#### **Platform-independent software**

For commercialising eye tracking technology within Automotive Solutions, Smart Eye has adopted a hardware diagnostics strategy, which enables the business area to benefit from investment in the smartphone industry. Usually, processors developed for mobile phones are then accepted by the automotive industry, generating a stream of new, enhanced chips for series production. Accordingly, Smart Eye's technology is compatible with most of the market's ECUs (electronic control units) and is SOCs (systems on chip). Smart Eye's platform-independent software can also be locked late in the development process. These strategic decisions have proved to harmonise closely with automotive industry preferences. Additionally, they mean that Smart Eye's technology can be generic, which means little customisation is necessary, and integration processes become extremely efficient.

### **The strategy Automotive Solutions has adopted has two phases:**

1.

Establish Smart Eye as the market leader in the premium segment, where initial development of driver monitoring systems is taking place. This goal has already been achieved, and the phase is complete.

2.

Use the premium market as a bridgehead to establish corresponding leadership in the mid-class mass market segment. Smart Eye regards this as the current phase for the company and Automotive Solutions



### **AIS's business model - complete driver monitoring systems for short production runs and the after-market**

While the demand for complete driver monitoring systems is growing, the global Tier 1 OEMs' offerings are not always cost-efficient for vehicles produced in short runs, or for the after-market. This is why Smart Eye has developed complete driver monitoring systems for sale direct to car manufacturers, but where the need is only for production runs of a few thousand units. AIS's driver monitoring systems are also provided to operators of large fleets that need to install driver monitoring systems in existing vehicles. AIS's driver monitoring systems consist of the same eye tracking technology that Automotive Solutions develops, but with hardware components added. The result is a fully functional and sophisticated driver monitoring system.

Demand for this type of driver monitoring system is especially high in China, urged by new legislation. The competition is intense, but Smart Eye's offering is strong because its robust and safe systems are based on decades of experience of developing eye tracking technology for vehicle interior environments.

The business area's model is straightforward - initially, it will offer three different driver monitoring systems. It is primarily addressing the Chinese market, but its offering may also be relevant to certain European and American players. After an order is secured, Systems are produced, and then ready for shipping in one or a few months. Customers pay a unit price, and as for all technology-intensive input goods, prices can be expected to fall and system complexity to rise over time. AIS will be in the premium segment of the market.

### **Research Instruments' business model - a bridgehead into new verticals**

Research Instruments offers four different main eye tracking product series, Aurora, Smart Eye XO, Smart Eye dx and Smart Eye Pro.

Aurora is what is known as a bar tracker, located on a display that customers can install themselves. This can be viewed as an entry-level product, once the customer has a need for eye tracking. Aurora has initially had two cameras, but in 2019, a new version with bar tracker was developed, which will have only one camera, and will be launched in early-2020. Smart Eye XO, launched in late 2018, offers an upgrade opportunity for Aurora users. It satisfies the need for eye tracking that is external from displays. Smart Eye Pro is a fully custom system without up to eight cameras, offering robust, precise and reliable eye tracking data. Finally, Smart Eye Pro dx is a system with smaller form factor but greater precision that helps customers save valuable space in complex environments. A number of complementary accessories such as the Smart Recorder, Smart AI, a support function and subscriptions are offered to back Smart Eye Pro and Aurora. All systems are sold as complete solutions, with customers paying per system or per product. Minor revenue flows are also generated during product lives in the form of subscription income and software updates.

Although Smart Eye does provide hardware, the substantial values are in the algorithms and software used in the system, as is reflected in the business area's gross margins of between 75 and 90%.

### ***High precision for complex applications and demanding customers***

Research Instruments' systems have the capability to work with up to eight cameras, making superior systems for the most complex and high-precision applications. This type of system is necessary in sophisticated research, development and educational environments, with the aviation, aerospace and automotive industries, and academic community, having a particular need for such sophisticated eye tracking systems. In the academic community, Research Instruments has provided equipment for research projects in usability, marketing, neuro and behavioural science.

Smart Eye is positioned as a vendor of premium systems, and has very strong references in the public and private sectors. A customer base including FAA, Volvo Trucks, NASA, US Airforce Research Lab, General Motors, Subaru Research and Development, Tokyo University and Nebraska University demonstrate how Smart Eye's systems are at the leading edge of technology.

### ***Sales through several channels***

Smart Eye conducts sales in-house, as well as through collaborative partners and local distributors. Usually, sales to the automotive, aviation and defence industries are direct from Smart Eye. Smart Eye also wins a lot of customer contracts through active participation at conferences and trade events. In Asia, sales are most often via distributors, and the company has distribution partnerships in Japan, China and South Korea. Since 2019, Smart Eye has been addressing and supporting the Chinese market through its own agency Guangzhou. In the USA, Research Instruments has had a presence with two professionals based in Detroit, USA, since 2017.

### ***High innovation standards for sophisticated R&D environments***

Continuous development is part of Research Instruments business model. Ongoing customer relationships generate a need for the continuous development of technology. The demand for eye tracking is also sourced from new customer groups, such as education and testing in aircraft interior environments, for use in train driver environments, and in neuroscience. Additionally, the demand for combined, multimodal research systems is also growing, with information from eye tracking systems being integrated with that from other modal sensor systems such as breathing, pulse and movement. Independently, and jointly with collaborative partner iMotions, Research Instruments can deliver systems that address the wants and needs of these customer categories.





# Cutting-edge development

*Smart Eye's creativity, innovation and challenging level of ambition have made the company the leading provider of eye tracking technology for some of the world's most demanding industries. It has secured this status through its sustainable capability and unique competence in developing algorithms and software that satisfy customers' extreme quality, safety and flexibility standards.*

Smart Eye prioritises its development projects through dialogue and close collaboration with customers, so that resources are allocated to those projects with the best commercial potential. Apart from development projects addressing actual customer needs, Smart Eye also researches development projects that are often funded and conducted jointly with other collaborative partners.

Smart Eye's R&D team has some 15 professionals working within various development projects, on pre-development, or completing technology for customer solutions jointly with colleagues in one of its business areas.

## **Centred on the customer**

Since incorporation in the early-2000s, Smart Eye has been developing eye tracking solutions in close collaboration with its customers. Saab Automobile was the company's first customer, and the automotive industry has been the company's primary target group ever since. This group has very exacting safety, reliability, quality, durability and delivery capability standards. Accordingly, Smart Eye's eye tracking solutions have been developed with extreme quality and performance, so the customer categories the company now addresses apply similar standards as the automotive industry, examples being the aviation and aerospace industries.

## **Research Instruments - researching new applications**

The most obvious way to develop new eye tracking solutions is to collaborate closely with customers. New application segments that Research Instruments has entered in recent years are educational environments for train drivers, research applications in neuroscience and full flight simulators (fully authentic with real flight plans regularly used in pilot training).

## **AI sharpens Automotive Solutions' competitiveness**

Most of Smart Eye's development work focuses on the ongoing development of existing applications or complete development of all-new applications for Automotive Solutions. In recent years, AI has gained growing significance, as it enables the development of algorithms and software capable of eye tracking in even more adverse conditions. AI enables better precision and accuracy than previous algorithms that use traditional image processing. Combined with cameras equipped with RGB and IR sensors, AI can deal with daylight and darkness, and situations when something partly and/or suddenly obscures the camera. Smart Eye's technology also offers the potential to combine traditional image processing with AI-based image processing, which means that Smart Eye's eye tracking systems can offer functional safety that is superior to when only a single type of image processing is employed.

## **AI - creating new potential for active safety**

The technology currently being explored does not just track eye movements, but when combined with other sensors, the mouth, face, the whole head or upper body can also be tracked. Smart Eye develops solutions that combine eye tracking with face ID and AI to enable identification of individuals and objects in all parts of passenger compartments. All this technology combined, will enable a wealth of new functionality that will further enhance safety and comfort in vehicle interior environments. This currently emerging segment, with functionality integrating eye tracking with other sensors in vehicle interior environments is called 'interior sensing.' To date, Automotive Solutions has only secured design wins for eye tracking for driver monitoring systems. Smart Eye thinks that current progress in the automotive industry will result in international tenders for interior sensing, similar to the current tenders for eye tracking systems.





### Mutual value in partnerships

Long-term relationships with the most important participants of the automotive industry has brought Smart Eye thorough knowledge of the software and hardware that its technology needs to be compatible with. Smart Eye's many years' work on eye tracking solutions for the automotive industry have also made the company a desirable collaborative partner for these component and system vendors. For many of these players, Smart Eye also serves as a key link to the automotive industry. Smart Eye has in-depth insights into the technical standards the automotive industry can be expected to apply in a few years' time. Having these collaborative partnerships is another strength, because inherently, they help secure Smart Eye's eye tracking technology as first choice for various systems and solutions in the automotive industry.

Actual examples include Smart Eye's strong relationships with leading vendors of image sensors, optics, light sources, semiconductors and processor platforms. Smart Eye collaborates with these component producers in marketing, joint demos at trade events, or through the production of shared prototypes for meetings with customers.

Some of the actual partnerships that Smart Eye has with some of these manufacturers follow. Other noteworthy partnerships include Renesas, Osram, Omnivision, Sony, Sunex, Maxim and On Semiconductors.

- AMBARELLA is one of the world's main video processor and image processor semiconductor manufacturers. Ambarella's components are crucial for making driver monitoring systems compatible with AI algorithms.
- Nvidia is one of the world's main manufacturers of graphics processors. Smart AI, Smart Eye's AI platform for use in vehicle interior environments, builds on Nvidia's XAVIER processor.  
NXP is one of the world's largest semiconductor manufacturers. Smart Eye's driver monitoring systems can be run on
- NXP's i.MX8 application processor to also control infotainment systems and Amazon Alexa.
- Texas Instruments, TI, develops signal processors for phones that can be used as target processor platforms for Smart Eye software.
- Smart Eye's software supports ST Microelectronics' image sensors, creating the potential to develop functionality for vehicle interior environments, i.e. in the interior sensing segment.

### Development projects in 2019

Smart Eye conducts research in different development projects, often in collaboration with external partners who wholly or partly fund them. Some projects have outcomes offering commercial potential, and understandings from projects with commercial potential are fed back into pre-development projects within Smart Eye's development resources, and Smart Eye business areas then productify and launch them.

### Smart AI-X

Smart AI-X is a new eye tracker that is smaller than Aurora, which Automotive Solutions and Research Instruments both sell. Smart AI-X has a single camera and 2 megapixel sensor with two infra-red light diodes in a bar. Smart AI-X is mainly intended for vehicle interior environments, but can also be used on desktops. Development of Smart AI-X started in 2018, and it was launched in 2019.

### DRAMA

DRAMA is a research project managed by RISE, the Research Institute of Sweden. DRAMA is funded by FFI Vinnova, a partnership between the Swedish government and automotive industry that funds FFI. This assignment has two parts, the first being to identify peoples' actions in vehicles to improve safety and comfort. The second is facial recognition to gain understandings of passenger emotional reactions. DRAMA started in 2018 and will conclude in early-2020. For Smart Eye, the research conducted in DRAMA has had outcomes that can be commercialised in functionality for interior sensing and reading facial expressions.

### ADAS&ME

ADAS&Me is an EU-funded project that Smart Eye has been participating in since 2017. This project is involved in developing safe solutions for self-driving vehicles. Smart Eye has helped produce fatigue estimates based on the Karolinska Sleepiness Scale. The fatigue estimate consists of an algorithm based on AI which predicts the level of tiredness based on driver behaviour. The project will conclude in early-2020, and has had outcomes that Smart Eye is applying in driver monitoring and interior sensing functionality.

### FOTe

Field Operation Test enhancement, FOTe, is a joint project with Chalmers University of Technology, Gothenburg. This project relates to enhancing video data captured from previous tests. The hope is that this project will generate validation data that can be used to demonstrate that Smart Eye's algorithms generate safe, reliable and accurate results.

### Motion

Motion is an EU-funded project that started in 2018, and is investigating how small children aged up to three can be studied when interacting with their social and physical surroundings. This research demonstrates that the time up to the age of three is most significant to outcomes later in life. This project has resulted in Smart Eye deciding to develop a baby version of its Smart Eye Pro tracker in the Research Instruments business area.

### IRRA

Intention Recognition in Real Time, or IRRA, is a joint project with Volvo Cars funded by FFI Vinnova. The project started in 2019, and hopes to generate outcomes that enable the prediction of future events, such as whether drivers intend to overtake, based on their actions.

# Sophisticated eye tracking systems for research, development and educational environments

*Smart Eye provides sophisticated eye tracking systems for analysing human behaviour in its Research Instruments business area. These systems consist of lighting and camera modules, as well as computation and analysis software. Its customers are mainly participants in academic research, aviation, aerospace and defence industries, as well as the automotive industry.*

Smart Eye was originally founded in the early 2000s to develop eye tracking systems for the automotive industry. These were complete systems consisting of software and hardware. Research Instruments' origins are in these activities.

## Organisation

Solmaz Shahmehri has headed up this business area since 2016. Most of the business area's employees are based in Sweden, at the head office in Gothenburg, but it also has staff at the office in Detroit, USA. Detroit is a major hub of the automotive industry, and the type of research activities that utilise Research Instruments' systems. The Detroit office opened in 2017. Research Instruments' market is global. To attain this reach with offices in Detroit and Gothenburg only requires agencies and distributor partnerships, especially for the Asian market. A Japanese partner, TOYO, which also has representation in China, was contracted in 2018. Research Instruments already had distribution partners in China, and to strengthen these relationships and address the Chinese market, an agent was contracted in Guangzhou in 2018. Apart from Japan and China, the business area also has partnerships in South Korea, for example.

