

IRRAS ANNUAL REPORT 2022

IRRAS





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## Bringing needed innovation to neurocritical care

IRRAS AB is a global commercial stage medical device company focused on bringing needed innovation to neurocritical care. Patients suffering from traumatic brain injury and intracranial bleeding are critically ill, often with life-threatening conditions but are generally treated with technologies that were introduced more than 30 years ago. IRRAS' products have been designed to address complications associated with these traditional treatment methods, thereby improving patient outcomes, reducing treatment time, and decreasing the overall cost of care.

IRRAS AB (publ) is listed on Nasdaq Stockholm (ticker: IRRAS).

For more information, please visit [www.irras.com](http://www.irras.com).

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### OUR PRODUCTS

IRRAflow® is the company's FDA-cleared<sup>1</sup> and CE-marked<sup>2</sup> medical device system that enables both intelligent intracranial fluid management and accurate real-time monitoring of intracranial pressure (ICP). The Hummingbird® product line includes several FDA-cleared products that help physicians diagnose and manage ICP.

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1. The US Food and Drug Administration, FDA, approves the sales and marketing in the US of medical devices in the United States.

2. Approval to sell and market medical devices in EU countries.

## OUR LOCATIONS

### United States – San Diego

- Management
- Direct sales team
- Manufacturing
- Regulatory & Quality

### Sweden – Stockholm

- Legal headquarters
- IR & Finance
- Direct sales team

### Netherlands – Amsterdam

- Global logistics management

### Germany – Munich

- Direct sales team

# SALES PRESENCE IN MORE THAN 30 COUNTRIES ACROSS 5 CONTINENTS

## BUILDING GLOBAL COMMERCIAL PRESENCE

### US

- Company's direct sales and education team
- Commercial partnership initiated with Medtronic

### Latin America

- Key markets covered by existing distribution agreement
- Initial market approvals received in Costa Rica, Mexico, Panama, Ecuador, and Argentina with registration ongoing in additional key countries

### Europe

- Company's direct sales team is in Germany and the Nordic countries
- International sales management and distribution warehouse are located in the Netherlands
- Distributors are in place for Poland, Spain, Portugal, the Netherlands, Switzerland, Greece, Austria, UK, Italy, Bulgaria, Czech Republic, the Baltic nations, Serbia, Croatia, Romania, Slovakia, and Northern Macedonia

### Middle East, Africa

- Distributors in place for Israel, Kuwait, Jordan, Qatar, Saudi Arabia, and the United Arab Emirates
- Registration ongoing in other key markets

### Asia – Pacific

- Registration received in Australia for IRRAflow control unit and tube set. Regulatory review ongoing for IRRAflow catheter
- Distribution partners in place in India, Vietnam, and Malaysia with regulatory review underway
- Distributor selection ongoing in other key markets

## Increased product adoption

### KEY FIGURES 2022

- Net revenue amounted to SEK 40.0 million (22.4).
- Gross profit/loss amounted to SEK 8.4 million (-28.0).
- Operating loss (EBIT) amounted to SEK -168.1 million (-136.5).
- Loss after tax amounted to SEK -166.6 million (-136.3).
- Earnings per share before and after dilution amounted to SEK -0.52 (-1.89).
- The Board of Directors proposes that no dividend should be paid.
- The Group's available liquidity amounted to SEK 69.3 million at year-end (55.9).

# +79%

Net revenue 2022

# 184

IRRAflow systems installed 2022

# +40%

IRRAflow systems

## New financial targets reflecting strong growth prospects

### FINANCIAL TARGETS 2025:

Revenue:

# SEK 350 MILLION

**GROSS MARGIN: > 60 %**

Revenue is expected to exceed SEK 350 million in 2025 with a gross margin above 60 percent. Cashflow breakeven is expected by 2025.

## New financing in 2022 supporting continued growth

### Q1

- Next-generation IRR*Aflow* system launched in the United States
- Regulatory clearance for IRR*Aflow* received in Australia
- Additional patent issued for IRR*Aflow* system in the U.S.
- First patient in Active study

### Q2

- Short-term financing agreement of SEK 30 million secured

### Q3

- IRRAS completed a fully subscribed rights issue that raised SEK 215 million before deduction of costs related to the transaction
- First patients enrolled in a new core clinical study, DIVE
- Clinical data confirming benefit of IRR*Aflow* was published

### Q4

- Commercial agreement with Medtronic on promoting IRR*Aflow* in part of the United States
- US FDA 510(k) clearance for IRR*Aflow* control unit

## COMMENTS FROM THE CEO

# A year of significant progress

After the initial impact of the COVID-19 pandemic, 2022 turned into a year of significant progress in the growth of IRRAS. Net revenue increased by 79% to SEK 40 million, and our total install base for our lead product, IRRAflow, grew by 40% to 184. However, for our team, the most meaningful sign of our progress during 2022 is the increased utilization of IRRAflow, which increased the number of patient lives that we were able to positively impact. From our internal estimates, during 2022, our IRRAflow patient treatments now total more than 700 since the product was first introduced.

The primary growth driver in the number of patients treated with IRRAflow continues to be the increased adoption at leading institutions in the United States. During 2022, our momentum continued to accelerate with SEK 22.4 million of revenue, 56% of the total, generated from US hospitals. More than 70% of this US revenue was driven by reorders from existing customers, demonstrating regular product utilization by those that have begun commercial use of the IRRAflow system. As the year ended, we began seeing increased activity from our European direct markets and global distribution partners. This momentum is the next step in our business strategy after expanding our network during the COVID-19 lockdown period. As things return to normal in 2023, we expect to see exciting, more meaningful contribution, much like the US.

### Commercial partnership agreement with Medtronic

Late in 2022, we also made a key strategic decision to shift our commercial strategy in the US by signing a commercial partnership agreement with Medtronic, the world's largest medical device company. We expect this partnership will help IRRAS increase both awareness and adoption of our IRRAflow system by significantly increasing the number of sales professionals promoting the system. Medtronic will exclusively market

IRRAflow in a number of its territories in the US, while our IRRAS education team will continue to provide training and patient treatment support. Even during the pilot phase of the partnership, the number of sales professionals promoting IRRAflow more than doubles, and we expect the associated revenue contribution to increase as we move through 2023. From our perspective, Medtronic's focus on therapies that extend life, restore health, and improve patient outcomes makes them an ideal partner for IRRAS. Both parties share a strong desire to bring needed innovation to the neurosurgical ICU, and we are already seeing examples of how this partnership is expanding awareness of our cutting-edge technology and can accelerate product adoption, bringing IRRAflow to more patients.

### Impactful clinical data

By the end of 2022, clinical evidence had been published to document the safe and effective use of IRRAflow in virtually all intracranial pathologies<sup>1</sup>, including chronic subdural hematomas (cSH)<sup>2</sup>, intraventricular hemorrhages (IVH)<sup>3</sup>, surgical abscesses<sup>4</sup>, bacterial ventriculitis<sup>5</sup>, subarachnoid hemorrhages (SAH)<sup>6</sup>, and intraparenchymal hemorrhages (IPH)<sup>7</sup>.

1. Abnormalities or diseases that occur within the skull or inside the brain.

2. Chronic subdural hematomas occur when blood accumulates between the surface of the brain and the outermost layer of the brain's protective covering, known as the dura mater.

3. Intraventricular hemorrhages (IVH) occur when there is bleeding in the ventricles of the brain, which are the spaces filled with cerebrospinal fluid.

4. Surgical abscesses are collections of pus that can form after surgery, usually due to a bacterial infection. These abscesses can occur in different parts of the brain.

5. Bacterial ventriculitis is an infection of the ventricles of the brain caused by bacteria.

6. Subarachnoid hemorrhages (SAH) occur when there is bleeding between the arachnoid membrane and the pia mater, the layers of tissue that surround the brain.

7. Intraparenchymal hemorrhages (IPH) occur when there is bleeding within the brain tissue itself.



The most important next step to increase the use of IRRAf<sup>low</sup> will be the generation of impactful clinical data that confirms the system's superiority over traditional drainage. Such comparative clinical data is the critical factor to help expand the adoption of IRRAf<sup>low</sup> more widely across the entire spectrum of neurosurgery. In 2022, IRRAS initiated patient enrollment in multiple controlled, comparative clinical trials to document the superiority of IRRAf<sup>low</sup> in increasingly large patient numbers, and, in 2023, we will begin to see this comparative data being published. We expect that the results will demonstrate improved patient outcomes with IRRAf<sup>low</sup> and pave the way for increased product adoption.

#### **Building consistent use and strong product support**

Support from leading neurosurgeons is critical to our continued growth, and we are pleased to see our physician partners publishing clinical outcomes that confirm the advantages of IRRAf<sup>low</sup>. These leading neurosurgeons are our strongest advocates, and their vocal support of IRRAS continues to serve as a strong lead generator for additional new users. Our team's focus remains on building consistent use and solid product support within key hospitals in our initial markets to ensure that our products continue to have a strong foundation of support.

Moving forward, our expectation is that the US market will likely generate an increased share of IRRAS' revenue due to the market's premium price points and the increased number of sales professionals promoting IRRAf<sup>low</sup> with the Medtronic partnership. Globally, our plan is to ensure that our existing distribution partners receive needed regulatory approval and are appropriately trained to maximize self-sufficiency and revenue growth. Additional distribution markets will only be added if they are strategic in nature and offer meaningful future growth opportunities.

#### **Gross margin affected by inventory write-downs**

Our gross margin ended the year at 21%. Thus far, our margin improvement has been constrained by the need to write down excess and obsolete inventory due to short shelf life and the inability to reuse components from earlier generation IRRAf<sup>low</sup> control units. If these inventory write-downs were excluded, the gross margin would have ended at 29%. Long term, we remain optimistic about our future margin projections as the transition to

the newest IRRAf<sup>low</sup> system will be completed, and we will see the benefits of our ongoing projects to extend the shelf life of our IRRAf<sup>low</sup> disposables to 36 months.

#### **Scalability is the key to revenue growth**

In 2022, IRRAf<sup>low</sup> install base, our number of distribution partners, the number of direct hospitals evaluating our products, and our number of direct commercial hospital customers all increased meaningfully. This growth and scalability is critical to achieve our future growth plans as the IRRAS business model is driven by increasing our installed base of capital equipment, which translates into the continued use of high-margin disposable products as more patients are treated.

#### **Delivering on milestones**

The future for IRRAS remains extremely bright, and our team remains focused on delivering an important set of upcoming milestones. These important milestones include:

- Expanding the partnership with Medtronic to accelerate revenue growth,
- Increasing adoption and number of installed systems to positively impact more patients,
- Demonstrating gross margin improvements that confirm that the company is moving toward achieving our stated financial targets,
- Presenting comparative clinical data that documents IRRAf<sup>low</sup> superiority,
- Upgrading the IRRAf<sup>low</sup> CE Mark to the new European MDR standard, and
- Launching the upgraded control unit with bedside monitor communication and the next-generation IRRAf<sup>low</sup> catheter.

I am proud of our IRRAS team's accomplishments in 2022. Our belief that IRRAS will be a leader in neurocritical care is stronger than ever, and 2023 will be the year when the important next steps take place. Thank you for your continued support.

Sincerely,  
**Will Martin**  
President and CEO



**For our team, the most meaningful sign of our progress during 2022 is the increased utilization of IRRAf<sup>low</sup>, which increased the number of patient lives that we were able to positively impact.◀**





# IMPROVING LIVES BY ESTABLISHING A NEW STANDARD OF CARE

## VISION

IRRAS' vision is to make life better for millions of people around the world by creating medical products that are established as the new standard of care for intracranial bleeding and traumatic brain injury.

By continuing to revolutionize care, through significantly improved patient outcomes, reducing time in the intensive care unit and other care settings and by providing economic benefits for hospitals and other caregivers, we will achieve our vision.