” The value lies in the software and algorithms, as is reflected in the business area's gross margins, which are 75-90%.

## Offering

Research Instruments' systems consist of hardware that Smart Eye assembles and installs with proprietary algorithms and software. The value lies in the software and algorithms, as is reflected in the business area's gross margins, which are 75-90%.

Research Instruments offers four different eye tracking product ranges. The entry-level tracker Aurora, the somewhat more sophisticated eye tracker, Smart Eye XO, and finally Smart Eye Pro and Smart Eye Pro dx, which are the business area's most sophisticated and significant eye tracking systems. To back Research Instruments' product ranges, it also offers a variety of accessories, support functions and subscriptions. Apart from the one-off revenues that Research Instruments secures at each sale, smaller revenue streams are also sourced from software. Customers pay an annual license fee and get regular software updates.

### Aurora

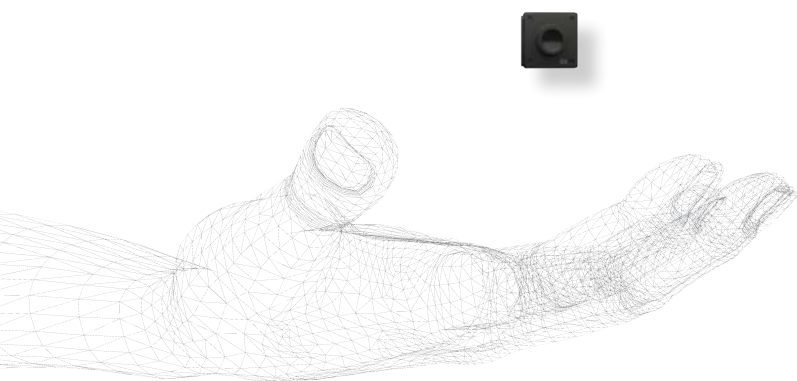
Aurora is the most basic eye tracker, a bar tracker, launched in 2015, which customers install themselves.

### Smart Eye XO

Smart Eye XO was launched at year-end 2018. This eye tracker combines Aurora hardware with Smart Eye Pro software.

### Smart Eye Pro

Smart Eye Pro and Smart Eye Pro dx, launched in 2018, are the business area's central products and generate the absolute majority of sales. They are fully tailored, complete solutions that consist of systems with up to eight cameras. Smart Eye Pro dx is an updated and more sophisticated version of Smart Eye Pro, and many previous Smart Eye Pro customers have decided to upgrade to Smart Eye Pro dx.





### Customers

The aviation and automotive industries remain the primary customer categories. The defence and aerospace industries are also important, as is the academic community. Although more recent target groups like rail, educational environments and neuroscience are interesting, volumes are modest to date. The customer base includes the US Air Force Research Lab, FAA, Nasa, Nissan, Lockheed Martin, Thales, MITRE, Honeywell, Toyota, Volvo and GM.

### Collaborative partners

A variety of partnerships are crucial to enable the business area to offer sophisticated eye tracking solutions. These partnerships cover everything from component vendors to distributor partnerships. iMotions is a major collaborative partner, and through this deal, which started in 2018, Smart Eye's eye tracking systems can be integrated with iMotions' multimodal research platform. This research platform enables eye tracking to be combined with other sensors of physiological signals.

### Progress in 2019

Research Instruments' sales decreased by 20% to SEK 23.6 million (29.5) in 2019. Although 2018 was a strong comparative year, progress in 2019 was also somewhat limited by customers deferring orders. However, Smart Eye considers that no business was lost, either to competitors or in terms of future orders.

The interest from customers in neuroscience remains high, especially benefiting the demand for more basic eye trackers. Increased demand for more basic eye trackers is also sourced from other customer groups and is one of the reasons underlying product development in 2019, which will spawn product launches in the Aurora family in 2020.

Interest in sophisticated eye tracking systems for train drivers, other participants in the rail industry, as well as the aviation industry for pilot training and pilot monitoring systems, is continuing to grow.

## Priorities 2020

Maintain focus on the US and European markets to increase sales, while prioritising new agency partnership in China to develop and advance Research Instruments' positioning on the Chinese market.

Continued initiatives to further develop and enhance the potential offered by digital marketing and web channels to strengthen customer relationships and lift sales.

Smart Eye's sales were SEK 49,8 Mkr during 2019. Of this total 47 % (SEK 23,5 Mkr) was generated from the Research Instruments business area.



# Eye tracking technology for vehicle interior environments

*In its Automotive Solutions business area, Smart Eye offers eye tracking algorithms and applications for the systems that automotive industry Tier 1 suppliers develop and deliver to car makers, termed OEMs.*

When automotive industry customers started demanding eye tracking systems for integration into driver monitoring systems in 2012, Smart Eye created the Automotive Solutions business area (known as Applied Solutions until autumn 2018). The need is now broader-based with driver monitoring systems heading towards becoming a new safety standard for all vehicles, not only those with partly self-driving functionality. In combination with other sensors for vehicle interior environments, Smart Eye also expects eye tracking to start being used to further enhance safety, but also to improve passenger compartment comfort. Smart Eye was an early adopter of AI to improve eye tracking system performance. This technology is going to become highly significant for this new functionality.

## Organisation

Daniel Åman has headed up this business area since 2014. Automotive Solutions' geographical expansion has tracked customer locations, and accordingly, it has had proprietary local presences in Detroit, USA since 2017, as well as Tokyo Japan, and in Chongqing, China since 2018. Most of the business area's staff, mainly active in development and sales, are based at Smart Eye's head office in Gothenburg.

## Offering

Within Automotive Solutions, Smart Eye primarily provides eye tracking algorithms and software for the systems that Tier 1 manufacturers develop for automotive industry OEMs. In overall terms, revenues are sourced from three types of assignment:

- Conceptual studies, reference designs or prototyping.
- Project-specific development fees when design wins are secured.
- License fees for the vehicles that enter production. Usually, these revenues are € 5-10 per manufactured vehicle. In tandem with the design win, Smart Eye receives initial compensation for its work on integrating software with other parts of the system the Tier 1 manufacturer will deliver. When a car model then goes into production about 12-36 months after a design win (see explanation on page 13, Smart Eye receives license fees per manufactured unit that Smart Eye software is installed in, usually €5-10 per vehicle. License fees at the lower end of this interval are becoming more common as the demand for eye tracking with more basic functionality for mid-class

models among vehicle manufacturers grows.

The term 'take rate' defines the share of cars of a certain model that are equipped with specific functionality, in Smart Eye's case, driver monitoring systems. Accordingly, it is the combination of the number of produced vehicles and the take rate that determine Smart Eye's license revenue from a car model.

In addition to revenues from design wins, Smart Eye also conducts conceptual studies, reference designs and prototyping for Tier 1 manufacturers and OEMs. Smart Eye receives project revenues for this type of assignment.

## Eye tracking for driver monitoring systems

Eye tracking for the automotive industry was initially developed to improve road safety. By equipping a vehicle with a driver monitoring system based on eye tracking technology, it is possible to determine whether a driver is inattentive or tired. When this information is combined with other vehicle functionality, road safety can be improved. The automotive industry's premium manufacturers were the first to realise this potential, but when in autumn 2017, Euro NCAP decided to include vehicle driver monitoring systems in its agenda for 2025 car safety tests, progress accelerated. Now, eye tracking technology for driver monitoring systems is being tendered for premium and mid-class cars.

## Unique quality that satisfies automotive industry standards

The eye tracking technology Smart Eye has developed is unique. The automotive industry sets exceptional performance, precision and availability standards. The technology needs to function on an optimised platform, not consume excessive processing power and must be implementable cost-efficiently. Moreover, the technology itself must be able to measure exactly - determine where a person is looking and how open their eyelids are precisely and accurately - basically 100% of measures must be accurate. Finally, in terms of availability, technology needs to work worldwide and in all environments, regardless of daylight, tunnels or season, whether the driver is wearing spectacles, hats or facemasks.

Apart from Smart Eye's eye tracking technology satisfying these exacting standards, Smart Eye also possesses an advantage in having addressed the automotive industry since incorporation in 2000. Smart Eye's organisational resources and development processes are a good fit with this sector. There are only a handful of players apart from Smart Eye that have the capability to provide eye tracking technology for the automotive industry.

### Customer base

By year-end 2019, Smart Eye had secured design wins to deliver eye tracking technology for 56 premium and mid-class car models with 10 European and Asian OEMs. The American market for driver monitoring systems has matured more slowly, with tendering processes in an earlier phase than the rest of the world.

Smart Eye secured its first design win in 2015 with BMW on the X5 model, which entered production in 2018. By 31 December 2019, Smart Eye had a total of 56 (29) design wins on 8 (5) different car platforms and 6 car models in production. Usually, Smart Eye is prevented from naming the OEM or car model as a specific design win relates to by nondisclosure agreements, and of those now in production, all are BMW models—the X3, X4, X5, Z4, 3 series and 8 series. Smart Eye also always announces its design wins in press releases, and current numbers are stated in press releases and quarterly reports.

### Progress in 2019

The sales of the Automotive Solutions business area increased by 25% in the year, and are now SEK 26.2 million (21.2). This increase is mainly driven by Smart Eye starting to receive license fees for vehicles equipped with Smart Eye software since the end of 2018. Work in the year featured intensive efforts on multiple ongoing international driver monitoring system tenders. Major, milestones successes were achieved on the Japanese and South Korean markets. Japan and South Korea have a tradition of primarily contracting domestic subcontractors, to then pursue long-term partnerships. Because some of the world's largest car manufacturers are located in Japan and South Korea, becoming an established player on these markets is highly significant. In Japan, Smart Eye secured 10 design wins with one car manufacturer, which shares car platforms with a European producer. In South Korea, Smart Eye secured 14 design wins with a global manufacturer in the mass market segment.

Looking back reveals that 2017 was a breakthrough year for driver monitoring tenders for premium segment cars, 2018 was a breakthrough year for tenders for the mass market segment, and 2019 was the year went Smart Eye's successes genuinely made the company a global player in the automotive sector. This progress has continued in early-2020, with further design wins in China.

## Priorities 2020

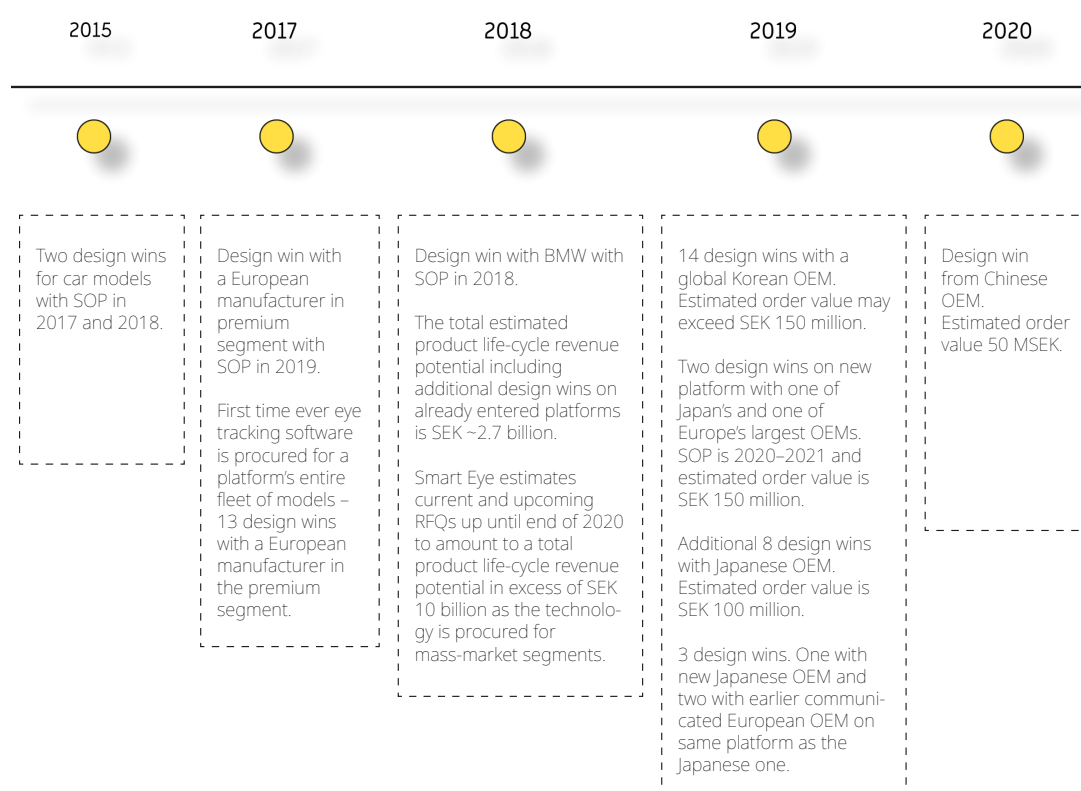
International successes achieved should be developed to secure Smart Eye's positioning as the global market leader in eye tracking for driver monitoring systems. A local presence in the USA and Asia are critical to achieve this.

Smart Eye's sales were SEK 49,8 Mkr under 2019. 53 % (SEK 26,2 Mkr) was generated from the Automotive Solutions business area.



## Current design wins and product life-cycle revenue potential

The table below shows the estimated value of the design wins communicated by the company as well as the estimated potential value if the company were to win additional design wins on already platforms obtained. The calculations are made by the company and are based on OEM's communicated estimated production volumes of car models and may change depending on changes assumptions for estimates made over the lifecycle of car platforms.



Design Win / (MSEK)	DW 1-29	DW 30-57	Total
Estimated value of obtained design wins	850	650	1 500
Estimated revenue over the product life-cycle from possible additional design wins with existing customers on already entered platforms.	1 150	150	1 300
Estimated revenue over the product life-cycle including current and possible additional design wins with existing customers on already entered platforms.	1 150	800	~2 800



# Complete driver monitoring systems direct to end-customers

*Smart Eye provides complete eye tracking systems for two customer categories in the AIS business area. Firstly for what are often commercial vehicles produced in shorter runs, and secondly to the after-market segment for vehicles already in production where driver monitoring systems are retrofitted.*

Demand for complete eye tracking systems has emerged over the last one to two years that cannot be addressed by the offerings from the automotive sector's established Tier 1 suppliers. Smart Eye has no ambition to independently secure positioning as a Tier 1 supplier to the global automotive industry's major players - it is just situations where customer needs are limited to low volumes where AIS's offering is relevant. At present, the demand for this type of system is greatest in China, propelled by new legislation from late-2018, although the rest of the world is expected to follow shortly.

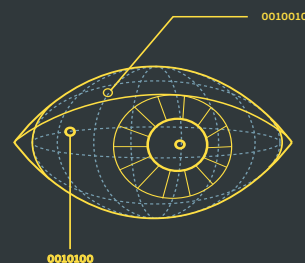
## Organisation

Smart Eye took a decision to develop this offering, which is now within an independent business area, in 2019. In May 2019, Smart Eye conducted a new share issue to arrange the necessary financing, and the initiative was formalised effective 1 July 2019 through the formation of the AIS business area. Smart Eye's CEO Martin Krantz has served as the Interim Business Area Manager for an initial phase. The business area now has some 20 employees, the majority based in Gothenburg, working on product development. Markets are addressed to some extent from Gothenburg, but mainly from Smart Eye's office in Chongqing, China, because the greatest potential in absolute terms is on the Chinese market.

## Offering

Smart Eye will initially provide three types of driver monitoring system through the AIS business area - a more basic system and a more sophisticated one including AI support, which will be shipped direct to car manufacturers, and to after-market customers. The third driver monitoring system will be more sophisticated and only available to after-market customers. Because the system is comprised of software and hardware, these offerings will be robust, and Smart Eye will secure control over its proprietary software.

While development work is in Gothenburg, manufacture and assembly will be by Chinese subcontractors. Smart Eye intends to provide driver monitoring systems at a competitive market price, but distinguished by performance and reliability. Smart Eye will satisfy automotive industry demands and standards, and be able to offer all expected functionality including state-of-the-art AI technology. Some development work and testing remains, but Smart Eye intends to start manufacturing and shipping its first systems in the second half-year 2020.



## Priorities 2020

- Completion of development work, testing and validation of driver monitoring systems, plus execution of pilot testing with specially selected customers.
- Addressing mainly the Chinese market on a focused footing, to gain full customer relationships and secure the business area's first orders.

“At present, the demand for this type of system is greatest in China, propelled by new legislation from late-2018.

## Customers

The greatest initial potential is on the Chinese market. New legislation was introduced in China in late-2018 stipulating that the transportation of hazardous freight, as well as long-distance and tourist coaches must be equipped with driver monitoring systems. In practical terms, this means that manufacturers of commercial and special vehicles, as well as operators of car and truck fleets, may need to install driver monitoring systems. Smart Eye will conduct a number of initial pilot tests with selected customers, to then be ready for production in the second half-year 2020. Smart Eye will report orders for AIS's driver monitoring systems in press releases as it does for Automotive Solutions' design wins. The lead-time from securing an order until AIS ships driver monitoring systems is likely to be only a few months.

## Progress in 2019

The operations of the AIS business area started in 2019, focusing on product development, reaching the stage of three different driver monitoring systems being ready for pilot testing. Additionally, the business area has secured subcontractors for component production and assembly. Development work has been at the company's head office in Gothenburg, initially addressing markets mainly from the office in Chongqing, China.

# Operations focused on safety and security

*The eye tracking technology Smart Eye has developed, and that has created the foundation of the group's operations is based on saving lives, improving safety and human security. Sustainability is the core of Smart Eye's business model.*

Smart Eye was founded to close the distance between humans and machines. The technological solutions the company develops understand, simplify and predict human intentions and actions.

## **Saving lives on the ground and in the air**

Smart Eye's customers are mainly in the automotive, aviation and aerospace industries, but also in the academic community, customers that set extreme standards on their suppliers. Smart Eye is capable of satisfying these exacting safety, reliability, quality, durability and delivery capability standards. Smart Eye's technology helps save lives on roads and in the air. By delivering to research and education environments, Smart Eye also helps generate deeper knowledge in behavioural science and better understanding of human behaviour in crises, for example.

## **Eye tracking - a necessity for reducing road accidents**

Each year, 1.3 million traffic-related deaths occur worldwide. The annual averages of accidents involving personal injury per 100,000 cars are 231 in the Nordic region, 498 in Europe and 1,450 in North America (source: UNECE, 2015). Driver monitoring and automated driving are necessary to achieve the vision of zero road accidents. Smart Eye's technology is embedded in active driver monitoring systems. The first cars with driver monitoring systems based on Smart Eye's eye tracking technology entered production in 2018, and the number of cars with this technology will grow rapidly over the coming years, with legislation, other initiatives and demand driving development. Systems can detect whether a driver is inattentive or drowsy, and can stimulate driver attention in a variety of ways. If the driver does not respond to these impulses, the driver monitoring system can restrict a vehicle's speed, or stop it completely. With current demand growth, it is likely that in a few years, driver monitoring systems will be as common as airbags and seatbelts are now.

## **Skilled professionals developing new technology**

To develop technology solutions at the leading edge of technology, Smart Eye needs to be able to hire and attract the best professionals. It is satisfying to note that many of the people who were present when the company was founded still remain. Of those who have joined the company in recent years, very few have left. Smart Eye can offer a workplace with a variety of research and development projects focused on developing sophisticated technological systems focused on improving security and safety. With an attractive working environment,


” Each year, 1.3 million traffic-related deaths occur worldwide.

where people are offered good potential to grow and develop, this helps Smart Eye to attract ambitious engineers, practised developers and outstanding scientists, all who have strong drive, a solution focus and interest in learning and teaching. Smart Eye professionals have what it takes to make a difference - in-depth knowledge of human-machine interaction. They know what's needed to measure, describe and interpret reality, and to develop and improve the whole technology chain, from eye to software.

## **Corporate culture and governance systems mean responsible business**

Apart from Smart Eye's software and systems themselves, the company also acts in other ways to ensure its business is responsible and sustainable. Internal procedures ensure that all staff are aware of Smart Eye's Code of Conduct and compliance with it. This Code offers employees guidance on the key principles of how Smart Eye should conduct itself and set priorities in daily operations. Established development and quality assurance processes also ensure good business control, and that the organisation is able to satisfy challenging targets and customer standards. Smart Eye is an inclusive workplace where we show consideration to each other, our environment, and have zero tolerance of corruption. In practice, these attitudes impact on how we prioritise and conduct ourselves in staff recruitment, procurement and contacts with customers, for example. The combination of our Code of Conduct, development and quality assurance procedures with Smart Eye's corporate culture help ensure that the company's operations are permeated by responsibility and sustainability.



An aerial photograph showing a winding asphalt road that curves through a vast, dense forest. The forest is composed of many tall, green trees, creating a textured canopy. The road has white lane markings and a few vehicles are visible, including a white car, a yellow bus, and a dark car. The overall tone of the image is a muted, teal-green color.

” With current demand growth, it is likely that in a few years, driver monitoring systems will be as common as airbags and seatbelts are now.



# Continued strong share price performance, major expansion of shareholder base

*Smart Eye's share has been listed on Nasdaq First North Growth Market since 7 December 2016, when its initial offering price was SEK 46. The share is in the Industrial Goods & Services sector, and trades with the ticker SEYE.*

Smart Eye's share price increased by 73.5% in 2019, and the closing price for the year was SEK 118 as of 30 December, which means that the company's market capitalisation at year-end was SEK 1,784 million. In 2019, the Stockholm Stock Exchange rose by 29.6%.

Smart Eye shares with a value of SEK 1,287.7 million (518.4) were traded in 2019, equating to average daily turnover of SEK 5.1 million (2.32). Shares traded in 2019 correspond to 90% (85) of the average number of shares outstanding in the year. Smart Eye's Certified Adviser is Erik Pensner Bank, on tel: +46 (0)8 463 8000, or email [info@pensner.se](mailto:info@pensner.se).

## Shares and share capital

At the beginning of 2019, the average number of shares outstanding was 13,146,943 (9,910,892), and share capital was SEK 1,314,694.3. Smart Eye conducted a private placement in May 2019, which increased the number of shares outstanding by 1,972,041, and share capital by SEK 197,204.10. Accordingly, at year-end 2019, the total number of Smart Eye shares outstanding was 15,118,984, and share

capital was SEK 1,511,898.4. All shares have equal voting rights and give entitlement to an equal share in the company's assets.

## Shareholders

The First Swedish Pension Insurance Fund was granted 1,000,000 shares in tandem with the private placement in May 2019, thus becoming the company's third-largest shareholders. Co-founders Mats and Martin Krantz still remain among the company's largest shareholders, with Swedbank Robur becoming the second-largest shareholder after a new share issue in autumn 2018.

In total, the number of shareholders increased by 46% in the year to 5,208 (3,565).

## Outstanding incentive programmes

The Annual General Meeting (AGM) 2018 resolved to establish an incentive programme, which upon full exercise of warrants, would involve the issuance of 170,000 new shares, equating to a dilution effect of approximately 1.5%. The subscription price of shares

subscribed through these warrants is SEK 48.7 per share, with subscription possible between 1 May 2021 and 30 June 2021 inclusive.

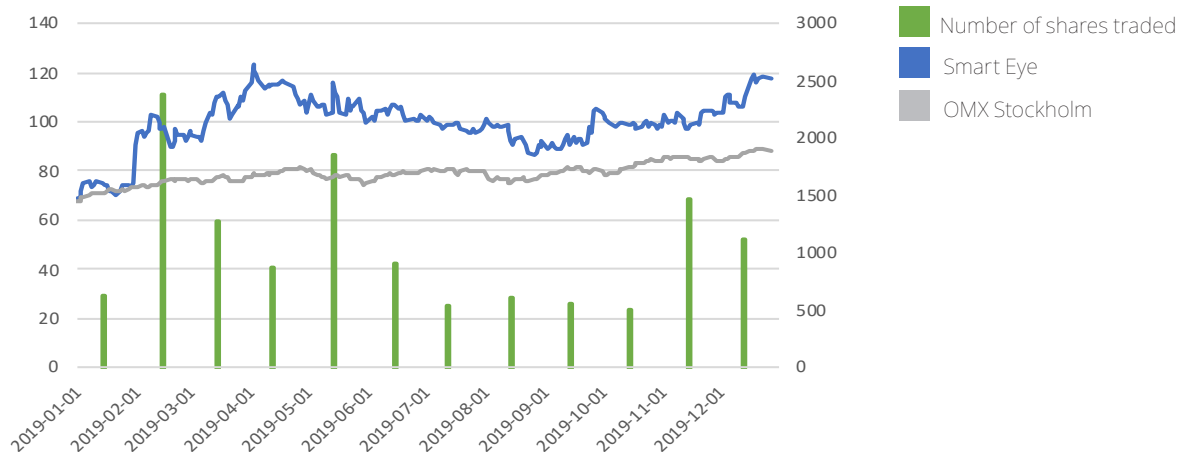
The AGM 2019 resolved to establish an incentive programme, which upon full exercise of warrants, would involve the issuance of 100,000 new shares, equating to a maximum dilution effect of approximately 0.76%. The subscription price of shares subscribed through these warrants is SEK 163 per share, with subscription possible between 1 June 2022 and 30 June 2022.

## Dividend policy

Smart Eye is in a development phase, with any surpluses planned for reinvestment in the company's progress. The Board of Directors does not intend to propose dividends. Any dividends will be resolved by the AGM after proposal from the Board.

## Share price performance in 2019

Source: Nasdaq OMX Nordic & Fidessa





# 118,0 kr

CLOSING PRICE ON 30 DECEMBER 2019

## Share price development and trading volume

SEK	2019	2018	2017
Closing price 28 (29) December	118 kr	68 kr	49,70 kr
Market capitalisation 28 (29) December	1 784,0 mkr	893,9 mkr	492,6 mkr
Price development during the year, %	+73,5	+36,8	-17,2
Highest price paid	125,2 (4 Apr)	86 kr (3 Oct)	63,25 kr (16 Jan)
Lowest price paid	66,0 (2 Jan)	30 kr (3 May)	36,50 kr (15 Nov)

1. Introduction price SEK 46, first day of trading 7 December 2016.

2. Price development from listing on 7 December until the year's last trading day on 30 December.

## Ten largest owners at 2019-12-30

Name	Share of votes and capital, %	Market value, SEK m
Mats Krantz med närstående	7,7	137,5
Swedbank Robur fonder	7,4	132,8
Första AP-fonden	6,6	118,0
Anders Jöfelt	5,7	101,9
Linda Jöfelt	5,3	95,2
Martin Krantz	5,7	101,4
Danica Pension	4,5	79,5
Handelsbanken Microcap Sverige	3,0	53,5
Avanza Pension	4,0	70,5
Niklas Eriksson med närstående	3,0	53,1
Other	47,1	840,6
<b>Total</b>	<b>100</b>	<b>1 784,0</b>

Source: Euroclear Sweden AB per 2019-12-30

## Share distribution at 2019-12-28

Shareholding	No. of shareholders	No. of shares outstanding
1-500	4 137	540 952
501-1 000	497	401 764
1 001-5000	403	849 568
5 001-10 000	67	476 165
10 001-15 000	23	289 013
15 001-20 000	15	279 540
20 001-	65	12 281 982
<b>Totalt</b>	<b>5 208</b>	<b>15 118 984</b>

Source: Euroclear Sweden AB per 2019-12-28.