# STRATEGY

IRRAS is focused on providing innovative solutions for both traumatic brain injuries and hemorrhagic stroke events. The IRRAS<sup>flow</sup> and Hummingbird product lines were designed with the goal of dramatically improving patient outcomes, reducing patient time in the intensive care unit, and providing health economic benefits to hospitals and healthcare providers

## The following tactics are crucial to the company's growth strategy:

- **Commercializing IRRAS<sup>flow</sup> and Hummingbird ICP for neurocritical care** and becoming the market leader for treatment of intracranial bleeding and traumatic brain injury.
- **Strategically building up global sales** through marketing via the company's own direct sales organization, its commercial partnership with Medtronic in the US, and selected distributors in other important markets.
- **Optimizing the current IRRAS<sup>flow</sup> system to exceed customer needs**, and, as patient treatment experience expands, develop a network of leading neurosurgeons to help document the positive impact of our products.
- **Transition the company's clinical affairs** focus from documenting treatment experience through retrospective case series to **enrolling prospective, controlled, and comparative clinical trials that document the superiority of IRRAS<sup>flow</sup>**.
- Take the necessary regulatory and clinical steps to **capitalize upon the drug delivery market opportunity** that has been confirmed through early clinical publications.

## Our core values

IRRAS' fundamental values are characterized by the Greek word FILOTIMIA, which means respect, honor, team before self, empathy, and a sense of purpose.

- We are **committed** to better patient outcomes in heart and mind
- We are **innovative** and **constantly improving**
- We remain committed to **win**, but in the **right** way
- We face challenges with **optimism**
- We have the **courage** to push limits



## FOUR REASONS TO INVEST IN IRRAS

# 1

### **Innovative product portfolio that offers advanced technologies for the treatment of neurocritical care patients**

IRRAS' product portfolio offers groundbreaking innovations in neurocritical care that result in fewer complications, shorter time in hospital for patients, and overall lower costs for hospitals and caregivers compared with traditional treatment methods.

# 2

### **High clinical need means major market potential**

The need for treatment with IRRAS' products equals a market in the US and EU of jointly approximately USD 1.8 billion for intracranial bleeding and another USD 600 million for traumatic brain injury. An expansion into targeted intracranial drug delivery in the future would add approximately USD 4.6 billion.

# 3

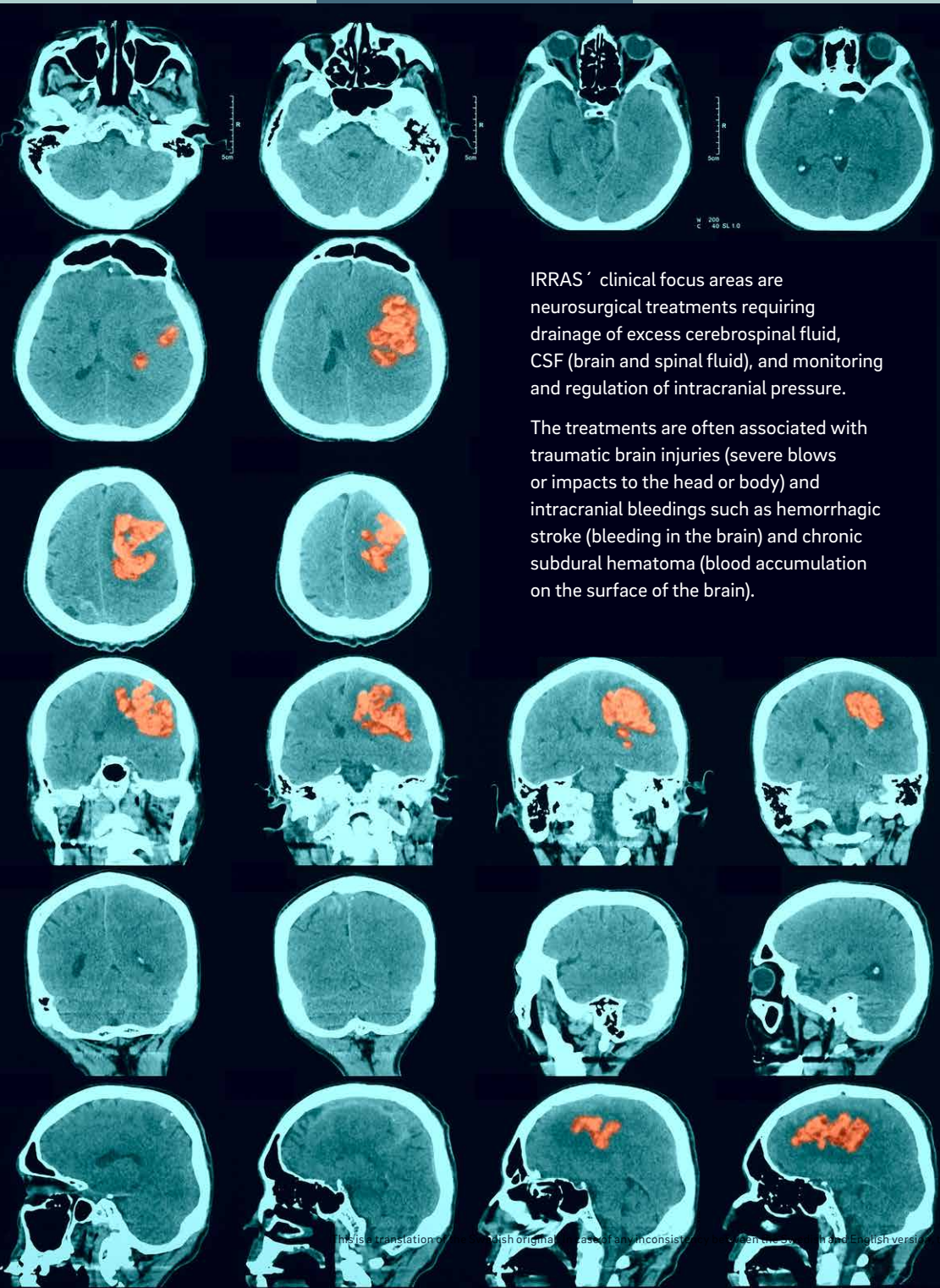
### **Scalable business model driven by a growing installed base and repeat orders of high-margin consumables**

The business model is built on selling digital control units and leveraging recurring revenue streams by selling high-margin consumables.

# 4

### **An increasing pool of supporting clinical evidence**

The clinical effectiveness of IRRAS' products has been documented through the publication of numerous manuscripts in peer-reviewed scientific journals, and this clinical evidence will help the company acquire new customers and treat more patients.



IRRAS' clinical focus areas are neurosurgical treatments requiring drainage of excess cerebrospinal fluid, CSF (brain and spinal fluid), and monitoring and regulation of intracranial pressure.

The treatments are often associated with traumatic brain injuries (severe blows or impacts to the head or body) and intracranial bleedings such as hemorrhagic stroke (bleeding in the brain) and chronic subdural hematoma (blood accumulation on the surface of the brain).

## High need to advance the standard of neurocritical care

There is a great need to establish a new standard of care for patients suffering from traumatic brain injury and intracranial bleeding. These patients are critically ill, often with life-threatening conditions. Yet, they are generally treated with primitive technologies that are plagued by complications.

When the brain is disturbed by traumatic brain injury and intracranial bleeding, its ability to autoregulate is often impacted and the ICP can increase to unsafe levels. When this happens, it is of vital importance to drain excess fluid to reduce the swelling of the brain and stabilize the patient.

### Primitive drainage systems

Drainage systems, such as external ventricular drains (EVD), are used to manage a patient's intracranial pressure. By draining excess fluid, an EVD plays a critical role in the recovery of these patients. However, EVDs are generally unsophisticated systems that rely solely on gravity and, as a result, they have been plagued by complications that are well documented in scientific publications, including catheter blockage, infections, excess drainage, and secondary bleeding, any or all of which can result in a negative impact on patient outcomes. It is also known that use of an EVD can lead to incomplete drainage and prolonged treatment times.



### Neuromonitoring with limitations

After a traumatic brain injury, brain hemorrhage or other events requiring neuro intensive care, it is important to determine the severity of the patient's condition and to use diagnostic tools to measure when the patient's intracranial pressure rises to excessive levels. Placing an ICP monitor in the brain itself can help detect excessive swelling of the brain. Conventional methods of measuring a patient's intracranial pressure have been accomplished by measuring the pressure through the water column confirmed by a ventricular drainage catheter or a specific ICP probe using fiber optics or strain gauges. Each method has its limitations.

A major limitation is the lack of regular calibration which causes the sensor to report inaccurate pressure values over time. The cumulative pressure difference can have negative implications for the patient's treatment and prognosis.

### Advancing the standard of care

IRRAS' proprietary IRRAflow and Hummingbird product families address the complications associated with EVD and ICP monitoring. The IRRAflow technology provides a controlled fluid exchange system that allows the neurosurgeon to actively manage intracranial pressure and cerebrospinal fluid drainage. Through a process known as active fluid exchange, IRRAflow uses automated irrigation to ensure continuous drainage, reduce the incidence of catheter blockage and associated infection, and dilute toxic blood by-products, making them easier to remove. IRRAflow is the only system that integrates needed fluid drainage, targeted fluid irrigation, and measurement of intracranial pressure in one product. This combination makes it possible to transform the treatment of these critically ill patients from a passive reactive approach to a proactive therapeutic approach. From its commercial launch to date, IRRAflow has been used in over 700 patient treatments in the US and Europe with no reported cases of catheter blockages when IRRAflow's irrigation has been actively employed, as reported in up to 47%<sup>1</sup> of cases where traditional drainage is used.

1. Fargen KM, Hoh BL, Neal D, O'Connor T, Rivera-Zengotita M, Murad G.J. The burden and risk factors of ventriculostomy occlusion in a high-volume cerebrovascular practice: results of an ongoing prospective database. *Journal of Neurosurgery*. 2015:1-8.





IRRAflow is the world's first irrigating intracranial drainage system. Its unique mechanism of action addresses the complications associated with the current methods of managing intracranial fluid by using a dual lumen catheter that combines active irrigation with ongoing fluid drainage. Additionally, IRRAflow incorporates intracranial pressure monitoring and uses a proprietary software to regulate treatment based on desired pressure levels.

**IRRAflow is built around the concept of active, controlled fluid exchange. As regularly employed during open surgery, the concept of active fluid exchange is based on the fact that it is faster to wash out any pathological extracellular fluid collection than to expect it to be removed by gravity alone.**

Therefore, IRRAflow combines traditional gravity-driven drainage with periodic, controlled irrigation of the catheter tip to exchange any pathological fluid collection with neutral physiological fluids. This fluid movement by design, mechanically cleanses the catheters tip thus potentially facilitating disruption of clot and or bacteria<sup>(1,2)</sup>. Furthermore, this fluid irrigation also helps to keep solid particulate in suspension, making it easier to subsequently drain.

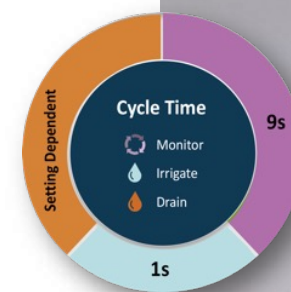
1. Rajjoub K, Hess R M, O'Connor T E, et al. (May 22, 2021) Drainage, Irrigation, and Fibrinolytic Therapy (DRIFT) for Adult Intraventricular Hemorrhage Using IRRAflow® Self-Irrigating Catheter. Cureus 13(5): e15167. DOI 10.7759/cureus.15167.

2. Brandmeir, Nicholas, et al. Early Experience with Patient Treatment & Drug Delivery with IRRAflow; An Automatically Irrigating and Draining Ventricular Catheter. As presented at The Neurosurgical Society of the Virginias Annual Meeting in January 2022.

## How it works

**IRRAflow offers a customizable patient treatment based on clinical condition and intracranial pressure:**

- Machine operates in a cyclical fashion between: Irrigation, Drainage, Monitoring



- Irrigation volume and rate are controlled by the user.
- ICP Alarms are selected to assist in ensuring there is not too much irrigation nor over-drainage.