# Contents

## Financial statements

- 32 Management report
- 34 Several-year overview, Group

### Group

- 36 Income statement
- 37 Balance sheet
- 39 Equity
- 40 Cash flow statement
- 41 Notes

### Parent company

- 48 Income statement
- 49 Balance sheet
- 51 Equity
- 52 Cash flow statement
- 53 Notes

- 59 Auditor's report
- 60 Board of Directors
- 61 Group Management

# Management Report

The Board of Directors and Chief Executive Officer of Smart Eye AB (publ), corporate identity number 556575-8371, hereby present the annual accounts for the financial year 2019. Unless otherwise specifically stated, all amounts are presented in thousands of Swedish kronor, abbreviated TSEK. Figures in brackets are for the previous year.

## Operations

The company develops and markets camera-based gaze sensors, as well as eye tracking algorithms and software. Measuring gaze data is critical to applications including vehicle safety, aircraft safety, education, simulators, behavioural analysis and within research & development. The most important unique qualities of the company's sensors, algorithms and software are their combination of high flexibility, insensitivity to external light conditions and vibration, and capability of dealing with situations where the eye to be tracked is partially or temporally obscured by other objects. The company also has unique potential to attain low cost in mass production.

The company currently has three business areas: Research Instruments, Automotive Solutions and Applied AI Systems (AIS). Within Research Instruments, Smart Eye delivers sophisticated eye tracking systems for measuring and analysing human behaviour. In Automotive Solutions, the company provides eye tracking software for the automotive industry, and within AIS, also offers hardware for integration into vehicles.

## Subsidiaries

The company has subsidiaries in the USA, Smart Eye International Inc. and Japan, Smart Eye Japan Co. The company has been preparing consolidated accounts since the third quarter of 2017. There were no purchases or sales from or to the subsidiary JN Data AB, which was dormant during the financial year.

## Revenue and earnings

Net sales for the period January to December 2019 were 49,817 (50,778) TSEK, down by 2%. The decrease is due to reduced revenues in the Research Instruments business area, mainly because of deferred orders from some customers. Sales in the Automotive Solutions business area increased, primarily because license revenue for produced cars and Smart Eye's technology increased progressively through the year.

Other operating revenue, which is mainly sourced from external research projects and currency effects, was 1,865 (2,360) TSEK. Work performed by the company for its own use and capitalised was 29,000 (17,976) TSEK. The group's total revenue in the period was 80,682 (71,114) TSEK.

EBIT for January to December was -105,723 (-55,998) TSEK. This change in earnings is due to increased investments, mainly in staff to manage contracts secured and high customer activity in the Automotive Solutions business area. Late in the year, an increasing share of expenses for the new AIS business area were charged to earnings.

The net sales of the Automotive Solutions business area were 26,240

(21,232) TSEK, a 24% increase. The net sales of the Research Instruments business area amounted to 23,557 (29,546) TSEK, a 20% decrease.

## Cash flow and financial position

At year-end, the company had an unutilised overdraft facility of 5,000 (5,000) TSEK, and cash and cash equivalents of 145,384 (89,946) TSEK. New share issues and stock option programmes raised 188,395 TSEK for the company in 2019. The equity ratio was 85% at year-end, compared to 83% at the corresponding point of the previous year. Cash flow from operating activities before changes in working capital in the January-December period was -87,552 (-42,603) TSEK. Cash flow after changes in working capital in the same period was -81,144 (-40,922) TSEK.

## Significant events in the financial year

The company secured 14 design wins from a new Korean OEM in February. The estimated order value for these 14 models is over SEK 150 million, based on volume forecasts over product lifecycles.

More design wins were announced in May, this time for a new automotive platform shared by one of Japan's largest OEMs and one of Europe's largest OEMs. Estimated revenues from this order are SEK 150 million, based on forecasts of estimated product lifecycles. Estimated potential revenue for future design wins on the same platform are SEK 500 million, and the estimated potential for all cars on all platforms is SEK 2.3 billion.

To consolidate the company's financial position and enable continued development of its operating activities, as well as expanding its offering to the Chinese market, the company executed a private placement of some SEK 200 million before issue expenses in May. This transaction means the company can cover its financing needs until current and potential new customers start generating sufficient revenue to cover the company's expenses.

In September, the company announced that it had secured eight car models for one of Japan's and one of Europe's largest OEMs. This is an extension of two previous design wins announced in May 2019. The order now comprises a total of ten models with SoP of the first model in 2020. Estimated revenue from the eight models are SEK 200 million, based on forecasts of estimated product lifecycles. In November, Smart Eye secured a design win from a new Japanese OEM on the previously announced platform shared by a Japanese and European OEM. Two further design wins were secured from the previously announced European OEM.

## Significant events after the end of the financial year

Significant events after the end of the financial year  
After the end of the financial year and in the period until March 27th, 2020, the company secured another 25 design wins. These design wins come partly from three new OEMs: one US high volume manufacturer, a European premium manufacturer and a Chinese mid-range manufactu-

Management report cont.

>>



## Management report cont. >>

rer. The estimated order value is expected to exceed SEK 550 million, based on volume forecasts over product lifecycles. In total, the company now has 81 design wins with 12 different car manufacturers. Furthermore, as a precautionary measure with the current market volatility due to the corona virus, Smart Eye has decided to lower its operating costs in order to conserve cash. The cost reduction program enters into effect immediately. Special emphasis is placed on ensuring that the numerous delivery commitments to the global automotive industry are met. This ensures the financial stability for operating the company for at least 18 months. The company retains readiness to quickly scale up if Corona related uncertainties improve.

### Future progress, significant risks and uncertainties

#### Operational risks

There are risk factors in operating activities that may negatively impact the company's business and financial position.

The capacity to retain current staff, and potential to hire new staff, are critical to the company's future progress. If key staff leave the company, or if the company is unable to attract qualified staff, this may negatively impact on the company's operating activities.

Delays to the company's development work, or an inability to keep pace with technological progress, may reduce or eliminate the company's competitiveness.

Inadequate quality of the products the company delivers could result in damages claims being filed against the company. There is also a risk that inadequate product quality could result in reduced demand for the company's products.

The company's intangible assets are highly significant to its operating activities. If the company is unable to protect its intangible assets, other parties may succeed in developing operations similar to the company's, replicating or otherwise exploiting the technology and products the company utilises and develops. If the company's measures to protect its intangible assets are inadequate or its assets are misused, this may impact on the company's operating activities. The company may also be compelled to initiate legal proceedings to protect its intangible assets and commercial secrets. Such proceedings may generate significant costs and occupy the time of the company's senior executives.

#### Financial risks

The company is financed by share capital and loans. If the company does not generate revenues to the extent and in the timeframe the Board of Directors judges, additional need for capital may arise.

As sales increase, the company will be exposed to more currency exposure, because most of the company's sales are in currencies other than Swedish kronor.

#### Market risks

Eye tracking is an emergent technology, where the company's products are currently used within behavioural analysis. There is a risk that the interest in eye tracking for behavioural analysis declines, which may have a negative impact on the company's sales. The company's objective is to provide eye tracking for the automotive industry, which assumes that car manufacturers decide to integrate eye tracking with safety functions and self-driving functionality into forthcoming models. There is a risk that the automotive industry decides to introduce eye tracking at a slower rate

than the company expects. There is also a risk that consumers do not recognise the value of the functionality that technology enables, which may reduce automotive industry interest in the technology, and thus the company's products. Overall, delayed or aborted introduction of eye tracking within the automotive industry may cause a risk of lower growth rates, or the complete absence of growth potential for the company, with a negative impact on the company's operating activities.

### The Coronavirus – COVID 19

The Company operates on a global market and the development of the Corona virus (COVID 19) may have an impact on the demand for the company's services and products. The company has and will take the necessary steps to ensure the long-term operation.

### Proposed appropriation of earnings

The following funds are available to the Annual General Meeting:

Retained earnings	266 267 TSEK
Loss for the year	-106 817 TSEK
	<b>159 450 TSEK</b>

The Board of Directors proposes that these funds are appropriated as follows:

Carried forward	159 450 TSEK
	<b>159 450 TSEK</b>

### Corporate governance

The company endeavours to maintain a high standard of corporate governance through the clarity and simplicity of its management systems and governance documents. The corporate governance of Smart Eye AB proceeds from Swedish law, mainly the Swedish Companies Act, Annual Accounts Act and Nasdaq First North's Rule Book for Issuers.

### The work of the Board of Directors

The main duty of the Board of Directors is to manage the company's operations in a way that optimally promotes shareholder interests, and generates long-term healthy returns on capital. The work of the Board of Directors is formalised by legislation and regulation including the Swedish Companies Act, the Articles of Association and the Rules of Procedure the Board of Directors has adopted for its work. The Board's rules of procedure, with instructions for the Chief Executive Officer and reporting instructions, are updated and adopted annually. The Rules of Procedure define the Board's working methods, and are based on considerations including a yearly cycle. Each Board meeting has one or more themes, and in addition, the Board deals with matters that are ongoing and arising.

## GROUP

## Several-year overview

## Several-year overview 2015-2019

		2019	2018	2017	2016	2015
Net sales	TSEK	49 817	50 778	43 199	40 743	37 572
Operating expenses	TSEK	186 405	127 112	102 068	66 708	50 358
Operating profit/loss	TSEK	-105 723	-55 998	-41 463	-11 159	-2 568
Operating margin	%	neg.	neg.	neg.	neg.	neg.
Profit after tax	TSEK	-106 362	-56 404	-41 896	-12 403	-3 863
Earnings per share*	SEK	-7,03	-4,29	-4,23	-1,52	-0,57
Earnings per share after full dilution*	SEK	-6,92	-4,24	-4,12	-1,47	-0,55
Return on equity	%	-35,8	-33,3	-57,1	-10,8	-29,9
Total assets	TSEK	297 139	204 101	101 053	139 475	51 369
Shareholders' equity	TSEK	251 546	169 312	73 408	115 312	12 927
Shareholders' equity per share*	SEK	16,64	12,88	7,41	14,13	1,90
Shareholders' equity per share after full dilution*	SEK	16,36	12,72	7,41	13,71	1,80
Equity ratio	%	85	83	73	83	25
Cash liquidity	%	403	370	135	520	57
Number of shares*		15 118 984	13 146 943	9 910 892	8 160 892	6 817 842
Number of shares after full dilution*		15 379 184	13 307 143	9 910 892	8 410 892	7 052 842

\* Not including shares from the new issue ahead of the listing on First North Growth Market.

Figures for 2017 are consolidated figures, as this is the first year that consolidated financial statements are presented.

Figures for earlier years pertain to the Parent Company.

Definitions of key ratios are presented in Note 1.

# Accounts Group



## GROUP

## Income statement

	Note	Full year 2019	Full year 2018
<b>Operating revenue</b>			
Net sales	3	49 817	50 778
Capitalised work for own account	4	29 000	17 976
Other operating revenue		1 865	2 360
<b>Total operating revenue, etc.</b>		<b>80 682</b>	<b>71 114</b>
<b>Operating expenses</b>			
Other external costs	5, 6, 7	-81 999	-48 424
Personnel costs	8, 9	-85 689	-64 943
Depreciation and write-down of tangible and intangible assets	4, 13	-18 717	-13 745
Total operating expenses		-186 405	-127 112
<b>Operating profit/loss</b>		<b>-105 723</b>	<b>-55 998</b>
Financial income and expenses			
Other interest income and similar profit/loss items		117	21
Interest expenses and similar profit/loss items		-663	-371
<b>Total financial income and expense</b>		<b>-546</b>	<b>-350</b>
<b>Profit/loss after financial items</b>		<b>-106 269</b>	<b>-56 348</b>
Tax on profit for the year	10	-93	-56
<b>Net profit/loss for the year</b>		<b>-106 362</b>	<b>-56 404</b>

## GROUP

## Balance sheet

GROUP	NotE	2019-12-31	2018-12-31
<b>Assets</b>			
<b>Non-current assets</b>			
<i>Intangible assets</i>			
Capitalised development expenditures	4	109 837	79 457
Concessions, patents, licences, trademarks and similar rights		184	272
		<b>110 021</b>	<b>79 729</b>
<i>Tangible assets</i>			
Fixtures, tools, fixtures and fittings	13	<b>5 680</b>	<b>4 769</b>
<i>Financial assets</i>			
Participations in associated companies	12	25	25
		25	25
<b>Total non-current assets</b>		<b>115 726</b>	<b>84 523</b>
<b>Current assets</b>			
<i>Inventories, etc.</i>			
Raw materials and consumables		<b>4 373</b>	<b>4 308</b>
<i>Current receivables</i>			
Trade receivables		11 734	19 342
Current tax assets		1 229	774
Other current receivables	14	5 385	2 594
Prepaid expenses and accrued income	15	13 308	2 614
		<b>31 656</b>	<b>25 324</b>
Cash and bank balances		<b>145 384</b>	<b>89 946</b>
<b>Total current assets</b>		<b>181 413</b>	<b>119 578</b>
<b>Total assets</b>		<b>297 139</b>	<b>204 101</b>

Balance sheet, cont. &gt;&gt;

## GROUP

## &gt;&gt; Balance sheet, cont.

GROUP	Not	2019-12-31	2018-12-31
<b>Shareholders' equity and liabilities</b>			
<b>Shareholders' equity</b>			
Share capital		1 512	1 315
Other contributed Equity		501 729	313 531
Other Equity		-251 693	-145 533
<b>Total shareholders' equity</b>		<b>251 547</b>	<b>169 312</b>
<b>Non-current liabilities</b>			
Other liabilities to credit institution	16, 18	1 667	3 667
<b>Total non-current liabilities</b>		<b>1 667</b>	<b>3 667</b>
<b>Current liabilities</b>			
Other liabilities to credit institutions	16, 18	2 000	2 000
Advance payments from customers		0	2 231
Trade payables		18 163	9 641
Tax liabilities		0	58
Other current liabilities		4 427	2 350
Accrued expenses and prepaid income	17	19 337	14 842
		<b>43 924</b>	<b>31 122</b>
<b>Total shareholders' equity and liabilities</b>		<b>297 139</b>	<b>204 101</b>



## GROUP

## Shareholders' equity

GROUP	Share capital	Other contributed equity	Other equity	Total equity
<b>Opening balance 2018-01-01</b>	<b>991</b>	<b>161 651</b>	<b>-89 234</b>	<b>73 408</b>
New issue after issue costs	324	150 935	0	151 259
Optionprogram 2018		945		945
Translation difference			105	105
Profit/loss for the year			-56 404	-56 404
<b>equity 2018-12-31</b>	<b>1 315</b>	<b>313 531</b>	<b>-145 533</b>	<b>169 312</b>
<b>Opening balance 2019-01-01</b>	<b>1 315</b>	<b>313 531</b>	<b>-145 533</b>	<b>169 312</b>
New issue after issue costs	197	187 387		187 584
Optionprogram 2019		811		811
Translation difference			202	202
Profit/loss for the year			-106 362	-106 362
<b>equity 2019-12-31</b>	<b>1 512</b>	<b>501 729</b>	<b>-251 693</b>	<b>251 547</b>

"The share capital consists of 15,118,984 shares with a quota value of SEK 0.1.

During the period a new issue was registered and the share capital increased by SEK 197,204.10

## GROUP

## Cash flow statement

GROUP	2019	2018
<b>Operating activities</b>		
Operating loss after depreciation and amortisation	-105 723	-55 998
Reversal of depreciation and amortisation	18 717	13 745
Financial payments received	117	21
Financial payments rendered	-663	-371
Tax	0	0
<b>Change in working capital</b>		
Change in stocks	-65	-1 349
Change in trade receivables	7 608	-5 410
Change in other current receivables	-13 940	-704
Change in trade payables	8 522	1 813
Changes in other non-current liabilities	4 283	7 331
<b>Cash flow from operating activities</b>	<b>-81 144</b>	<b>-40 922</b>
<b>Investing activities</b>		
Intangible assets	-47 043	-28 595
Tangible assets	-2 877	-1 050
<b>Cash flow from investing activities</b>	<b>-49 920</b>	<b>-29 645</b>
<b>Financing activities</b>		
New issue	187 584	151 259
Optionprogram	811	945
Non-current liabilities	-2 000	-2 000
<b>Cash flow from financing activities</b>	<b>186 394</b>	<b>150 204</b>
Translation difference	108	47
Cash flow	55 438	79 684
Opening cash and cash equivalents	89 946	10 262
<b>Closing cash and cash equivalents</b>	<b>145 384</b>	<b>89 946</b>

## GROUP

# Notes

### NOTE 1 Accounting policies and valuation principles

The company's annual report has been prepared in accordance with the Swedish Annual Accounts Act and the Swedish Accounting Standards Board's recommendation BFNR 2012:1 Annual accounts and consolidated accounts (K3). The accounting policies are unchanged from the previous year.

#### Foreign currencies

Monetary asset and liability items in foreign currencies are measured at the exchange rate on the balance sheet date. Transactions in foreign currencies are translated at the spot rate on the transaction date.

#### Revenue

##### Goods

Sales of goods are recognised when the significant risks and benefits are transferred from the seller to the buyer in accordance with the terms of sale. Sales are recognised after deductions for VAT, discounts and exchange rate differences for sales in foreign currencies. System revenue for which there are non-delivered components that are a condition for the functionality of the system is recognised when these components are delivered.

##### Service assignments

For service assignments at current prices the revenue attributable to a completed service assignment is recognised in pace with completion of the work and the delivery or use of the material.

##### Capitalised work for own account.

See further under intangible assets.

##### License revenue

The company receives license revenue from customers based on the number of vehicles produced. According to agreements, the number of cars manufactured is reported quarterly and revenue is then reported based on this report.

#### Income tax

##### Current tax

Current tax is measured based on the tax rates and tax rules on the balance sheet date. Deferred tax is measured based on the tax rates and tax rules decided prior to the balance sheet date. Deferred tax liabilities concerning temporary differences that are related to investments in subsidiaries are not recognised in the consolidated accounts, since the Parent Company may in all cases determine the time of reversal of the temporary differences, and it is not deemed to be probable that reversal will take place in the foreseeable future.

##### Deferred tax

Deferred tax assets pertaining to loss carryforwards or other future tax deductions are recognised to the extent that it is likely that the loss carryforwards can be offset against surpluses in conjunction with future taxation.

Receivables and liabilities are recognised net only when there is a legal right of set-off. Current tax, like the change in deferred tax, is recognised in the income statement unless the tax is attributable to an event or transaction that is recognised directly in shareholders' equity.

#### Leases

All leases for which the company is the lessee are recognised as

operating leases (rental agreements), regardless of whether the leases are finance or operating leases. Lease payments under operating leases, including higher first-time rents, but excluding expenses for insurance and maintenance, are recognised as expenses on a straight-line basis over the lease term.

#### Employee benefits

Employee benefits in the form of salaries, holiday pay, paid sick leave, etc., as well as pensions, are recognised as they are earned. The company only has defined-contribution pension plans. There are no other long-term employee benefits.

#### Defined-contribution pension plans

Under defined-contribution pension plans, the company pays fixed contributions to a separate independent legal entity and does not have any obligation to pay additional contributions. The company's earnings are charged with expenses as the benefits are earned, which normally corresponds to the time when the premium is paid.

#### Intangible assets

Intangible non-current assets are recognised at cost less accumulated amortisation and any impairment. Cost includes costs directly attributable to the acquisition of the asset.

Intangible non-current assets are amortised on a straight-line basis over the asset's estimated useful life. Straight-line amortisation is applied. Amortisation is recognised as a cost in the income statement.

#### Development work

Development costs are capitalised if the project is assumed to be of significant future value to the company. Capitalisation pertains to development costs for a specific application and which are clearly delineated for the project.

#### The following amortisation schedule is applied:

Capitalised development expenditure	10 years
-------------------------------------	----------

#### Tangible assets

Property, plant and equipment is recognised at cost less accumulated depreciation and any impairment.

Cost includes costs directly attributable to the acquisition of the asset.

Additional expenses concerning assets that are not divided into components are added to the cost if they are estimated to give the company future economic benefit, to the extent that the asset's performance increases in relation to the asset's value on the acquisition date. Expenses for ongoing repair and maintenance are recognised as costs.

Property, plant and equipment is depreciated on a straight-line basis over the asset's estimated useful life. Any residual value of the asset is taken into account when determining the assets' depreciable amounts. Straight-line depreciation is applied. Depreciation is recognised as a cost in the income statement.

#### The following depreciation schedules are applied:

Equipment and tools	5 years
Computers	3 years

If an asset's carrying amount exceeds its estimated recoverable amount, the asset is immediately written down to its recoverable amount.

## GROUP

# Notes

## Financial instruments

Financial instruments recognised on the balance sheet include trade receivables, other receivables, trade payables and loans. The instruments are recognised on the balance sheet when the company becomes party to the contractual terms of the instrument. Financial assets are derecognised from the balance sheet when the right to receive cash flows from the instrument has expired or has been transferred, and the company has transferred essentially all risks and benefits associated with the right of ownership. Financial liabilities are derecognised from the balance sheet when the obligations in the contract are met or otherwise lapse.

### Trade and other receivables

Receivables are recognised as current assets, with the exception of items falling due more than 12 months after the balance sheet date, which are classified as non-current assets. Receivables are recognised in the amount at which they are expected to be received less individually assessed doubtful debts.

### Loans and trade payables

Loans and trade payables are initially recognised at cost after deducting transaction costs. If the recognised amount differs from the amount to be repaid on the due date, the difference is accrued as an interest cost or interest income over the term of the loan. This means that as of the due date the recognised amount corresponds to the amount to be repaid.

### Participations in subsidiaries and associated companies

Participations in subsidiaries are recognised at cost after deducting any impairment. Participations in associated companies are recognised at cost after deducting any impairment.

## Inventories

Inventories are measured at the lower of cost and net realisable value on the balance sheet date. Cost is calculated according to the first-in, first-out (FIFO) principle. Net sales value is the sales value after deducting calculated costs that can be attributed directly to the sales transaction.

## Provisions

A provision is recognised on the balance sheet when the company has a formal or informal obligation due to an event that has occurred, and it is probable that an outflow of resources will be required to settle the obligation, and a reliable estimate of the amount can be made.

## Cash flow statement

The cash flow statement presents the changes in the company's cash and cash equivalents during the financial year. The cash flow statement is prepared according to the indirect method. The recognised cash flow solely includes transactions that involve incoming and outgoing cash payments.

## Definitions of key ratios

### Net sales growth

The percentage net increase in net sales compared with an earlier period. The company believes that this key ratio gives a better understanding of the company's growth.

### Operating profit/loss

Profit/loss before financial income and expenses, and tax.

### Operating margin

Operating profit in relation to net sales.

### Liquidity ratio

Current assets excluding inventories and work in progress as a percentage of current liabilities.

### Equity ratio

Equity and untaxed reserves (less deferred tax) in relation to total assets.

### Return on equity

Profit after tax in relation to shareholders' equity during the period.

### Earnings per share

Profit for the period divided by the number of shares outstanding at the end of the period.

### Equity per share

Shareholders' equity divided by the number of shares at the end of the period.

### Dividend per share

Dividend for the period divided by the number of shares outstanding at the time of the dividend.

### Employees

Number of employees at the end of the period.

## NOTE 2 Estimates and assessments

No assessments or estimates have been made that have a significant effect on the amounts recognised in the financial statements or that would entail a significant risk of a material adjustment of the carrying amounts for assets and liabilities in the next financial year.

## NOTE 3 Net sales per business area

	2019	2018
Research Instruments	23 577	29 546
Automotive Solutions	26 240	21 232
	<b>49 817</b>	<b>50 778</b>



# GROUP

## Notes

### NOTE 4 Capitalised development expenditure

	2019	2018
Acquisition value	141 481	112 995
Capitalised expenses for the year	47 043	28 574
Disposals	-237	-88
Closing accumulated cost	188 287	141 481
Opening depreciation	-62 024	-49 906
Amortisation for the year	-16 663	-12 205
Disposals	237	87
Closing accumulated amortisation	-78 450	-62 024
Closing residual value according to plan	109 837	79 457

### NOTE 5 Operating leases

Future minimum lease payments to be made for non-cancellable leases.

	2019-12-31	2018-12-31
Due for payment within one year	7 480	5 759
Due for payment later than one year, but within five years	9 742	12 099
Due for payment later than five years	0	0
	<b>17 222</b>	<b>17 858</b>
Lease payments expensed during the period	5 753	5 011

### NOTE 6 Auditors' fees

	2019	2018
PWC AB		
Audit assignment	320	204
Other services	205	51
<b>Total auditors' fees</b>	<b>525</b>	<b>255</b>

By audit assignment is meant the auditor's fee for the statutory audit. This work includes review of the annual report and bookkeeping, the Board of Directors' and CEO's administration, and fees for audit consulting in connection with the audit assignment.

### NOTE 7 Transactions with related parties

No transactions were made with related parties during the year other than stated in note 8 and note 9.