**Dual lumen catheter that combines active irrigation with ongoing fluid drainage**



**Intelligent digital pump enables automated irrigation**



# Neuromonitoring with Hummingbird ICP

The Hummingbird ICP System is a family of products that addresses a full range of neurosurgical access, drainage, and brain monitoring needs for treatment of traumatic brain injury, subarachnoid hemorrhage<sup>1</sup> and stroke<sup>2</sup> to reduce the intracranial pressure and improve patient care. These products complement IRRAflo<sup>3</sup> by offering both single and multi-lumen bolts that meet the need for brain monitoring to diagnose traumatic brain injury and assess the need for interventional treatment<sup>3</sup>.

The Hummingbird system uses a different mechanism of action than other commercially available ICP monitoring systems by placing a small air bladder in the brain tissue. The air bladder

is used to measure intracranial pressure using a mechanism that incorporates a proprietary technology, the AOA (Accuracy Optimization Algorithm), which recalibrates the system on an hourly basis without requiring the use of a large piece of capital equipment. This allows the system to operate for extended periods with virtually no inaccuracy or ICP measurement drift, thereby generating a reliable reading of the intracranial pressure throughout the patient treatment. The system is also relatively easy and intuitive to use and setup, while other ICP monitoring systems require a cumbersome start-up process, involving a series of steps to calibrate the system.

This facilitates Hummingbird delivering a unique approach to advanced neuromonitoring with several competitive advantages over the current competition:

- The only in-vivo parenchymal monitoring sensor that can be re-zeroed in-situ with zero drift.
- The most accurate parenchymal ICP<sup>4</sup> measurement, independent of patient positioning.
- Drainage system with multimodal monitoring through a single access point, providing parenchymal ICP measurement, CSF drainage and two additional brain probes via one bolt.
- Easy-to-use ICP control module seamlessly transmits ICP reading to the patient monitor.

## HOW IT WORKS



Hummingbird neuromonitoring products help clinicians manage patients suffering from conditions that cause an elevated intracranial pressure, including traumatic brain injury, subarachnoid hemorrhage, and stroke by measuring the pressure within a patient's brain tissue, managing intracranial pressure after traumatic brain injury, and aiding in the diagnosis of subarachnoid hemorrhage or stroke.

The Hummingbird ICP Monitoring System includes proprietary single and multi-lumen cranial access bolts, parenchymal intracranial pressure monitoring, and a cranial access kit, which is used for every cranial procedure.

**The system's mechanism of action requires the following three steps:**



**1**

**Insert bolt and catheter**



**Zero systems**



**2**

**Connect catheter**



**3**

**Press prime system button. ICP reading transmitted to bedside monitor**

1. A subarachnoid hemorrhage (SAH) is a type of bleeding that occurs in the space between the brain and the thin tissues that cover the brain, known as the subarachnoid space. SAH can be caused by a variety of factors, such as head trauma, rupture of an aneurysm, or a vascular malformation.

2. A stroke refers to a disruption of blood flow to the brain that can result in brain cell death and neurological deficits. Strokes can be caused by a blocked blood vessel in the brain (ischemic stroke) or a ruptured blood vessel in the brain (hemorrhagic stroke), which can lead to bleeding in the brain.

3. Interventional treatment refers to medical procedures that are performed using minimally invasive techniques.

4. Parenchymal ICP (Intracranial Pressure) refers to the pressure inside the brain tissue itself.





**\$600**  
million

Hummingbird addressable market for intracranial pressure monitoring in Europe and US

**\$1.8**  
billion

IRRAflow's addressable market for intracranial bleeding in Europe and US

**SIZEABLE  
MARKET  
OPPORTUNITY**

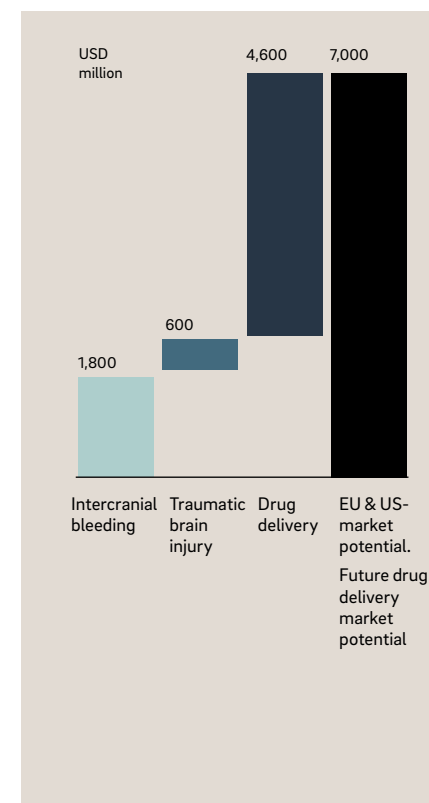


# Large addressable market

Neurocritical care represents a sizeable market opportunity for IRRAS. The need for treatment with IRRAS' products equals a market in the US and EU of approximately USD 1.8 billion for intracranial bleeding and another USD 600 million for traumatic brain injury. An expansion into targeted intracranial drug delivery in the future would add approximately USD 4.6 billion.

Each year, in the US and EU alone, approximately 5.4 million people are affected by traumatic brain injury.<sup>1,2</sup> Of those patients, approximately 235,000 people require invasive monitoring of their intracranial pressure where the Hummingbird ICP system can be used.<sup>3</sup> Accordingly, the market value of the Hummingbird line in these regions is estimated at approximately USD 600 million per year. In addition, around 600,000 people in the US and Europe suffer from hemorrhagic stroke and chronic subdural hematoma annually, and approximately 345,000 of these people are treated surgically.<sup>4</sup> In these situations, once the bleeding is under control, the excess blood and the pressure that it creates must be urgently removed to stabilize the patient's condition. These patients, requiring treatment following intracranial bleeding, represent an addressable market size in Europe and the US combined for the IRRAflow products of approximately USD 1.8 billion, according to IRRAS' estimate based upon current average selling prices.<sup>5</sup> An expansion into targeted intracranial drug delivery in the future would add approximately USD 4.6 billion.<sup>6</sup>

1. Centers for Disease Control and Prevention (2019). Surveillance Report of Traumatic Brain Injury-related Emergency Department Visits, Hospitalizations, and Deaths—United States, 2014. Centers for Disease Control and Prevention, U.S. Department of Health and Human Services.
2. Center-TBI EU Traumatic Brain Injury Fact Sheet and Policy Brief.
3. Market Study Report, Global Intracranial Pressure (ICP) Monitoring Devices Market Growth, 2019–2024.
4. Market data from L3 consulting and internal analysis. Combination of incidence rates combined with market specific DRG reimbursement data.
5. The company's estimate is based on the approximate number of surgically operated cases of hemorrhagic stroke and cases of chronic subdural hematoma in the EU and USA multiplied by the average sales price of the disposable components (IRRAflow tube set and catheter) of the IRRAflow system.
6. Grandview Research Report



## Variety of reimbursement payment models

Medical devices used by healthcare providers are usually financed by insurance companies or public payment systems. In the US and many European markets, the use of products such as IRRAflow and Hummingbird is reimbursed through an established DRG (Diagnosis Related Group) system, a classification of hospital compensation for a procedure. Payment is based on the resources used, length of hospital stay, and the medical device costs.

Depending on the treatment, an average DRG payment in Germany, the largest EU market, can reach up to EUR 36,700. Approximately EUR 3,000 of this payment can be earmarked for IRRAflow's disposable, single-use items. The hospital is usually responsible for the investment of small pieces of capital equipment.

In the US, hospitals are paid directly by patients and various public and private third-party payers, including federal Medicare, state-run Medicaid and private health insurance. The average DRG payment can range from USD 35,000 to USD 65,000, depending on the complexity of the procedure.

## Regulations and requirements

Before any medical device can be commercially marketed, it must demonstrate compliance with the regulatory requirements set by local and global regulatory authorities. Approval in Europe is based on the EU's common directives and regulations governing medical devices. Products that prove they meet these regulatory requirements are considered CE marked, which allows the product to be sold in any EU country. The United States Food and Drug Administration, FDA, provides the corresponding approval for sales and marketing in the US.

IRRAflow received its CE Mark certification in December 2019, which is valid until April 2024. Both IRRAflow and Hummingbird have been approved for use in FDA-regulated markets, including the United States. Many countries in Asia, Latin America, the Middle East, Australia, Canada and Africa are not subject to the CE Mark or FDA approval process. Instead, they generally have direct registration processes based on the documentation required in Europe or the US. Since 2021, IRRAS' quality management system is certified under the Medical Device Single Audit Program (MDSAP). MDSAP is a rigorous audit process established to enable medical device manufacturers to undergo a single regulatory audit covering the requirements of participating regulatory jurisdictions in Australia (TGA), Brazil (ANVISA), Canada (Health Canada), Japan (MHLW) and the United States (FDA). By successfully completing the MDSAP audit, IRRAS has demonstrated that it meets stringent requirements related to the design, development, manufacturing and sale of its products. During 2022, IRRAS received its initial regulatory clearance for IRRAflow in Australia.

**CASE**

# “Life is definitely good”

Dr. Horace Mitchell, 76, was storing Christmas decorations when he fell off a ladder. “I lost my balance and hit my head. We needed to go to the emergency room”, said Dr. Mitchell.

He was taken to UCI Health Medical Center in Irvine, California. Under the care of neurosurgeon Dr. Sumeet Vadera, MD, MBA, FAANS., Dr. Mitchell was diagnosed with a chronic subdural hematoma and underwent treatment with IRRAflow.

“Chronic subdural hematomas are blood clots that accumulate under the covering of the brain on top of the surface of the brain. The traditional approach to chronic subdural hematoma has been fraught with lots of issues. The IRRAflow catheter has really provided us with a giant leap forward in terms of improving patient care. It actively irrigates fluid into that space, allowing us to get any residual blood clot that starts to form. After the surgery it was an almost immediate change. He’s just done very well, and it was a great outcome with using the IRRAflow device. UCI Health is committed to providing world class care, pioneering new technology and improving the quality of life for the patients that we treat, and IRRAflow fits very well in that mission”, said Dr. Vadera.

“UCI has exceeded our expectations. It is almost like a miracle. Life is definitely good”, said Dr. Mitchell.



**“The IRRAflow catheter has really provided us with a giant leap forward in terms of improving patient care”**

**Neurosurgeon Dr. Sumeet Vadera,  
MD, MBA, FAANS**

**SCIENTIFIC POSTER**

# Significant reduction in shunt dependency<sup>1</sup>

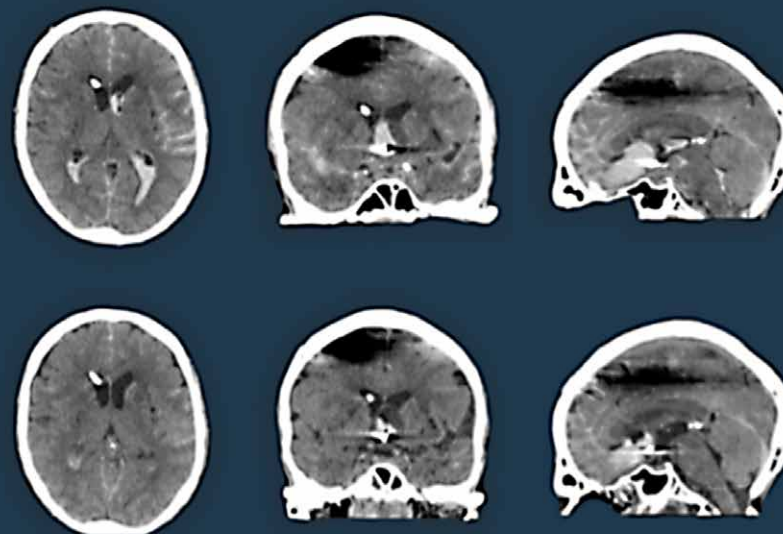
At the 2022 Congress of Neurological Surgeons (CNS) annual meeting in the U.S., Dr. Behnam Rezai Jahromi, neurosurgeon from Helsinki University Hospital, presented a scientific poster titled "Active Cerebrospinal Fluid (CSF) Exchange and Removal of Subarachnoid Hemorrhage (SAH) to Reduce Shunt Dependency".