### NOTE 8 Employees

	2019	2018
<b>Average number of employees</b>		
Women	25	14
Men	79	60
	<b>104</b>	<b>74</b>

#### Board members and senior executives

<b>Number of Board members on the balance sheet date</b>		
Men	4	6
Women	2	0
	<b>6</b>	<b>6</b>

#### Number of CEOs and other senior executives

Men	5	5
Women	1	1
	<b>6</b>	<b>6</b>

# GROUP

## Notes

### Salaries, fees and other remuneration

	2019		2018	
	Fees	Other remuneration	Fees	Other remuneration
Board of Directors				
Anders Jöfeldt, Chairman of the Board	246	0	125	0
Lars Olofsson, director	256	0	42	0
Mats Krantz, director	130	0	125	0
Staffan Hansson, director	42	0	138	0
Magnus Jonsson, director	130	0	149	0
Eva Elmstedt, director	88	0	0	0
Cecilia Wachtmeister, director	88	0	0	0
<b>Summa</b>	<b>978</b>	<b>0</b>	<b>579</b>	<b>0</b>

### Salaries, fees and other remuneration

	2019	2018
Board of Directors	978	579
CEO	1 637	1 534
Other senior executives	5 181	4 726
Other employees	34 938	34 039
<b>Summa</b>	<b>42 734</b>	<b>40 878</b>

### Social security charges and pensions

	2019	2018
Statutory and contractual social security charges and pensions	14 111	11 007
Pension costs	7 149	6 361
<b>Total</b>	<b>21 260</b>	<b>17 368</b>
Of which, CEO	0	0
Of which, other senior executives	992	806
Of which, other employees	6 157	5 555

### Salaries and remuneration for the CEO and other senior executives

	Salary		Pension costs		Social security charges		Total	
	2019	2018	2019	2018	2019	2018	2019	2018
CEO	1 637	1 534	0	0	514	482	2 151	2 016
Other senior executives	5 181	4 726	992	806	1 628	1 485	7 801	7 017
<b>Total</b>							<b>9 952</b>	<b>9 033</b>

The CEO is subject to six months' mutual notice of termination. On notice of termination by the company, the CEO is not entitled to any severance pay or any pension benefits. No agreements concerning severance payments have been made with the company's other employee.

### NOTE 9 Share-based payments

At the Annual General Meeting on 25 April 2018 it was resolved to establish a new incentive program. The decision was made to issue a total of a maximum of 170,000 warrants, which senior executives and other employees – approximately 70 persons in all – were offered to purchase. Upon full exercise of the warrants, a maximum of 170,000 new shares will be issued, corresponding to a dilutive effect of approximately 1.5%. The subscription price for shares subscribed for via the warrants is SEK 48.7 per share. The premium per warrant, which has been calculated using the Black-Scholes model, was SEK 5.90. Subscription of shares may take place during the period 1 May 2021 through 30 June 2021.

At the Annual General Meeting on May 15, 2019, it was resolved to establish an incentive programs aimed at senior executives and staff. When fully utilizing the company's incentive program 100,000 shares will be issued, leading to a total dilution effect of a maximum of approximately 0.76 percent of the share capital and number of votes. The subscription price for shares subscribed for via the warrants is SEK 163 per share. The premium per warrants, which has been calculated using to the Black & Scholes model, was SEK 17. The subscription of shares may take place during the period 1 June 2022 through June 30, 2022.

### NOTE 10 Income tax

	2019	2018
Current tax	-93	-56
Deferred tax	0	0
	<b>-93</b>	<b>-56</b>
Reconciliation of tax expense		
Tax according to current tax rate 21,4% (22%)	-106 269	-56 404
Tax effect of non-deductible expenses	22 742	12 397
Tax effect of non-deductible income	-219	-89
Tax effect of unrecognised loss carryforwards	-22 616	-12 364
<b>Recognised tax expense</b>	<b>-93</b>	<b>-56</b>

Unrecognised loss carryforwards amount to TSEK 248,055 (142 808).

## GROUP

# Notes

### NOTE 12 Participations in associated companies

	Reg. no.	Number of shares	Share of equity (%)	Share of votes (%)	Book value 31/12/2019	Book value 31/12/2018
Neoeeye AB	559059-9824	Stockholm	50	50	25	25
<b>Summa</b>					<b>25</b>	<b>25</b>

### NOTE 13 Equipment, tools, fixtures and fittings

	2019	2018
Opening cost	7 076	8 512
Changes during the year		
- Disposals	0	-2 485
- Purchases	2 877	1 049
Closing accumulated cost	9 953	7 076
Opening depreciation	-2 307	-3 362
Changes during the year		
- Disposals	0	2 485
- Depreciation	-1 966	-1 430
Closing accumulated depreciation	-4 273	-2 307
<b>Closing residual value according to plan</b>	<b>5 680</b>	<b>4 769</b>

### NOTE 14 Other current receivables

	2019	2018
Tax account	2 998	1 046
VAT account	2 158	1 476
Other current receivables	229	72
<b>Total other current receivables</b>	<b>5 385</b>	<b>2 594</b>

## GROUP

# Notes

### NOTE 15 Prepaid expenses and accrued income

	2019	2018
Prepaid rents	1 109	501
Accrued income and ongoing contribution projects	4 626	1 064
Other prepaid expenses	7 573	1 049
<b>Total prepaid expenses and accrued income</b>	<b>13 308</b>	<b>2 614</b>

### NOTE 17 Accrued expenses and prepaid income

	2019	2018
Accrued salaries and holiday pay	6 838	5 107
Accrued social security charges	2 149	1 605
Accrued expenses	5 534	3 564
Accrued prepaid income	2 172	2 436
Other items	2 644	2 130
<b>Total accrued expenses and prepaid income</b>	<b>19 337</b>	<b>14 842</b>

### NOTE 16 Liabilities to credit institutions

	2019	2018
Due within 1 year after the balance sheet date	2 000	2 000
Due between 1 and 5 years after the balance sheet date	1 667	3 667
Due later than 5 years after the balance sheet date	0	0
<b>Total liabilities to credit institutions</b>	<b>3 667</b>	<b>5 667</b>

### NOTE 18 Pledged assets and contingent liabilities

	2019	2018
<b>For own provisions and liabilities</b>		
Floating charges	15 000	15 000



# Parent company

## PARENT COMPANY

## Income statement

PARENT COMPANY	Note	Full year 2019	Full year 2018
<b>Operating revenue</b>			
Net sales	3	49 817	50 778
Capitalised work for own account	4	29 000	17 976
Other operating revenue		1 865	2 360
<b>Total operating revenue, etc.</b>		<b>80 682</b>	<b>71 114</b>
<b>Operating expenses</b>			
Other external costs	5, 6, 7	-82 622	-48 680
Personnel costs	8, 9	-85 614	-64 878
Depreciation and write-down of tangible and intangible assets	4, 13	-18 717	-13 745
<b>Total operating expenses</b>		<b>-186 953</b>	<b>-127 303</b>
<b>Operating profit/loss</b>		<b>-106 271</b>	<b>-56 189</b>
<b>Financial income and expenses</b>			
Other interest income and similar profit/loss items		117	20
Interest expenses and similar profit/loss items		-663	-371
<b>Total financial income and expenses</b>		<b>-546</b>	<b>-351</b>
<b>Profit/loss after financial items</b>		<b>-106 817</b>	<b>-56 540</b>
Tax on profit for the year	10	0	0
<b>Net profit/loss for the year</b>		<b>-106 817</b>	<b>-56 540</b>

## PARENT COMPANY

## Balance sheet

PARENT COMPANY	Note	2019-12-31	2018-12-31
<b>Assets</b>			
<b>Non-current assets</b>			
<i>Intangible assets</i>			
Capitalised development expenditure	4	109 837	79 457
Concessions, patents, licences, trademarks and similar rights		184	272
		<b>110 021</b>	<b>79 729</b>
<i>Tangible assets</i>			
Fixtures, tools, fixtures and fittings	13	<b>5 680</b>	<b>4 769</b>
<i>Financial assets</i>			
Participations in Group companies	11	1 302	624
Participations in associated companies	12	25	25
		<b>1 327</b>	<b>649</b>
<b>Total non-current assets</b>		<b>117 028</b>	<b>85 147</b>
<b>Current assets</b>			
<i>Inventories, etc.</i>			
Raw materials and consumables		<b>4 373</b>	<b>4 308</b>
<i>Current receivables</i>			
Trade receivables		11 734	19 342
Receivable from Group companies		0	147
Current tax assets		1 301	774
Other current receivables	14	5 384	2 590
Prepaid expenses and accrued income	15	12 496	2 554
		<b>30 915</b>	<b>25 407</b>
Cash and bank balances		<b>145 118</b>	<b>88 809</b>
<b>Total current assets</b>		<b>180 406</b>	<b>118 524</b>
<b>Total assets</b>		<b>297 434</b>	<b>203 671</b>

Balance sheet, cont. &gt;&gt;

## PARENT COMPANY

## &gt;&gt; Balance sheet, cont.

PARENT COMPANY	Note	2019-12-31	2018-12-31
<b>Shareholders' equity and liabilities</b>			
<b>Shareholders' equity</b>			
<i>Restricted shareholders' equity</i>			
Share capital		1 512	1 315
Share premium reserve		21 914	21 914
Fund for development costs		67 690	43 459
		<b>91 116</b>	<b>66 688</b>
<i>Unrestricted shareholders' equity</i>			
Share premium reserve		479 814	291 617
Retained profit or loss		-213 546	-132 776
Net profit/loss for the year		-106 817	-56 540
		<b>159 450</b>	<b>102 301</b>
<b>Total shareholders' equity</b>		<b>250 566</b>	<b>168 989</b>
<b>Non-current liabilities</b>			
Other liabilities to credit institutions	16, 18	1 667	3 667
<b>Total non-current liabilities</b>		<b>1 667</b>	<b>3 667</b>
<b>Current liabilities</b>			
Other liabilities to credit institutions	16, 18	2 000	2 000
Advance payments from customers		0	2 231
Trade payables		17 874	9 461
Liabilities to Group companies		1 793	611
Other current liabilities		4 207	2 350
Accrued expenses and prepaid income	17	19 328	14 363
		<b>45 201</b>	<b>31 015</b>
<b>Total shareholders' equity and liabilities</b>		<b>297 434</b>	<b>203 671</b>



## PARENT COMPANY

## Shareholders' equity

<b>MODERBOLAGET</b>	Share capital	Share premium reserve (restricted)	Fund for development expenditure (restricted)	Share premium reserve (unrestricted)	Other unrestricted shareholders' equity	Total shareholders' equity
<b>Opening balance, 1/1/2018</b>	<b>991</b>	<b>21 914</b>	<b>28 314</b>	<b>139 737</b>	<b>-117 631</b>	<b>73 325</b>
New issue after issue cost	324			150 935		151 259
Optionprogram 2018				945		945
Warrants 2016			17 976		-17 976	
Fund for development costs			-2 831		2 831	
Net profit/loss for the year					-56 540	-56 540
<b>Shareholders' equity at 31/12/2018</b>	<b>1 315</b>	<b>21 914</b>	<b>43 459</b>	<b>291 617</b>	<b>-189 316</b>	<b>168 989</b>
<b>Opening balance, 1/1/2019</b>	<b>1 315</b>	<b>21 914</b>	<b>43 459</b>	<b>291 617</b>	<b>-189 316</b>	<b>168 989</b>
New issue after issue cost	197			187 386		187 583
Optionprogram 2019				811		811
Fund for development costs			29 000		-29 000	
Reversal of fund for development costs			-4 769		4 769	
Net profit/loss for the year					-106 817	-106 817
<b>Shareholders' equity at 31/12/2019</b>	<b>1 512</b>	<b>21 914</b>	<b>67 690</b>	<b>479 814</b>	<b>-320 364</b>	<b>250 566</b>

The share capital consists of 15,118,984 shares with a share quota value of SEK 0.1.

During the period an ongoing new issue was registered and the share capital increased by SEK 197,204,4.

## PARENT COMPANY

## Cash flow statement

PARENT COMPANY	2019	2018
<b>Operating activities</b>		
Operating loss after depreciation and amortisation	-106 270	-56 189
Reversal of depreciation and amortisation	18 717	13 745
Financial payments received	117	20
Financial payments rendered	-663	-371
Tax	0	0
<b>Change in working capital</b>		
Change in inventories	-65	-1 349
Change in trade receivables	7 608	-5 410
Change in other current receivables *	-13 116	-1 159
Change in trade payables	8 413	1 639
Change in other current liabilities	5 774	7 755
<b>Cash flow from operating activities</b>	<b>-79 485</b>	<b>-41 320</b>
<b>Investing activities</b>		
Intangible assets	-47 043	-28 594
Tangible assets	-2 877	-1 050
Financial assets	-679	-163
<b>Cash flow from investing activities</b>	<b>-50 599</b>	<b>-29 808</b>
<b>Financing activities</b>		
New issue	187 584	151 259
Dividends	811	945
Non-current liabilities	-2 000	-2 000
<b>Cash flow from financing activities</b>	<b>186 395</b>	<b>150 204</b>
Cash flow	56 310	79 076
Opening cash and cash equivalents	88 809	9 733
<b>Closing cash and cash equivalents</b>	<b>145 118</b>	<b>88 809</b>

# PARENT COMPANY

## Notes

### NOTE 1 Accounting policies and valuation principles

The company's annual report has been prepared in accordance with the Swedish Annual Accounts Act and the Swedish Accounting Standards Board's recommendation BFNAR 2012:1 Annual accounts and consolidated accounts (K3). The accounting policies are unchanged from the previous year.

#### Foreign currencies

Monetary asset and liability items in foreign currencies are measured at the exchange rate on the balance sheet date. Transactions in foreign currencies are translated at the spot rate on the transaction date.

#### Revenue

##### Goods

Sales of goods are recognised when the significant risks and benefits are transferred from the seller to the buyer in accordance with the terms of sale. Sales are recognised after deductions for VAT, discounts and exchange rate differences for sales in foreign currencies. System income for which there are non-delivered components that are a condition for the functionality of the system is recognised when these components are delivered.

##### Service assignments

For service assignments at current prices the income attributable to a completed service assignment is recognised in pace with completion of the work and the delivery or use of the material.

##### Capitalised work for own account

See further under intangible assets.

##### License revenue

The company receives license revenue from customers based on the number of vehicles produced. According to agreements, the number of cars manufactured is reported quarterly and revenue is then reported based on this report.

#### Income tax

##### Current tax

Current tax is measured based on the tax rates and tax rules on the balance sheet date. Deferred tax is measured based on the tax rates and tax rules decided prior to the balance sheet date. Deferred tax liabilities concerning temporary differences that are related to investments in subsidiaries are not recognised in the consolidated accounts, since the Parent Company may in all cases determine the time of reversal of the temporary differences, and it is not deemed to be probable that reversal will take place in the foreseeable future.

##### Deferred tax

Deferred tax assets pertaining to loss carryforwards or other future tax deductions are recognised to the extent that it is likely that the loss carryforwards can be offset against surpluses in conjunction with future taxation.

Receivables and liabilities are recognised net only when there is a legal right of set-off. Current tax, like the change in deferred tax, is recognised in the income statement unless the tax is attributable to an event or transaction that is recognised directly in shareholders' equity.

#### Leases

All leases for which the company is the lessee are recognised as operating leases (rental agreements), regardless of whether the leases are finance or operating leases. Lease payments under operating leases, including higher first-time rent, but excluding expenses for insurance and maintenance, are recognised as expenses on a straight-line basis over the lease term.

#### Employee benefits

Employee benefits in the form of salaries, holiday pay, paid sick leave, etc., as well as pensions, are recognised as they are earned. The company only has defined-contribution pension plans. There are no other long-term employee benefits.

##### Defined-contribution pension plans

Under defined-contribution pension plans, the company pays fixed contributions to a separate independent legal entity and does not have any obligation to pay additional contributions. The company's earnings are charged with expenses as the benefits are earned, which normally corresponds to the time when the premium is paid.

#### Intangible assets

Intangible non-current assets are recognised at cost less accumulated amortisation and any impairment. Cost includes costs directly attributable to the acquisition of the asset.

Intangible non-current assets are amortised on a straight-line basis over the asset's estimated useful life. Straight-line amortisation is applied. Amortisation is recognised as a cost in the income statement.

##### Development work

Development costs are capitalised if the project is assumed to be of significant future value to the company. Capitalisation pertains to development costs for a specific application and which are clearly delineated for the project.

##### The following amortisation schedule is applied:

Capitalised development expenditure	10 years
-------------------------------------	----------

#### Tangible assets

Property, plant and equipment is recognised at cost less accumulated depreciation and any impairment.

Cost includes costs directly attributable to the acquisition of the asset. Additional expenses concerning assets that are not divided into components are added to the cost if they are estimated to give the company future economic benefit, to the extent that the asset's performance increases in relation to the asset's value on the acquisition date. Expenses for ongoing repair and maintenance are recognised as costs.

Property, plant and equipment is depreciated on a straight-line basis over the asset's estimated useful life. Any residual value of the asset is taken into account when determining the assets' depreciable amounts. Straight-line depreciation is applied. Depreciation is recognised as a cost in the income statement.

##### The following depreciation schedules are applied:

Equipment and tools	5 years
Computers	3 years

If an asset's carrying amount exceeds its estimated recoverable amount, the asset is immediately written down to its recoverable amount.

#### Financial instruments

Financial instruments recognised on the balance sheet include trade receivables, other receivables, trade payables and loans. The instruments are recognised on the balance sheet when the company becomes party to the contractual terms of the instrument.

Financial assets are derecognised from the balance sheet when the right to receive cash flows from the instrument has expired or has been transferred, and the company has transferred essentially all risks and benefits connected with the right of ownership. Financial liabilities are derecognised from the balance sheet when the obligations in the contract are met or otherwise lapse.

# MODERBOLAGET

## Noter

### Trade receivables and other receivables

Receivables are recognised as current assets, with the exception of items falling due more than 12 months after the balance sheet date, which are classified as non-current assets. Receivables are recognised in the amount at which they are expected to be received less individually assessed doubtful debts.

### Loans and trade payables

Loans and trade payables are initially recognised at cost after deducting transaction costs. If the recognised amount differs from the amount to be repaid on the due date, the difference is accrued as an interest cost or interest income over the term of the loan. This means that as of the due date the recognised amount corresponds to the amount to be repaid.

### Participations in subsidiaries and associated companies

Participations in subsidiaries are recognised at cost after deducting any impairment. Participations in associated companies are recognised at cost after deducting any impairment.

### Inventories

Inventories are measured at the lower of cost and net realisable value on the balance sheet date. Cost is calculated according to the first-in, first-out (FIFO) principle. Net sales value is the sales value after deducting calculated costs that can be attributed directly to the sales transaction.

### Provisions

A provision is recognised on the balance sheet when the company has a formal or informal obligation due to an event that has occurred, and it is probable that an outflow of resources will be required to settle the obligation, and a reliable estimate of the amount can be made.

### Cash flow statement

The cash flow statement presents the changes in the company's cash and cash equivalents during the financial year. The cash flow statement is prepared according to the indirect method. The recognised cash flow solely includes transactions that involve incoming and outgoing cash payments.

### Definitions of key ratios

#### Net sales growth

The percentage net increase in net sales compared with an earlier period. The company believes that this key ratio gives a better understanding of the company's growth.

#### Operating profit/loss

Profit/loss before financial income and expenses, and tax.

#### Operating margin

Operating profit in relation to net sales.

#### Liquidity ratio

Current assets excluding inventories and work in progress as a percentage of current liabilities.

#### Equity ratio

Equity and untaxed reserves (less deferred tax) in relation to total assets.

#### Return on equity

Profit after tax in relation to shareholders' equity during the period.

#### Earnings per share

Profit for the period divided by the number of shares outstanding at

the end of the period.

#### Equity per share

Shareholders' equity divided by the number of shares at the end of the period.

#### Dividend per share

Dividend for the period divided by the number of shares outstanding at the time of the dividend.

#### Employees

Number of employees at the end of the period.

## NOTE 2 Estimates and assessments

No assessments or estimates have been made that have a significant effect on the amounts recognised in the financial statements or that would entail a significant risk of a material adjustment of the carrying amounts for assets and liabilities in the next financial year.

## NOTE 3 Net sales per business area

	2019	2018
Research Instruments	23 577	29 546
Automotive Solutions	26 240	21 232
	<b>49 817</b>	<b>50 778</b>



## PARENT COMPANY

## Noter

## NOTE 4 Capitalised development expenditure

	2019	2018
Opening cost	141 481	112 995
Capitalised expenses for the year	47 043	28 574
Disposals	-237	-88
Closing accumulated cost	188 287	141 481
Opening amortisation	-62 024	-49 906
Amortisation for the year	-16 663	-12 205
Disposals	237	87
Closing accumulated amortisation	-78 450	-62 024
Closing residual value according to plan	109 837	79 457

## NOTE 5 Operating leases

Future minimum lease payments to be made for non-cancellable leases.

	2019-12-31	2018-12-31
Due for payment within one year	7 480	5 759
Due for payment later than one year, but within five years	9 742	12 099
Due for payment later than five years		0
	<b>17 222</b>	<b>17 858</b>
Lease payments expensed during the period	5 753	5 011

## NOTE 6 Auditors' fees

	2019	2018
PWC AB		
Audit assignment	320	204
Other services	205	51
<b>Total auditors' fees</b>	<b>525</b>	<b>255</b>

By audit assignment is meant the auditor's fee for the statutory audit. This work includes review of the annual report and bookkeeping, the Board of Directors' and CEO's administration, and fees for audit consulting in connection with the audit assignment.

## NOTE 7 Transactions with related parties

No transactions were made with related parties during the year other than stated in note 8 and note 9.

## NOTE 8 Employees

	2019	2018
<b>Average number of employees</b>		
Women	20	13
Men	78	57
	<b>98</b>	<b>70</b>

**Board members and senior executives**

<b>Number of Board members on the balance sheet date</b>		
Men	4	6
Women	2	0
	<b>6</b>	<b>6</b>

**Number of CEOs and other senior executives**

Men	5	5
Women	1	1
	<b>6</b>	<b>6</b>

# PARENT COMPANY

## Notes

### Salaries, fees and other remuneration

	2019		2018	
	Fees	Other remuneration	Fees	Other remuneration
Board of Directors				
Anders Jöfeldt, Chairman of the Board	246	0	125	0
Lars Olofsson, director	256	0	42	0
Mats Krantz, director	130	0	125	0
Staffan Hansson, director	42	0	138	0
Magnus Jonsson, director	130	0	149	0
Eva Elmstedt, director	88	0	0	0
Cecilia Wachtmeister, director	88	0	0	0
<b>Total</b>	<b>978</b>	<b>0</b>	<b>579</b>	<b>0</b>

### Salaries, fees and other remuneration

	2019	2018
Board of Directors	978	579
CEO	1 637	1 534
Other senior executives	5 181	4 726
Other employees	34 938	34 039
<b>Total</b>	<b>42 734</b>	<b>40 878</b>

### Social security charges and pensions

	2019	2018
Statutory and contractual social security charges and pensions	14 111	11 007
Pension costs	7 149	6 361
<b>Total</b>	<b>21 260</b>	<b>17 368</b>
Of which, CEO	0	0
Of which, other senior executives	992	806
Of which, other employees	6 157	5 555

### Salaries and remuneration for the CEO and other senior executives

	Salary		Pension costs		Social security		Total	
	2019	2018	2019	2018	2019	2018	2019	2018
2018								
CEO	1 637	1 534	0	0	514	482	2 151	2 016
Other senior executives	5 181	4 726	992	806	1 628	1 485	7 801	7 017
<b>Total</b>							<b>9 952</b>	<b>9 033</b>

The CEO is subject to six months' mutual notice of termination. On notice of termination by the company, the CEO is not entitled to any severance pay or pension benefits. No agreements concerning severance payments have been made with the company's other employees.

### NOTE 9 Share-based payments

At the Annual General Meeting on 25 April 2018 it was resolved to establish a new incentive program. The decision was made to issue a total of a maximum of 170,000 warrants, which senior executives and other employees – approximately 70 persons in all – were offered to purchase. Upon full exercise of the warrants, a maximum of 170,000 new shares will be issued, corresponding to a dilutive effect of approximately 1.5%. The subscription price for shares subscribed for via the warrants is SEK 48.7 per share. The premium per warrant, which has been calculated using the Black-Scholes model, was SEK 5.90. Subscription of shares may take place during the period 1 May 2021 through 30 June 2021.

At the Annual General Meeting on May 15, 2019, it was resolved to establish an incentive programs aimed at senior executives and staff. When fully utilizing the company's incentive program 100,000 shares will be issued, leading to a total dilution effect of a maximum of approximately 0.76 percent of the share capital and number of votes. The subscription price for shares subscribed for via the warrants is SEK 163 per share. The premium per warrants, which has been calculated using the Black & Scholes model, was SEK 17. The subscription of shares may take place during the period 1 June 2022 through June 30, 2022.

### NOTE 10 Income tax

	2019	2018
Current tax	0	0
Deferred tax	0	0
Reconciliation of tax expense		
Result before tax	-106 818	-56 541
Tax according to current tax rate 21,4 % (22 %)	22 859	12 439
Tax effect of non-deductible expenses	-219	-89
Tax effect of unrecognised loss carryforwards	-22 640	-12 350
Recognised tax expense	0	0

Unrecognised loss carryforwards amount to TSEK 248,332 ( 142,944).

## PARENT COMPANY

## Noter

## NOTE 11 Participations in Group companies

	2019	2018	Group	Reg. no.	Domicile	Capital share (%)
Opening cost	624	461	JN Data AB	556563-7849	Göteborg	100
Change during the year	679	163	Smart Eye International Inc.	6303763	Delaware	100
Closing accumulated cost	1 303	624	Smart Eye Japan Co. Ltd	0104-01-139423	Tokyo	100
Closing residual value according to plan	1 303	624				

Parent Company	Reg. no.	Number of shares	Share of equity (%)	Share of votes (%)	Book value 31/12/2019	Book value 31/12/2018
JN Data AB	556563-7849	1 000	100	100	371	371
Smart Eye International Inc.	6303763	1 000	100	100	90	90
Smart Eye Japan Co. Ltd	0104-01-139423	2 000	100	100	842	163
<b>Total</b>					<b>1303</b>	<b>624</b>

## NOTE 12 Participations in associated companies

	Reg. no.	Number of shares	Share of equity (%)	Share of votes (%)	Book value 31/12/2019	Book value 31/12/2018
Neoeeye AB	559059-9824	Stockholm	50	50	25	25
<b>Total</b>					<b>25</b>	<b>25</b>

## NOTE 13 Equipment, tools, fixtures and fittings

	2019	2018
Opening cost	7 076	8 512
Changes during the year		
- Disposals	0	-2 485
- Purchases	2 877	1 049
Closing accumulated cost	9 953	7 076
Opening depreciation	-2 307	-3 362
Changes during the year		
- Disposals	0	2 485
- Depreciation	-1 966	-1 430
Closing accumulated depreciation	-4 273	-2 307
<b>Closing residual value according to plan</b>	<b>5 680</b>	<b>4 769</b>

## NOTE 14 Other current receivables

	2019	2018
Tax account	2 998	1 046
VAT account	2 158	1 476
Other current receivables	229	68
<b>Total other current receivables</b>	<b>5 384</b>	<b>2 590</b>

## NOTE 15 Prepaid expenses and accrued income

	2019	2018
Prepaid rents	1 109	501
Accrued income and ongoing contribution projects	4 626	1 064
Other prepaid expenses	6 760	989
<b>Total prepaid expenses and accrued income</b>	<b>12 495</b>	<b>2 554</b>

## PARENT COMPANY

# Notes

### NOTE 16 Liabilities to credit institutions

	2019	2018
Due within 1 year after the balance sheet date	2 000	2 000
Due between 1 and 5 years after the balance sheet date	1 667	3 667
Due later than 5 years after the balance sheet date	0	0
<b>Total liabilities to credit institutions</b>	<b>3 667</b>	<b>5 667</b>

### NOTE 17 Accrued expenses and prepaid income

	2019	2018
Accrued salaries and holiday pay	6 838	5 107
Accrued social security charges	2 149	1 605
Accrued expenses	5 534	3 085
Accrued prepaid income	2 172	2 436
Other items	2 636	2 130
<b>Total accrued expenses and prepaid income</b>	<b>19 328</b>	<b>14 363</b>

### NOTE 18 Pledged assets and contingent liabilities

	2019	2018
<b>For own provisions and liabilities</b>		
Floating charges	15 000	15 000

The income statement and balance sheet will be submitted to the Annual General Meeting on 8 May 2020 for adoption.