"We asked ourselves if you remove the subarachnoid hemorrhage from the subarachnoid space<sup>2</sup>, can you reduce shunt dependency? We found 15 patients with CHES<sup>3</sup> score more than 6, meaning that they had a 75% probability of shunt dependency. From 15 patients, only 2 patients actually received a shunt while we expected it to be 11 patients, so there was a significant reduction in shunt dependency after you removed the subarachnoid hemorrhage from the subarachnoid space", said Dr Rezai Jahromi.

1. A shunt is a medical device that is used to treat hydrocephalus, a condition in which there is an excessive buildup of cerebrospinal fluid (CSF) in the brain. The shunt works by diverting excess CSF away from the brain and into another part of the body where it can be absorbed.
2. The subarachnoid space is a fluid-filled space located between the arachnoid membrane and the pia mater, two of the three layers of tissue that surround the brain and spinal cord. It is filled with cerebrospinal fluid (CSF), which provides cushioning and support for the brain and spinal cord.
3. CHES stands for Chronic Hydrocephalus Ensuuing from Subarachnoid hemorrhage Score. This score can help determine whether permanent cerebrospinal fluid drainage is needed.

**Pre-Active EVD Treatment**



**Post-Active EVD (36 hours of treatment)**



## SCIENTIFIC POSTER

# Active exchange of cerebrospinal fluid and removal of subarachnoid hemorrhage to reduce shunt dependency

Behnam Rezai Jahromi, MD, Felix Göhre, MD, PhD, Päivi Tanskanen, MD, Mika Niemelä, MD, PhD, Jari Siironen, MD, PhD, Nicholas Brandmeir, MD

### Objective

Hypothesis: By actively removing subarachnoid hemorrhage via minimally invasive active external ventricular drainage while actively exchanging cerebrospinal fluid, we can reduce pathological outcome of blood in subarachnoid space. This might reduce shunt dependency of patients with subarachnoid hemorrhage.

### Introduction

- Aneurysmal subarachnoid hemorrhage<sup>4</sup> causes disturbances in the cerebrospinal fluid circulation with multiple pathways.
- Sterile inflammation increases cerebrospinal fluid output and subarachnoid hemorrhage blocks the absorption of cerebrospinal fluid at the microscopic and macroscopic level.
- Organization of blood in the subarachnoid space induces fibrosis and further disrupts normal cerebrospinal fluid circulation, which is seen as a need for a permanent shunt to normalize intracranial pressure.

### Method

- Patients were identified with high probability of shunt dependency with CHES<sup>1</sup> score 6 > which predicts 75% shunt dependency.
- Data was gathered from three US and EU centers.
- 15 patients with subarachnoid hemorrhage were recognized to have CHES scores 6 or higher, with 3-month follow-ups and which aneurysms were endovascularly treated.
- All the patients suffered from acute hydrocephalus and received active external ventricular drainage where subarachnoid space was irrigated and drained passively.
- 7 patients received tPA (an enzyme made in the body that helps dissolve blood clots) in irrigation fluid with daily doses of 1,5–3 mg, and the rest of the patients irrigated with ringer acetate or NaCl (sodium chloride) solutions alone.

### Results

- Active external ventricular drainage allows accelerated removal of subarachnoid hemorrhage.
- Shunt dependency was seen in 2 patients in 3-month follow-ups, which was less than expected with CHES score prediction.
- None of the patients suffered from mortality or morbidity related to cerebrospinal fluid exchange.

### Conclusion

- **Active cerebrospinal fluid exchange is possible via active external ventricular drainage, and this accelerated subarachnoid hemorrhage removal.**
- **This might reduce shunt dependency after subarachnoid hemorrhage.**
- **Prospective trials are needed to confirm our preliminary findings.**

4. An aneurysmal subarachnoid hemorrhage (aSAH) is a type of subarachnoid hemorrhage that occurs when there is bleeding in the subarachnoid space due to the rupture of an intracranial aneurysm. Intracranial aneurysms are weakened areas of the blood vessel wall that can balloon out and potentially burst, causing bleeding in the brain.



# OPERATIONS

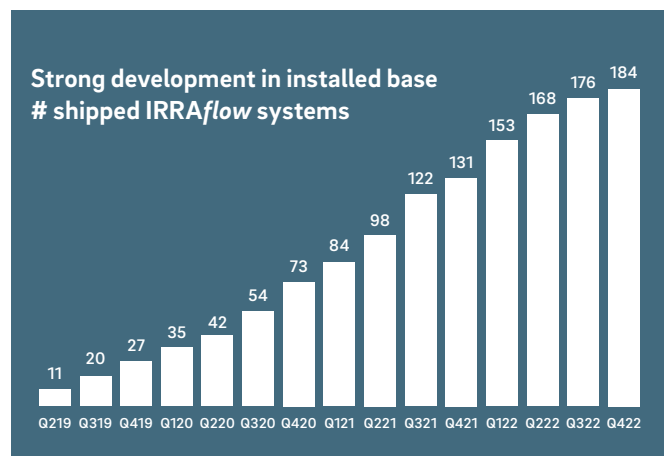
# Focus on commercial execution and clinical data generation

In 2022, IRRAS continued its strategic focus on commercial execution and clinical data generation to accelerate product adoption and move its products towards becoming standard of care. These efforts were validated with progressive growth, via expanded product adoption, achievement of forecasted reorder rates, and through published 3rd party clinical risk benefit profile.

In 2022, net revenue grew by 79% to SEK 40 million, and the number of IRRAS*flow* systems delivered increased to 184 from 131. The number of commercial customers in the US continued to grow with more US customers choosing to evaluate the company's products. Globally, the company's network of distribution partners and the number of direct customers in Germany and the Nordic countries also continued to expand. Commercial IRRAS*flow* systems in the US grew by 47% in 2022 from 30 systems to 44. During the year, the number of systems at direct customer sites in Europe increased from 16 to 30, and the number of systems deployed to distribution partners globally grew from 52 to 89.

## Consistent product reorders and strong growth in physician support

To increase adoption, IRRAS remains focused on building consistent usage and strong product support in its initial markets and key hospitals. This ensures that the system has a strong foundation of support from leading physicians, and consistent product reorders with a solid base of recurring revenue to build upon. Europe and the US are considered key markets, having the largest pool of potential patients, combined with well-established health care systems and high demands for innovative medical device solutions. These markets also have attractive end-user price points and attractive reimbursement levels.



## Dedicated direct sales team in US and EU, combined with network of distribution partners

IRRAS' products are currently sold via a direct sales organization in key markets such as the US, Germany and Sweden. In more than 25 other countries, the company collaborates with distribution partners in neurosurgery with product portfolios that focus on neurosurgical intensive care units. Partnering with a local distributor ensures rapid access to important markets in other parts of the world, with the same detailed focus on education, training, and patient outcomes seen in the company's direct sales markets.

During 2022, IRRAS expanded the reach of its network farther into Asia with new distribution partners in India, Vietnam, and Malaysia. The choice of distributor is also ongoing for other key markets, including China, Japan and South Korea. The company plans to continue to build its strategic network of qualified distributors to expand the relationship with key opinion leaders and thus increase awareness and demonstrate clinical and financial benefits at large hospitals to generate interest and increased adoption. However, globally IRRAS has shifted its focus from adding new markets to increasing adoption within its direct markets and supporting existing distribution partners. Further distribution markets will be added selectively.

Due to the similarities and how the products complement each other, the IRRAS direct sales team can effectively sell both IRRAS*flow* and Hummingbird. Additionally, IRRAS will utilize and expand upon its existing distributor base to assist in launching the Hummingbird product line.

## Business model driven by growing installed base and repeat orders of high-margin consumables

The IRRAS business model is built on selling digital control units and then leveraging recurring revenue streams by selling integrated consumables (primarily catheters, digital pumps and cranial access bolts). IRRAS expects this model to result in more than 80% of its long-term revenue to be driven by disposable reorders as more patients are treated. In order to fully take advantage of this strategy, it is important to maximize the number of systems that are in place globally to support patient treatments.



## Commercial agreement with Medtronic

**In November 2022 IRRAS signed a commercial agreement with Medtronic, the largest medical device company in the world, to further promote the IRRAS*flow* system in the United States.**

**This partnership is expected to build broader awareness of IRRAS' technology and increase product adoption, ensuring that more patients with intracranial bleeding can receive the latest available advances in treatment.**

**The IRRAS neurocritical education team will closely support the Medtronic sales professionals to train new customers, fulfill customer orders, and support patient treatments within designated territories.**



## Generating meaningful clinical data

A key development to increase adoption and move a product towards the standard of care is to confirm its superiority over traditional treatment by generating meaningful clinical data.

By the end of 2022, clinical evidence had been published documenting the safe and effective use of IRRAflow in every intracranial pathology<sup>1</sup>, including chronic subdural hematoma (cSH)<sup>2</sup>, intraventricular hemorrhage (IVH)<sup>3</sup>, surgical abscesses<sup>4</sup>, bacterial ventriculitis<sup>5</sup>, subarachnoid hemorrhage (SAH)<sup>6</sup>, and intraparenchymal hemorrhage (IPH)<sup>7</sup>. The latest clinical data was published by Dr. Andrew Carlson and the team from the University of New Mexico Hospital, highlighting the ability of IRRAflow to irrigate thrombolytic medication into an IPH to break down the collected blood and more effectively drain the toxic material.

In 2022, surgeons from West Virginia University Hospital presented clinical data from the hospital's treatment of its first 45 patients using the IRRAflow system across multiple intracranial pathologies. The data showed that the use of IRRAflow resulted in a 0% catheter occlusion rate, a decreased percentage of observed vasospasm, and a reduced need for shunt placement after treatment. The data set also further expands the available clinical evidence of IRRAflow's ability to safely perform targeted drug delivery with positive results.

IRRAS' ongoing projects are focused on documenting the superiority of IRRAflow in increasingly large patient numbers, with enrollment in the ARCH and DIVE trials. The results from these trials are expected to be important pieces of the growing pool of clinical evidence to support improved patient outcomes with IRRAflow.

# ARCH

Removal of intracerebral hematoma via active irrigation of ventricular system clinical trial

**The ARCH study investigates the ability of the IRRAflow system to clear blood collected in a patient's ventricles after an intraventricular hemorrhage (IVH) more effectively than traditional passive drainage. The ARCH investigators hypothesize that IRRAflow's active irrigation, when combined with thrombolytic medication, will reduce the time needed to clear blood from the intraventricular space, thereby improving patient outcomes. The ARCH study is a controlled, randomized clinical trial that is expected to enroll 60 patients across sites in Europe and the United States, led by a team at Helsinki University Hospital.**

# DIVE

Deployment of irrigating intraventricular catheter system clinical trial

**The DIVE study is assessing the IRRAflow system's ability to treat patients experiencing IVH more effectively compared to traditional treatment with an external ventricular drain (EVD). The primary objective of the study is to evaluate the safety and radiographic outcomes associated with using the IRRAflow system compared to the current standard of care with EVDs. The study will compare retrospective EVD data from Mount Sinai Hospital and Mount Sinai West Hospital to prospective data collected from patients treated with IRRAflow in up to 140 patients (70 EVD and 70 IRRAflow).**

1. Abnormalities or diseases that occur within the skull or inside the brain.

2. Chronic subdural hematomas occur when blood accumulates between the surface of the brain and the outermost layer of the brain's protective covering, known as the dura mater.

3. Intraventricular hemorrhages (IVH) occur when there is bleeding in the ventricles of the brain, which are the spaces filled with cerebrospinal fluid.

4. Surgical abscesses are collections of pus that can form after surgery, usually due to a bacterial infection. These abscesses can occur in different parts of the brain.

5. Bacterial ventriculitis is an infection of the ventricles of the brain caused by bacteria.

6. Subarachnoid hemorrhages (SAH) occur when there is bleeding between the arachnoid membrane and the pia mater, the layers of tissue that surround the brain.

7. Intraparenchymal hemorrhages (IPH) occur when there is bleeding within the brain tissue itself.

## Innovation focused on optimizing and expanding use of product portfolio

IRRAS' research and development is conducted in the US and mostly with the company's own resources. Focus lies on optimizing the *IRRAflow* and Hummingbird product lines and exploring ways to expand their applications and areas of use. The company continuously focuses on improving functionality and user experience. In 2022, IRRAS introduced the next-generation *IRRAflow* control unit designed to continue to enhance the procedural workflow for health care professionals treating critically ill patients suffering from intracranial bleeds. The upgrades to the *IRRAflow* control unit and its software include interactive tutorials, intuitive software with upgraded graphics, refined treatment workflow, and a new drainage collection design. This next-generation system also included the ability to communicate with existing hospital patient monitors where patient data and updates are transferred from *IRRAflow* to the existing ICU monitoring equipment. This will allow healthcare professionals to ascertain the patient's condition from the centralized care unit at any given time.

IRRAS introduced an updated version of the *IRRAflow* catheter. Future near-term focus lies on introducing customer-driven enhanced usability features as well as extending the shelf life of the complete *IRRAflow* disposable product line. Longer term, IRRAS is considering the benefits of combining the functionality of the *IRRAflow* and Hummingbird product lines and expanding the ability of the *IRRAflow* system to quantify and potentially characterize the fluid that is drained from the intracranial space.

## Targeted drug delivery to the brain

The blood brain barrier creates a strong protection for the brain, but this physical barrier makes it difficult for the desired dose of medication to reach the brain. Thus, existing drug delivery systems for the central nervous system (CNS) have limited effectiveness. Furthermore, it is difficult to administer a sufficient volume of the drug since it often leads to an increase in intracranial pressure.<sup>1</sup> With the use of the *IRRAflow* system, the medication can be placed directly at the exact concentration that would be appropriate, right at the place where it has the targeted value. Using its multi-lumen catheter and fluid exchange software, IRRAS is developing targeted drug delivery capabilities for *IRRAflow* for CNS pathologies to enable safe and accurate delivery of therapeutic drug volumes, evacuation of harmful fluid collections and intracranial pressure management.

## Active fluid management and targeted drug delivery in other areas of the body

There is a great need for active fluid management and targeted drug delivery in other areas of the body. IRRAS therefore believes that in the future the *IRRAflow* system will have multiple applications beyond brain pathologies. IRRAS envisions product and research development that will support physicians with an *IRRAflow* technology platform for the treatment of patients with conditions such as abdominal abscesses and drainage, blood clots and other abnormalities where active fluid management and targeted drug delivery may have a therapeutic effect.

## Extensive patent portfolio protecting technologies

IRRAS has a broad patent portfolio protecting the underlying technologies of the *IRRAflow* and Hummingbird ICP product families. For *IRRAflow*, patent protection focuses on the system's combination of irrigating and draining to keep the system free of catheter blockages. In addition, a patent issued in the US in 2021 provides protection for potential future areas of use, such as drug delivery, infection, orthopedics, and treatment in other areas of the body. With Hummingbird, protection consists of multiple patent families covering the proprietary air connection, a unique method for probe access to the brain tissue, and monitoring ICP with an air-based pressure monitoring method. This IP protection protects the company's products until 2036. The IP portfolio is continuously reviewed as new patent opportunities arise in ongoing development projects.

1. Fargen KM, Hoh BL, Neal D, O'Connor T, Rivera-Zengotita M, Murad GJ. The burden and risk factors of ventriculostomy occlusion in a high-volume cerebrovascular practice: results of an ongoing prospective database. *Journal of Neurosurgery*. 2015

## Foundational patent protection encompasses multiple uses for active fluid exchange and novel ICP monitoring

- Nine key issued patents
- Protection across the top 16 markets
- Four new areas with pending patent protection

# The share

Since May 20, 2020, IRRAS' share has been listed on Small Cap, Nasdaq Stockholm after being listed on First North Premier Growth Market since 2017. During the year, the share price fell, and the number of shares traded increased, and at year-end, IRRAS had 7,414 shareholders (2,803).

## Market capitalization and turnover

The closing price on December 31, 2022, was SEK 0,47, corresponding to a market capitalization of MSEK 374. An average of 6.7 million shares were traded per day and a total of 1,693 million in 2022. The share price declined by 64 percent while the SIX General Index declined by 25 percent.

## Share capital

During 2022, IRRAS raised MSEK 215, before deduction of transaction related costs, in a rights issue to ensure a successful implementation of the Company's growth strategy, including financing of its ongoing operations and the commercialization of its product portfolio.

Through the rights issue, the number of shares and votes in IRRAS increased through the registration of 484,759,494 shares subscribed with support of subscription rights and 230,572,566 shares subscribed without the support of subscription rights.

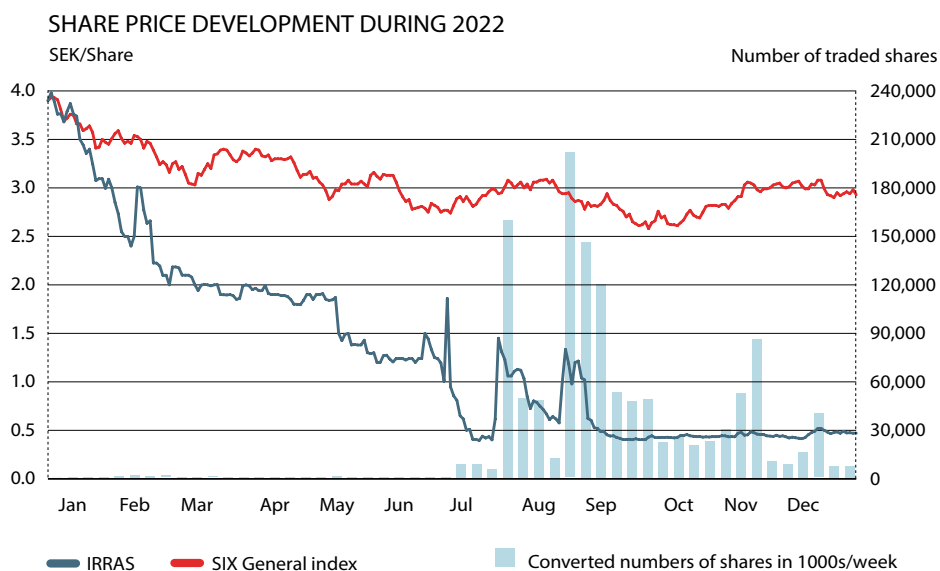
As of December 31, 2022, the share capital of IRRAS amounted to SEK 23,844,402.00, distributed on 794,813,400 shares with a quota value of SEK 0.03 per share. In 2022 the share capital increased by 715,332,060 shares. IRRAS has only one class of shares. Each share has an equal part of the company's assets and profit and equal voting right.

## Shareholder agreement

The Board of Directors of IRRAS is not aware of any shareholder agreements or other agreements between the company's shareholders, which are intended to have joint influence over the company. Nor are they aware of any significant agreements to which the company is a party and which take effect or change or cease to apply if control of the company changes as a result of a public takeover bid.

## Dividend and dividend policy

The Board of Directors of IRRAS has proposed to the Annual General Meeting that no dividend will be paid for the financial year 2022. However, the Board does not intend to propose a dividend to the AGM prior to a positive cash flow is achieved by IRRAS.



## Development of the share capital

Year	Transaction	Increase in share capital	Increase in number of shares	Share capital, total	Number of shares	Par value, SEK
2011	Foundation	50,000	10,000	50,000	10,000	5.00
2013	New share issue (1)	9,180	1,836	59,180	11,836	5.00
2016	Share split	–	11,824,164	59,180	11,836,000	0.005
2016	New share issue (2)	18,250	3,650,000	77,430	15,486,000	0.005
2016	Change of convertibles (3)	8,657	1,731,419	86,087	17,217,419	0.005
2017	Bonus share issue	430,435.48	–	516,522.57	17,217,419	0.03
2017	New share issue (4)	193,333	6,444,444	709,855.89	23,661,863	0.03
2018	New share issue (5)	10,683.33	356,111	720,539.22	24,017,974	0.03
2019	New share issue (6)	144,000	4,800,000	864,539.22	28,817,974	0.03
2020	New share issue (7)	1,123,900.98	37,463,366	1,988,440.20	66,281,340	0.03
2021	New share issue (8)	396,000	13,200,000	2,384,440.20	79,481,340	0.03
2022	New share issue (9)	21,459,961.80	715,332,060	23,844,402.00	794,813,400	0.03

1. The subscription price in the share issue was SEK 14.800 per share, corresponding to SEK 14.80 per share adjusted for the share split carried out during 2016.

2. The subscription price in the share issue was SEK 25 per share.

3. The conversion rate in connection with the exchange of the convertible debt was SEK 17.50.

4. The subscription price in the share issue was SEK 45 per share.

5. Share program to the CEO. Issue price SEK 0.00 per share.

6. New issue price SEK 22.00 per share.

7. The subscription price in the rights issue was SEK 5.80 per share.

8. The subscription price in the new issue was SEK 5.00 per share.

9. The subscription price in the right issue was SEK 0.30 per share.

## Shareholders as of December 31, 2022

### Largest shareholders December 31, 2022

Name	Number of shares	%
Spetses Investments Ltd	234,500,000	29.50%
Bacara Holdings Ltd	186,833,390	23.51%
Lexington Holdings	31,557,270	3.97%
Andra AP-fonden	18,000,000	2.26%
March Asset Management	17,100,000	2.15%
Handelsbanken fonder	13,330,102	1.68%
Kleanthis G. Xanthopoulos	13,014,870	1.64%
Christer Hellström	11,519,627	1.45%
Avanza Pension	8,510,683	1.07%
SEB fonder	3,277,458	0.41%
Other	257,170,000	32.36%
<b>Total</b>	<b>794,813,400</b>	<b>100.00%</b>
<b>Top 10</b>	<b>537,643,400</b>	<b>67.64%</b>

## Ownership structure December 31, 2022

Size class	Number of known users
1–500	2,543
501–5,000	91
5,001–100,000	153
100,001–500,000	37
500,001–	43
Anonymous ownership	4,547
<b>Total</b>	<b>7,414</b>



# Remuneration Report 2022

## Introduction

This report describes how the guidelines for executive remuneration of IRRAS AB, adopted by the Annual General Meeting 2020, were implemented in 2022. The report also provides information on remuneration to the CEO and Deputy CEO and a summary of the company's outstanding share-related incentive plans. The report has been prepared in accordance with the Swedish Companies Act and the Rules on Remuneration of the Board and Executive management and on Incentive Programs issued by the Swedish Corporate Governance Board.

Further information on executive remuneration is outlined in note 10 on in the Annual Report 2022. Information on the work of the Remuneration Committee in 2022 is set out in the Corporate Governance Report available on page 68 in the Annual Report 2022.

Remuneration of the Board of Directors is not covered by this report. Such remuneration is resolved annually by the Annual

General Meeting and disclosed in both note 10 and the Corporate Governance Report in the Annual Report 2022.

### Key development 2022

The CEO summarizes the company's overall performance in his statement on page 7–8 in the Annual Report 2022.

### Guidelines for remuneration to senior executives

The company's business strategy is to develop medical devices that create a new standard of care for intracranial bleeding and traumatic brain injuries. Management's task is to commercialize these innovative devices and make IRRAS a globally recognized company. The goal with the remuneration package is to enable the company to attract and retain qualified senior executives at a reasonable cost to the company. More information on the company's strategy can be found on the company's website.

To retain and attract competent senior leaders, the remuneration must be competitive and based on prevailing market conditions. Remuneration generally consists of a fixed salary, variable remuneration, pension and other benefits.