Gothenburg 2020-04-06

  
 Martin Krantz  
 MD

  
 Anders Jöfält  
 Ordförande

  
 Cecilia Wachtmeister

  
 Eva Elmstedt

  
 Lars Olofsson

  
 Mats Krantz

  
 Magnus Jonsson

Our audit report was submitted on 6 April 2020.  
 Öhrlings PricewaterhouseCoopers AB

Magnus Götenfelt

# Auditor's report

TO THE GENERAL MEETING OF THE SHAREHOLDERS OF SMART EYE AB (PUBL),  
CORPORATE IDENTITY NUMBER 556575-8371

## Report on the annual accounts and consolidated accounts

### Opinions.

We have audited the annual accounts and consolidated accounts of Smart Eye AB (publ) for the year 2019.

In our opinion, the annual accounts and consolidated accounts have been prepared in accordance with the Annual Accounts Act and present fairly, in all material respects, the financial position of parent company and the group as of 31 December 2019 and its financial performance and cash flow for the year then ended in accordance with the Annual Accounts Act. The statutory administration report is consistent with the other parts of the annual accounts and consolidated accounts.

We therefore recommend that the general meeting of shareholders adopts the income statement and balance sheet for the parent company and the group.

### Basis for Opinions

We conducted our audit in accordance with International Standards on Auditing (ISA) and generally accepted auditing standards in Sweden. Our responsibilities under those standards are further described in the Auditor's Responsibilities section. We are independent of the parent company and the group in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our ethical responsibilities in accordance with these requirements.

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

### Other Information than the annual accounts and consolidated accounts

This document also contains other information than the annual accounts and consolidated accounts and is found on pages 1-29. The Board of Directors and the Managing Director are responsible for this other information.

Our opinion on the annual accounts and consolidated accounts does not cover this other information and we do not express any form of assurance conclusion regarding this other information.

In connection with our audit of the annual accounts and consolidated accounts, our responsibility is to read the information identified above and consider whether the information is materially inconsistent with the annual accounts and consolidated accounts. In this procedure we also take into account our knowledge otherwise obtained in the audit and assess whether the information otherwise appears to be materially misstated.

If we, based on the work performed concerning this information, conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

### Responsibilities of the Board of Director's and the Managing Director

The Board of Directors and the Managing Director are responsible for the preparation of the annual accounts and consolidated accounts and that they give a fair presentation in accordance with the Annual Accounts Act. The Board of Directors and the Managing Director are also responsible for such internal control as they determine is necessary to enable the preparation of annual accounts and consolidated accounts that are free from material misstatement, whether due to fraud or error.

In preparing the annual accounts and consolidated accounts, The Board of Directors and the Managing Director are responsible for the assessment of the company's and the group's ability to continue as a going concern. They disclose, as applicable, matters related to going concern and using the going concern basis of accounting. The going concern basis of accounting is however not applied if the Board of Directors and the Managing Director intend to liquidate the company, to cease operations, or has no realistic alternative but to do so.

### Auditor's responsibility

Our objectives are to obtain reasonable assurance about whether the annual accounts and consolidated accounts as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs and generally accepted auditing standards in Sweden will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these annual accounts and consolidated accounts.

A further description of our responsibility for the audit of the annual accounts and consolidated accounts is available on Revisorsinspektionen's website: [www.revisorsinspektionen.se/revisornsansvar](http://www.revisorsinspektionen.se/revisornsansvar). This description is part of the auditor's report.

## Report on other legal and regulatory requirements

### Opinions

In addition to our audit of the annual accounts and consolidated accounts, we have also audited the administration of the Board of Director's and the Managing Director of Smart Eye AB (publ) for the year 2019 and the proposed appropriations of the company's profit or loss.

We recommend to the general meeting of shareholders that the profit be appropriated in accordance with the proposal in the statutory administration report and that the members of the Board of Director's and the Managing Director be discharged from liability for the financial year.

### Basis for Opinions

We conducted the audit in accordance with generally accepted auditing standards in Sweden. Our responsibilities under those standards are further described in the Auditor's Responsibilities section. We are independent of the parent company and the group in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our ethical responsibilities in accordance with these requirements.

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

### Responsibilities of the Board of Director's and the Managing Director

The Board of Directors is responsible for the proposal for appropriations of the company's profit or loss. At the proposal of a dividend, this includes an assessment of whether the dividend is justifiable considering the requirements which the company's and the group's type of operations, size and risks place on the size of the parent company's and the group's equity, consolidation requirements, liquidity and position in general.

The Board of Directors is responsible for the company's organization and the administration of the company's affairs. This includes among other things continuous assessment of the company's and the group's financial situation and ensuring that the company's organization is designed so that the accounting, management of assets and the company's financial affairs otherwise are controlled in a reassuring manner. The Managing Director shall manage the ongoing administration according to the Board of Directors' guidelines and instructions and among other matters take measures that are necessary to fulfill the company's accounting in accordance with law and handle the management of assets in a reassuring manner.

### Auditor's responsibility

Our objective concerning the audit of the administration, and thereby our opinion about discharge from liability, is to obtain audit evidence to assess with a reasonable degree of assurance whether any member of the Board of Directors or the Managing Director in any material respect:

- has undertaken any action or been guilty of any omission which can give rise to liability to the company, or
- in any other way has acted in contravention of the Companies Act, the Annual Accounts Act or the Articles of Association.

Our objective concerning the audit of the proposed appropriations of the company's profit or loss, and thereby our opinion about this, is to assess with reasonable degree of assurance whether the proposal is in accordance with the Companies Act.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with generally accepted auditing standards in Sweden will always detect actions or omissions that can give rise to liability to the company, or that the proposed appropriations of the company's profit or loss are not in accordance with the Companies Act.

A further description of our responsibility for the audit of the administration is available on Revisorsinspektionen's website: [www.revisorsinspektionen.se/revisornsansvar](http://www.revisorsinspektionen.se/revisornsansvar). This description is part of the auditor's report.

Gothenburg 6 April 2020  
Öhrlings PricewaterhouseCoopers AB  
Magnus Götenfelt  
Authorized Public Accountant



# Board of Directors



## LARS OLOFSSON

*Board Member since 2017*

**Date of birth:** 1951

**Educational background:** Degree in Business Administration 1975, University of Lund, Sweden PED, IMD Lausanne, Switzerland

**Other appointments:** Vice Chairman Axfood AB, Advisory board member Zytara Inc.

**Previous appointments during the last five years:** Board member Axel Johnson AB, Chairman TCC Global NV, Board member Compass/Bata shoes, Senior Advisor SICPA SA

**Holdings:** 45,000 shares

## EVA ELMSTEDT

*Board Member since 2019*

**Born:** 1960

**Education:** Bachelor's degree in Economics and Computer Science from Indiana University of Pennsylvania, USA, and Stockholm School of Economics

**Other assignments:** Chairman at Proact IT Group AB, and Board Member in Addtech AB, Arjo AB, Gunnebo AB and Semcon AB

**Previous appointments during the last five years:** EVP Global Services at Nokia Networks and Nokia Siemens Networks and held senior positions at Ericsson AB, the telecom operator 3 and Semcon

**Holdings:** 5,500 shares

## ANDERS JÖFELT

*Chairman of the Board Member since 2017  
(Board Member since 2012)*

**Date of birth:** 1975

**Educational background:** MSc, Computer Engineering, Lund University's Faculty of Engineering

**Other appointments:** None

**Previous appointments during the last five years:** None

**Holdings:** 863,433 shares

## CECILIA WACHTMEISTER

*Board Member since 2019*

**Date of birth:** 1966

**Educational background:** MSc in Industrial Economics from the Institute of Technology at Linköping University

**Other appointments:** Executive Vice President Business & Group Functions at KAMBI Plc. Cecilia is also a board member of HMS Networks AB

**Previous appointments during the last five years:** Leading positions within Ericsson AB

**Holdings:** 5,500 shares

## MAGNUS JONSSON

*Board Member since 2013*

**Date of birth:** 1956

**Educational background:** MSc, Mechanical Engineering, Chalmers University of Technology

**Other appointments:** Chairman of the Board for Powercell AB, AstaZero AB, BIL Sweden Adm AB, Board Member in Nilsson Special Vehicles AB, Leading Light AB, AB Magnus Jonsson and in Magnus Jonsson Consulting AB

**Previous appointments during the last five years:** Chairman of the Board in TechRoi Fuel Systems AB, Board Member in Väst kustens Affärsänglar AB, SenseAir AB, Kongsberg Automotive AS and LeanNova AB

**Holdings:** 3,000 shares

## MATS KRANTZ

*Board Member since 1999*

**Date of birth:** 1947

**Educational background:** Master Brewer at the Scandinavian School of Brewing in Copenhagen.

**Other appointments:** Chairman of Letter Cube Digital AB, and Board Member of Ost kustens FartygsAssistans AB and M. Irwin & Krantz AB

**Previous appointments during the last five years:** None

**Holdings:** Krantz holds 984,384 shares privately and 180,800 shares via related parties

# Group Management



## ANDERS LYRHEDEN CFO

Employed since 2017

**Date of birth:** 1965

**Educational background:** School of Economics; Bachelor of Managerial Economics, Gothenburg 1991

**Other appointments:** None

**Previous appointments during the last five years:** None

**Holdings:** 13,000 shares private and 14,000 through companies, 45,000 options

## MARTIN KRANTZ Founder and CEO

**Date of birth:** 1971

**Educational background:** MSc, Engineering Physics, Chalmers University of Technology

**Other appointments:** Chairman Neoeeye AB, Board Member 1928 Diagnostics

**Previous appointments during the last five years:** Board Member Smart Eye 1999-2016

**Holdings:** 859,300 shares and 30,000 options

## SOLMAZ SHAHMEHR VP of Research Instruments

Employed since 2009

**Date of birth:** 1982

**Educational background:** MSc, Computer Engineering, Chalmers University of Technology

**Other current appointments:** None

**Previous appointments:** None

**Holdings:** 8,500 shares and 6,600 options

## DANIEL ÅMAN VP of Automotive Solutions

Employed since 2013

**Date of birth:** 1972

**Educational background:** MSc, Engineering Physics, Chalmers University of Technology and IFL, Stockholm School of Economics

**Other appointments:** Board Member Neoeeye AB

**Previous appointments during the last five years:** None

**Holdings:** 20,000 options

## MARTIN RYDBERG CTO

Employed since 2000

**Date of birth:** 1976

**Educational background:** MSc, Computer Engineering, Chalmers University of Technology

**Other appointments:** None

**Previous appointments during the last five years:** None

**Holdings:** 41,500 shares and 10,000 options

## HENRIK LIND CRO

Employed since 2017

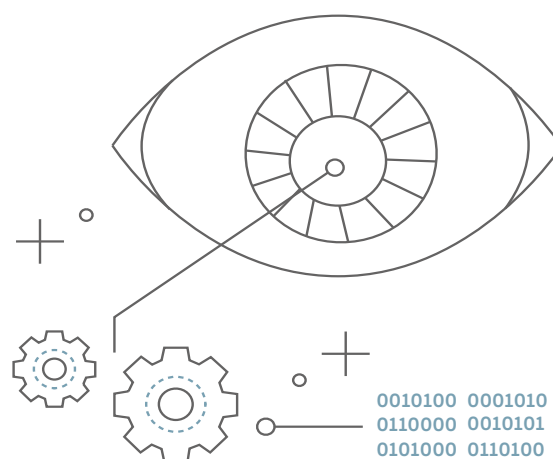
**Date of birth:** 1961

**Educational background:** MSc, Electrical Engineering, Chalmers University of Technology

**Other appointments:** Board Member Innoble AB

**Previous appointments during the last five years:** Technical Expert Remote Sensing Volvo Car Corporation

**Holdings:** 150 shares and 30,000 options



## Calendar

Annual General Meeting	8 May 2020
Interim report January–March	8 May 2020
Interim report April–June	26 August 2020
Interim report July–September	20 October 2020
Interim report October–December	23 February 2021

## Contact

### Martin Krantz

CEO

Tel nr 070-329 26 98

[martin.krantz@smarteye.se](mailto:martin.krantz@smarteye.se)

### Anders Lyrheden

CFO/IR

Tel nr 070-320 96 95

[anders.lyrheden@smarteye.se](mailto:anders.lyrheden@smarteye.se)



Smart Eye AB • Första Långgatan 28B • SE-413 27 Göteborg  
Tel +46 31 60 61 60  
org. nr: 556575-8371  
[www.smarteye.se](http://www.smarteye.se)