The guidelines are found on page 37–38 in the Annual Report 2022. During 2022, the company has complied with the applicable remuneration guidelines adopted by the General Meeting. No deviations from the guidelines have been decided and no derogations from the procedure for implementation of the guidelines have been made. The auditor's report regarding the company's compliance with the guidelines is available on [www.irras.com](http://www.irras.com). No remuneration has been reclaimed. In addition to remuneration covered by the remuneration guidelines, the General Meetings of the company have resolved to implement long-term share-related incentive plans.

## Remuneration for the CEO and Deputy CEO in 2022 ('000 SEK unless otherwise stated)<sup>1</sup>

Name and Position	Fixed remuneration		Variable remuneration			Total remuneration	Proportion of fixed and variable remuneration
	Base salary <sup>2)</sup>	Other benefits <sup>3)</sup>	Bonus <sup>4)</sup>	Share-based remuneration <sup>5)</sup>	Pension costs <sup>6)</sup>		
Will Martin, CEO	4,085	376	1,760	458	0	6,677	Fixed 67% Variable 33%

1) With exception for share-based remuneration, the table shows remuneration earned during 2022. Share-based remuneration is reported to the extent that it has been the subject to vesting during 2022.

2) Includes holiday pay.

3) Includes other benefits such as healthcare benefits.

4) Bonus earned during 2022 and paid out in 2023.

5) Calculated as the number of shares in the company's incentive programs that have vested from January 1st to December 31st, 2022, multiplied by the share price for IRRAS' share on December 30th, 2022 (SEK 0.47) minus the strike price for the options.

6) Pension is a defined contribution equal to ITP2 (excluding holiday pay). No occupational pension is paid to the CEO.

## Remuneration for the CEO and Deputy CEO in 2021 ('000 SEK unless otherwise stated)<sup>1</sup>

Name and Position	Fixed remuneration		Variable remuneration			Total remuneration	Proportion of fixed and variable remuneration
	Base salary <sup>2)</sup>	Other benefits <sup>3)</sup>	Bonus <sup>4)</sup>	Share-based remuneration <sup>5)</sup>	Pension costs <sup>6)</sup>		
Kleanthis G. Xanthopoulos, CEO <sup>7)</sup>	2,668	0	0	0	0	2 688	Fixed 100% Variable 0%
Will Martin, CEO <sup>8)</sup>	2,200	0	1,004	0	0	3 204	Fixed 62% Variable 37%
Sabina Berlin, CFO and Deputy CEO <sup>9)</sup>	789	0	0	0	201	998	Fixed 100% Variable 0%

1) With exception for share-based remuneration, the table shows remuneration earned during 2022. Share-based remuneration is reported to the extent that it has been the subject to vesting during 2022.

2) Includes holiday pay.

3) Includes other benefits such as healthcare benefits.

4) Bonus earned during 2021 and paid out in 2022.

5) Calculated as the number of shares in the company's incentive programs that have vested from January 1st to December 31st, 2021, multiplied by the share price for IRRAS' share on December 31st, 2021 (SEK 3.90) minus the strike price for the options. As the share price was below the strike price for all vested options, they are listed as having zero value in the table above.

6) Pension is a defined contribution equal to ITP2 (excluding holiday pay). No occupational pension is paid to the CEO.

7) CEO through June 2021. Remuneration in the table above shows the period January to June 2021.

8) CEO from July 2021. Remuneration in the table above shows the period July to December 2021.

9) Deputy CEO through June 2021. Remuneration in the table above shows the period January to 20 June 2021.

## Option plans for the CEO (Will Martin)

Main conditions for option plans				Information regarding the reported financial year				
				Opening balance	During the year		Closing balance	
Plan name	Award year	Vesting period	Strike price	Options held at the beginning of the year <sup>1)</sup>	Awarded <sup>2)</sup>	Vested <sup>3)</sup>	Subject to performance conditions	Awarded and unvested at year end
1	2018	2015–2019	13,60	37,750	0	24,625	36,125	98,500
6	2020	2019–2022	7,42 <sup>4)</sup>	49,996	0	48,859	27,761	126,616
7	2021	2021–2024	5,47 <sup>4)</sup>	0	0	82,633	92,367	175,000
8	2022	2022–2025	0,47 <sup>4)</sup>	0	4,760,000	0	4,760,000	4,760,000

1) The number of vested options before January 1st, 2022.

2) The number of awarded options during 2022.

3) The number of vested options during 2022.

4) Strike price is calculated based on award date.

## Share-based remuneration

IRRAS has introduced share-based remuneration for employees in the form of incentive programs and share rights for the purpose of motivating and rewarding employees through participation in order to benefit the company's long-term interests. In 2022, the company had four ongoing option-based incentive programs (program 1, 6, 7, 8). The allocation of options in program 1 is based on the employee's position and how well they have reached their individual targets during the year. The allocation of options in program 6, program 7, and program 8 is based on the employee's position, how well they have reached their individual targets during the year and the company's annual performance. The level of achievement toward the targets in programs 6, 7, and 8 are approved by the Board of Directors after the end of every year.

Additional information about outstanding option performance programs is available in note 10 in the Annual Report for 2022.

## Application of performance criteria

Each senior executive may, from time to time, be offered variable remuneration (bonuses) to be paid in cash. The variable remuneration is to be based on clear and measurable criteria, financial performance, and business objectives that are defined in advance. Variable remuneration should also be used to promote the company's long-term value creation. Variable remuneration may not exceed 12 months' fixed salary for the CEO and 6 months' fixed salary for other senior executives in company management.

The performance criteria for the CEO's and the Deputy CEO's variable salary are fully based on the company's strategic and operational targets for each year. The board of directors assess the performance of the company after every financial year, and this assessment is the basis of both the variable remuneration for the company's employees and the performance criteria assessment for the company's option programs 6, 7 and 8.

## Bonus for the CEO and Deputy CEO during the year

Name and Position	Bonus criteria	Weighting	Outcome bonus, '000 SEK <sup>1)</sup>
Will Martin, CEO	Corporate targets	100%	1,760

1) Refers to outcome 2022 paid in 2023.

## Comparative information on the change of remuneration and company performance

### Remuneration and company performance ('000 SEK unless otherwise stated)<sup>1</sup>

	2022 vs 2021	2022
CEO <sup>2)</sup>	-183 (-4%)	6,365
CFO and Deputy CEO	-992 (-100%)	0
Group Operating Income <sup>3)</sup>	-31,567 (-23%)	-168,089
Average remuneration on a full-time equivalent basis of employees in IRRAS AB <sup>4)</sup>	892 (56%)	2,474

1) Remuneration earned in the respective years.

2) CEO includes remuneration for Will Martin, CEO.

3) The Group Operating Income was -168,1 MSEK in 2022 compared to -136,5 MSEK in 2021.

4) Excluding members of group management.

Stockholm, April 2023

**IRRAS AB**

The Board of Directors



# ADMINISTRATION REPORT

# Administration Report

The Board of Directors and CEO of IRRAS AB (publ), corporate registration number 556872-7134, with its registered office in Stockholm, Sweden, hereby submits the Annual Report and consolidated financial statements for the fiscal year from January 1 to December 31, 2022. Earnings from the year's operations, and the financial position of the Parent Company and the Group, are presented in the Administration Report and the subsequent statements of profit or loss, profit or loss and other comprehensive income, financial position, changes in equity, cash flows, income statement, balance sheet and notes with supplemental information.

The Company initially listed on Nasdaq First North Premier in 2017, and subsequently moved to Nasdaq's main market in May 2020.

## Operations

IRRAS is a global medical technology company focused on delivering innovative medical solutions to improve the lives of critically ill patients. IRRAS designs, develops, and commercializes neurocritical care products that transform patient outcomes and decrease the overall cost of care by addressing complications associated with current treatment methodologies. IRRAS markets and sells its innovative IRRAS*flow* and Hummingbird ICP Monitoring product lines to hospitals worldwide through its direct sales organization in the United States and select European countries, as well as an international network of distribution partners.

IRRAS*flow* is an FDA-cleared, CE-marked, fully-integrated medical device system that enables intelligent intracranial fluid management as well as accurate, real-time monitoring of intracranial pressure.

The Hummingbird product line includes multiple FDA-approved products that help clinicians diagnose and manage patients' intracranial pressure after a traumatic brain injury, subarachnoid hemorrhage, and/or stroke. The combination of IRRAS*flow* and

Hummingbird creates a unique, complementary product portfolio. Along with strong patent protection, this provides IRRAS with a solid foundation to establish a leading position in the neurocritical care market.

The IRRAS business model is built on selling digital control units and then leveraging recurring revenue streams by selling consumables (primarily catheters, digital pumps, and cranial access bolts) which integrate with the control units.

## Group structure

IRRAS AB has three wholly owned subsidiaries: IRRAS GmbH in Germany, IRRAS BV in the NL and IRRAS Inc in the US. The Parent Company is responsible for such Group-wide functions as finance and investor relations.

## Multi-year overview

Amounts in TSEK	Group					Parent Company				
	Jan–Dec 2022	Jan–Dec 2021	Jan–Dec 2020	Jan–Dec 2019	Jan–Dec 2018	Jan–Dec 2022	Jan–Dec 2021	Jan–Dec 2020	Jan–Dec 2019	Jan–Dec 2018
<b>Earnings</b>										
Net Revenue	39,998	22,386	7,390	5,288	5,994	414	742	4,726	1,551	13,081
Gross margin, %	21%	neg.	neg.	neg.	neg.	neg.	neg.	neg.	neg.	39%
Operating Loss (EBIT)	-168,090	-136,522	-134,316	-151,486	-143,328	-44,781	-38,076	-40,091	-47,384	-43,018
Net loss for the period	-166,604	-136,335	-135,916	-151,144	-138,842	-59,438	-258,252	-41,224	-46,434	-39,565
<b>Financial position</b>										
Total assets	171,618	132,594	209,035	158,992	205,284	466,518	319,256	517,486	369,650	315,265
Equity	146,043	111,634	182,353	131,470	184,154	454,326	313,833	509,352	360,532	307,419
Equity ratio, %	85%	84%	87%	83%	90%	97%	98%	98%	98%	98%

## Significant events during the fiscal year

- First patient in ACTIVE Study designed to confirm IRRAS-flow's efficacy to traditional passive drainage (Jan)
- Additional patent was issued for IRRAS-flow system in the United States (Jan)
- Next-generation IRRAS-flow system was launched in the United States (Feb)
- IRRAS-flow receives regulatory clearance in Australia (Mar)
- First global patient treatment with next generation IRRAS-flow (Mar)
- IRRAS secured short-term financing agreement of SEK 30 million (May)
- IRRAS completed a fully subscribed rights issue that raised SEK 215 million before transaction related costs (Aug)
- The first patients were enrolled in a new clinical study, DIVE, with Mount Sinai in New York City (Aug)
- Data showing the efficacy of IRRAS-flow was published (Oct)
- IRRAS signed a commercial agreement with Medtronic to promote IRRAS-flow in part of the United States (Nov)
- IRRAS received US FDA 510(k) clearance for the IRRAS-flow control unit (Dec)

## Significant events after the period

- IRRAS-flow System Confirmed to More Effectively Remove Collected Blood and Reduce Catheter Infection Rates than Passive Drainage in Head-to-Head Analysis (Mar 2023)
- IRRAS Secures Short-term Financing Agreement of MSEK 40 (Apr 2023)

## Sales and market

IRRAS' initial clinical focus is neurosurgical treatments that require the drainage of excess cerebrospinal fluid (CSF) as well as monitoring and regulation of intracranial pressure (ICP). The treatments are often administered in conjunction with traumatic brain injuries (powerful blows or bumps to the head or body), hemorrhagic strokes (bleeding in the brain) or chronic subdural hematoma (blood collection on the surface of the brain).

IRRAflow is used to drain collected blood and other fluids and monitor intracranial pressure in patients with hemorrhagic strokes and chronic subdural hematoma, two serious conditions with high rates of mortality. IRRAflow addresses complications that commonly arise from current treatment methods and has the potential to become the new standard of care.

The company's Hummingbird products also offer an important diagnostic tool for monitoring the patient's condition after a traumatic brain injury. This is a critical tool for determining when the use of a therapeutic tool, such as IRRAflow will be required.

Around 600,000 people in the US and Europe suffer from hemorrhagic stroke and chronic subdural hematoma annually. Approximately 345,000 of these people are treated surgically each year, and IRRAS estimates that the market value of IRRAflow in Europe and the US is currently approximately USD 1.8 billion per year. The intracranial drug delivery capability of IRRAflow may significantly increase this addressable market opportunity.

At the same time, approximately 5.4 million people are affected by traumatic brain injury in the US and Europe. Of those patients, approximately 235,000 people require invasive monitoring of their intracranial pressure where the Hummingbird ICP system can be used. Accordingly, the addressable market size Hummingbird line in these regions is estimated at approximately USD 600 million per year.

The number of patients is expected to increase sharply in the coming years as a result of population growth, an aging population, and an increased share of patients receiving treatment.

## Earnings and financial position in the Group

### Net revenue

Net revenue for the 2022 fiscal year totalled SEK 40.0 million (22.4).

Sales derive from the sale of systems as well as consumables in the US, Europe and, to a smaller extent, other parts of the world. Revenues are recognized in line with the terms stated in customer contracts, and provisions for potential returns and bad debt are provided on a conservative basis. The positive sales

development in 2022 was driven by contribution from each major area of commercial activity, primarily enabled by normalized customer activity as COVID-19 restrictions were reduced, increased reorders from existing customers, and new hospital orders.

### Gross profit/loss

The gross profit/loss for 2022 totalled SEK 8.4 million (-28.0) which corresponds to a gross margin of 21% (neg). The improvement is driven by higher sales in combination with lower cost of goods sold and reclassifications between cost of goods sold and operating expenses. The gross profit includes SEK 3.1 million (1.9) of write-downs related to inventory adjustments. Excluding these items, the gross margin would be 29%.

Cost of goods sold amounted to SEK 32 million (50) and include direct production costs for sold products, amortization of capitalized development expenses, overhead expenses for the production department and personnel.

As per 2022 IRRAS had implemented in-house assembly for our IRRAflow control unit. As part of this shift, the company reviewed the allocation of costs and certain functions have been reallocated from cost of goods sold to administrative expenses in 2022 reflecting the revised nature of the costs. These costs were correctly included within Cost of Goods Sold during 2021 under the previous operating model. This change is reflected in gross margin as well as corresponding increases in administrative expenses. Total reallocated costs for the year correspond to SEK 8.3 million.

### Operating expenses

Operating expenses for 2022 totalled SEK 177.1 million (116.6). Costs are recognized by taking into account non-recurring costs for replacing and impairing old products. The approach is an important principle for IRRAS to ensure that the financial statements reflect the company's next phase in an appropriately prudent manner. This "re-launch" is symbolized by the introduction of the new IRRAflow System in the US. All impairment losses are non-recurring.

Marketing and sale expenses increased slightly compared to last year driven by the growing sales and education force in the



US, increased activity as COVID restrictions were reduced, and increased regulatory costs.

R&D costs amounted to 46.2 million (23.7) for the year and include mainly personnel costs and specialist consultants. SEK 2.1 million (6.7) was capitalized and SEK 44.1 (17.0) was expensed. The comparatively high proportion of expensed costs were driven by enhancement work that, is not expected to drive higher revenue long term, reflects projects coming to and end where adjustments made that are short term in nature and hence can not be capitalized under IFRS.

Administrative expenses for the year amounted to SEK 66.5 million (39.5). The increase is driven by the expansion of the company as well as reclassification of previous operational expenses from cost of goods sold to administrative expenses. The reclassified totals for the full year totaled SEK 8.3 million.

Operating expenses include costs for share-based incentive programs amounting to SEK 0.7 million (1.2) for the year. Costs for social security contributions vary as a result of changes in the underlying market price of the share. As the market price fell during the year, the value of provisions, including tax benefits, was reduced.

The net of other operating income and operating expenses for 2022 amounted to SEK -0.5 million (7.7) primarily relating to exchange rate differences. The 2021 total included the waiver of the SEK 6.9 million loan received from the US government's "Payment Protection Program" in 2020.

### Operating income/loss (EBIT)

The operating loss for 2022 totalled SEK -168.1 million (-136.5), for the period January to December 2022.

### Net financial income

Net financial items totalled SEK 1,5 million (0.2) for the period January to December 2022.

### Earnings

The loss before tax for 2022 amounted to SEK -166.6 million (-136.3).

### Financial position and going concern

On December 31, 2022, the company's cash position amounted to SEK 69.3 million (55.9), and equity to SEK 146.0 million (111.6). The company has an unutilized loan facility from the EIB amounting to EUR 10 M. The loan facility become available provided that the company reaches certain commercial and R&D related milestones.

The Board of Directors and the CEO continuously assess the Group's short- and long-term liquidity and financial resources. This annual report has been prepared with the assumption that the Company has the ability to continue operations for the next 12 months, in line with the going concern assumption. The Board of Directors and the CEO conclude that the Company will need additional financing to fully secure going concern in accordance with the company's strategic plan during the upcoming 12-month period. Given the EIB facility, the continuous interest from the capital market, and the strong current ownership base, the Board of Directors and the CEO's assessment is that the Group will attract and receive sufficient financing to continue for at least the next 12 months. They further acknowledge that should decisive conditions not be met, for example, by sales not developing as expected, the Group's continued operation might be at risk, and additional capital infusions may be required. This means that there are circumstances that may give rise to significant doubts about the company's ability to continue operations without additional financing.

### Financial outlook

IRRAS continues to expand its market and anticipate sustained sales growth and the company projects

- Revenue is expected to exceed SEK 350 million by 2025
- Gross margin is expected to exceed 60% by 2025
- Cash flow break-even is expected by 2025

## Cashflow, investment, and liquidity

Cash flow from operating activities for the year amounted to an outflow of SEK -175,8 million (-130,5). The increase is mainly attributable to the company's investment in sales and marketing activities.

Cash flow from investing activities amounted to an outflow of SEK 3.4 million (7.3).

Cash flow from financing activities amounted to an inflow of SEK 194.0 million (57.2), resulting mainly from the rights issue conducted in July which contributed about SEK 200 (62) net of transaction costs, while payments on lease liabilities amounted to SEK 5.2 million (4.3). Total cash flow for the year amounted to an outflow of SEK 14.7 million (-80) and the cash balance at the end of the year amounted to SEK 69.3 million (55.9)

## Parent Company

Net revenue for the Parent Company in 2022 totalled SEK 0.4 million (0.7). This amount primarily pertains to reimbursements of services and other remuneration from subsidiaries.

Cost of goods sold corresponds to the amortization of capitalized expenses derived from the IP held by the Parent company.

The operating income/loss amounted to MSEK -44.8 (-38.1) for the period January – December 2022.

Net financial items amounted to SEK -14.7 (-220.2) and relates to the marketing contribution made to support the US subsidiary. The net loss for the period amounted to MSEK -59.4 (-258.3)

As of December 31, 2022, equity in the Parent Company totalled SEK 454.3 million (313.9).

The Parent Company's receivables from Group companies consist of long-term loans and current receivables, which amounted to SEK 34.4 million (13.7) at year-end.

## Personnel

The average number of employees in the Group for 2022 was 51 (53), of whom 4 (7) are employed in the Parent Company. The breakdown of the average number of employees by country was 4 (7) in Sweden, 43 (42) in the US and 4 (4) in Germany.

The average number of women in the Group was 23 (26), and the average number of men was 27 (27). IRRAS depends on its ability to attract and retain employees with a high level of competency and experience. The company continuously addresses issues related to competency development, work environment, and equality.

## Effects of Covid-19

IRRAS still suffers the consequences of Covid-19 to an extent. The noticeable set back in growth opportunities and supplier flows was noticeable. Some markets where customers have shown strong interest in trying/buying the IRRAS' systems were hampered by the lock down, and the subsequent consequences thereof which are still noticeable today. As a result, not all customers have been able to put their newly acquired system into use, slowing sales considerably beyond what would have been expected considering the development and containment of the epidemic in the US and Europe.

To an extent the epidemic has also influenced the decision to bring more of the manufacturing inhouse – inevitably driving costs for start-up and move of operations. The Board has deemed these investments necessary to secure the viability of the company long term, even if doing so has forced the company to use more than expected of earlier financing rounds towards manufacturing rather than as initially planned towards sales and marketing. It is also relevant to consider the effects of Covid-19 on the, to an extent, overwhelmed reimbursement systems in the countries previously considered to be main markets. This in turn has inevitably contributed to shifting the company's focus towards the US market in the past year.

Going into 2023, with increase inhouse manufacturing alignment and adjustments to sales focus, the Company anticipates the impact of Covid-19 to decrease but recognizes that strategic and new market entries might still be hampered by the pandemic for years to come.

## The war in Ukraine

The situation in Ukraine is not deemed to have any material effects on the financial statements.

## Production

The US subsidiary, IRRAS Inc, is a registered manufacturer of the company's products. IRRAS in-house manufactures the IRRAS*flow* capital equipment and partners with select contract manufacturers for the manufacturing of sterilized consumable products. IRRAS uses distributors to deliver to end customers outside the US, Germany, and the Nordics.

## Development

The optimization of existing products and the continued development of additional innovative solutions is a critical element of IRRAS' long-term strategy. The IRRAS product development team has developed a product development roadmap that projects related to both the IRRAS*flow* and the Hummingbird product lines.

IRRAS' overall engineering strategy is focused on developing innovative, user-friendly, reliable, and high-quality proprietary fluid exchange systems. IRRAS continued to strengthen its internal competence with the in-house development of a next-generation IRRAS*flow* control unit and enhanced consumables. Internal expertise is supplemented by external consultants that provide specific competencies.

In addition to these research and development efforts, IRRAS' manufacturing engineering department is focused on continuous improvements in its sourcing and production processes in order to enhance its manufacturing efficiency.

## Quality assurance

IRRAS is certified under ISO 13485:2016 and FDA 21 CFR Part 820. In 2021, IRRAS received an updated ISO 13485:2016 certificate that was certified under Europe's new Medical Device Regulations, and its manufacturing facility was inspected and certified by the state of California, the US FDA, and its notified body, DEKRA, on behalf of Europe for product shipping.

Also, during 2021, IRRAS' quality system was certified under the Medical Device Single Audit program (MDSAP), which allows the company to seek product regulatory approval in key markets, including Brazil, Australia, Canada, and Japan.

Initial FDA clearance in the US was obtained for the IRRAS*flow* CNS System in 2018. Clearance for an extended period of use was obtained in 2019. In 2022 IRRAS received FDA clearance for the next generation IRRAS*flow* control unit with bedside monitor communication capability. CE Mark approval for its IRRAS*flow* CNS System control unit and tube set was received in the spring of 2018, and, in December 2019, CE Mark approval was also received for the IRRAS*flow* CNS System catheters. The control unit and tube set are medical device Class IIb products, and the catheter belongs to Class III.

In addition to the US and EU, regulatory approval for IRRAS*flow* has also been received in Israel, Kuwait, Mexico, Ecuador, Costa Rica, Saudi Arabia and Argentina. During 2022, IRRAS received its initial regulatory clearance for IRRAS*flow* in Australia. Work to secure registration clearance is also under way in a number of additional countries. During 2019, the company acquired the assets of Innerspace, which includes eight 510(k) FDA-cleared Hummingbird products, and DermaPort, a 510(k) FDA-cleared product for vascular access.

## Sustainability

IRRAS' environmental impact is deemed to be low. The choice of products, services, and suppliers is taken into account in order to achieve an efficient use of resources in areas such as health and safety, energy consumption, carbon emissions, water consumption and air pollution and to minimize any negative environmental footprint. IRRAS works proactively to reduce the company's negative environmental impact and to develop as a sustainable company. The company's objective is to contribute to sustainable development, and it thus works proactively to improve its environmental performance insofar as this is economically feasible.

IRRAS' sustainability strategy rests on two main pillars:

- (1) Commitment to patients by focusing on filling the apparent patient need of reliable and relevant access to the IRRAS system and (2) Leveraging our vast in-house know-how and experience to continue developing the product to secure future patient needs is an integral part of our promise to serve the market sustainably.
- Taking responsibility for the environment that IRRAS can influence directly or indirectly. By continuously focusing on strong business ethics, actively focusing on building a workplace where staff and associated organizations can thrive and serve as a role model IRRAS aims to positively influence the community and supply chain that the Company is an integral part of.

## The IRRAS share and ownership structure

In 2022, the number of shares increased by 715,332,060 ordinary shares, and as of 31 December 2022 the total number of shares amounted to 794,813,400 ordinary shares. The shares have a quota value of SEK 0.03 each. The company has not issued any Series C shares.

For the issued common shares, no differences or restrictions apply in accordance with law or the Articles of Association regarding the transferability of the shares, voting rights, rights to the company's assets or dividends.

At the turn of the year, the number of shareholders in IRRAS was 7,414 (2,803) with Spetses Investments Ltd as the majority shareholder with 29 (0) percent of the capital and the votes.

Bacara Holdings Limited had 23 (24) percent of the capital and the votes. No other shareholder owns more than 10 percent of the votes. The ten largest shareholders together account for 68 (57) percent of the capital and the votes. For more information about the IRRAS share, see pages 27–28.

IRRAS has four outstanding incentive programs for employees and key employees. The incentive programs may increase the number of shares by currently 12,309,423 ordinary shares. This amounts to 1.5% of dilution.

## Guidelines for salary and other remuneration to senior executives in company management

The following guidelines for remuneration to senior executives were approved at the 2020 Annual General Meeting and are still in effect. The guidelines apply to the CEO and other senior executives. Remuneration that is included in the guidelines shall include salary and other remuneration to senior executives. Remuneration is equated with transfers of securities and the concession of the right to acquire securities from the company in the future. The guidelines do not apply to the company's incentive programs where senior executives in company management retain the right to acquire shares in the company in the future. To give an understanding of the company's total remuneration package, the salary and other remuneration to senior executives in company management is provided in Note 10.

### The guidelines contribute to the company's business strategy, long-term interests and sustainability

The company's business strategy is to develop medical devices that create a new standard of care for haemorrhagic stroke and traumatic brain injuries. Management's task is to commercialize these new innovative devices that are based on a unique technology and make IRRAS a globally acknowledged company. The goal of the remuneration package is to enable the Group to attract and retain qualified senior executives at a reasonable cost to the company.

### Different forms of remuneration

To retain and attract competent employees as senior executives in company management, the remuneration must be competitive and based on prevailing market conditions. Remuneration consists of a fixed salary, variable remuneration and pension and other benefits. Beyond this, the Annual General Meeting can decide on long-term incentive programs such as share-based or share price-based incentive programs. The incentive program will contribute to long-term value growth.

In order to avoid encouraging the company's senior executives

to take unnecessary risks, there must be a fundamental balance between fixed and variable remuneration. Each senior executive is to be offered a market-level fixed salary based on the degree of difficulty of the work as well as the individual's experience, responsibilities, qualifications and performance. In addition, each senior executive may, from time to time, be offered variable remuneration (bonuses) to be paid in cash.

The variable remuneration is to be based on clear, predetermined, and measurable criteria and financial performance, and on business objectives that are defined in advance. Variable remuneration should also be used to promote the company's long-term value creation. Variable remuneration may not exceed 12 months' fixed salary for the CEO and 6 months' fixed salary for other senior executives in company management.

The standard age of retirement is to be 65. Pension terms are to be in accordance with market practice and based on fee-based pension schemes. Other benefits that can be provided include a company car, health programs, health insurance, life insurance and memberships.

### Termination of employment

The period of notice should normally be 6 months if the termination has been on the initiative of the company and 6 months if the termination has been on the initiative of the senior executive in company management. With reference to foreign senior executives, adjustments may be made to comply with local regulations and market conditions.

Following a potential termination of the Executive Director, the sum of the total remuneration consisting of, but not limited to, salary, severance pay, bonus, or other benefits, shall not exceed 24 fixed monthly salaries. Correspondingly, the total remuneration for other Senior Executives shall not exceed 12 fixed monthly salaries.



### Salary and terms of employment

In the preparation of these guidelines for remuneration to senior executives in company management, salary and terms of employment for the company's employees have been observed by including information about the employee's total remuneration. Additionally, the various components of the remuneration, the increase in remuneration and the rate of increase over time have been a part of the Remuneration Committee's and the Board's basis of decision when evaluating whether the guidelines for remuneration and the limitations set out herein are reasonable.

In the remuneration report, which will be prepared and presented in conjunction with the 2023 Annual General Meeting, with respect to paid remuneration as well as remuneration in arrears covered by these guidelines, the development of the disparity between the remuneration for senior executives in company management and remuneration for other employees will be reported.

### The decision-making process to determine, review, and implement the guidelines

The Board of Directors has established a Remuneration Committee whose primary tasks are to make preparations for the Board of Directors' decision to propose guidelines for remuneration for the CEO, evaluate variable remuneration for senior executives in company management, and evaluate the application of guidelines for remuneration and provisions for key individuals, as resolved on by the Annual General Meeting. The Remuneration Committee shall also monitor and evaluate the application of the guidelines for the remuneration of senior executives in company management, which the Annual General Meeting must resolve on by law, as well as the current remuneration structures and remuneration levels in the company.

The Board of Directors shall prepare a proposal for new guidelines at least every fourth year and submit it to the Annual General Meeting for decision. The CEO and other senior executives in company management do not participate in the Board of Directors'-processing of and resolutions regarding remuneration-related matters in so far as they are affected by such matters.

### Derogation from the guidelines

The Board of Directors may temporarily resolve to derogate from the guidelines, in whole or in part, if, in a specific case, there is special cause for the derogation and the derogation is necessary to serve the company's long-term interests, including its sustainability or to ensure the company's financial viability.

### Description of the company's incentive program

The company has four outstanding incentive programs, of which the first was introduced in 2016. During the year, two incentive programs expired, and one program has been added. Share options are awarded to senior executives in company management and other key individuals following approval by the Board of Directors. For more information on the company's incentive programs, refer to note 2 and 10.

### Risks and uncertainties

Like all business operations, IRRAS' operations are exposed to risks and uncertainties. In the opinion of the Board of Directors, the most important risks at present are described below.

#### Sales and market risks

The company's future sales depend on its success with current and new customers. If the company fails to attract and retain new customers or experience a delayed market adoption, this could negatively affect the company's future development, growth and financial position.

The company is also subject to geopolitical risks such as, but not limited to, political upheaval in countries where IRRAS does business, and unexpected global or regional epidemics.

### High barriers of entry

IRRAS target market is traditionally conservative characterized by high barriers of entry for new providers. The Company recognizes that this effect is magnified by the need for the end users to break away from previous ways of working – even if user acknowledges that the efficacy of using the IRRAS systems is better than using traditional or alternative methods. Should IRRAS fail in convincing and converting new users at the projected rate, there is a risk that the Company fails to penetrate the market at a rate that is commercially viable; an outcome that could threaten the profitability and ultimately the viability of the Company.

### Regulatory approval

IRRAS is exposed to regulatory decisions such as the permits required to commercialize pharmaceutical equipment and regulatory changes with regard to pricing, reimbursement and discounting of, or altered conditions for regulatory guidelines for medical devices such as the IRRAS systems. If IRRAS does not obtain future clearance from government authorities or cannot maintain its existing clearances, this will negatively impact its operations and could potentially threaten its existence. There is also a risk that the requirement for products previously approved is altered. Should such a risk materialize, there is a risk that the Company is adversely affected while the compliance shortcoming is rectified. There is also a risk that the company will fail to become compliant again which could result in withdrawal from certain markets or prohibit sales for certain indications, which in turn could affect the Company's situation adversely.

### Dependence on a specific product

The company has invested considerable resources in the development of IRRAS systems and expanding the use of them in new geographical locations and for alternative indications is dependent on the confirmation of positive results from clinical studies and statement of key opinion leaders. A setback in the development, adoption rate of physicians, delays, rejections, inconclusive or insufficient data from clinical studies, or if sales of the approved indication are lower than anticipated could adversely impact the company's operations, financial position and earnings.

### Risk related to competitors

IRRAS' competitors include international pharmaceutical companies and biotech companies. Some competitors have substantial financial, technical and staffing resources as well as considerable manufacturing, distribution, sales and marketing capacities. There is also a risk that the Company's products may be subject to competition from entirely new product concepts that provide greater added value to patients.

There is a risk that competitors could develop technology and products that prove to be superior to IRRAS' technology and products and that IRRAS' sales could therefore decline.

### Risks related to product quality from a customer perspective

There is always a risk that the product does not meet customer expectations. Despite applying far reaching quality processes that aims to ensure a high and even quality level there is a risk that customers experience what they perceive as shortcomings in quality resulting in an elevated risk of them choosing other suppliers. Should this risk materialize, it could lead to lower sales and profitability.

### Macroeconomic development/change management/demand readiness

The company's future success depends in part on its ability to adapt an everchanging macroeconomic development and be sufficiently agile in its cost base and business models such as, but not limited to, changes in the market conditions for key segments and/or indications, and significantly increasing prices on key components.

### Development risks

There is always a risk that current and future R&D projects may be delayed, become more costly or prove to be unsuccessful. This could impact the company negatively.

### Risk of impairment of capitalized expenditures

IRRAS reports capitalized expenditures less associated depreciation and impairments. Capitalization is based on a defined set of criteria. There is hence a risk that costs forecasted to be capitalized have to be expensed if the criteria are not fulfilled, consequently affecting the financial statements adversely.

All capitalized assets are continuously tested for impairment. Should any such asset at any point be deemed to be unable to generate future revenue streams, it will be impaired, consequently affecting the financial statements adversely.

### Risks related to studies

Running studies carries a number of risks where only some of them are within IRRAS realm of control. It can be difficult to predict with any certainty when planned clinical studies can be started or when ongoing studies can be completed since these are circumstances that are affected by several factors beyond IRRAS control, for example, regulatory approval, ethical review, access to patients and clinical study units, and the implementation of the clinical study at the study unit. It is also difficult to accurately predict the costs associated with such studies. The actual costs for carrying out a study may significantly exceed the estimated and budgeted costs. Further, the outcome of any study could potentially show unfavorable results – or contradictory results at different clinics – if the use of the equipment

has not followed the prescribed protocol or simply due to human error.

Clinical studies may also give rise to results that do not confirm the intended treatment efficacy or an acceptable safety profile due to undesirable side effects or an unfavorable risk-benefit assessment of the product.

### Business interruptions

Several unforeseen events could potential interruptions and higher costs in the supply chain and manufacturing flow, causing delays – and in a worst-case scenario, non-delivery to customers. IRRAS has prepared a number of back up solutions, but there is always a risk that e.g., issues resulting from the anticipated move could cause business interruptions no matter how well planned that move is from IRRAS side. Should such a risk materialize it could have negative impact on the Company's financial position and statements.

### Supplier risks

IRRAS relies on third-party contract manufacturers and an extensive raw material supply chain. The COVID-19 pandemic has stressed the global supply chain as shipping lead times and raw material availability have been negatively impacted. IRRAS has mitigated supply disruptions to date and continues to take proactive steps with vendors to ensure required production demand can be met. While IRRAS remains focused on meeting all required inventory needs, continued supply chain disruptions could result in unexpected product availability impact.

### Regulatory compliance relating to e.g., data privacy and good business ethics

Failure to comply with applicable laws, rules and regulations, including anti-bribery, anti-corruption, information security or privacy legislation, may result in civil and/or criminal law cases and/or regulatory sanctions, fines or penalties, and affect reputation, business or financial results. Since IRRAS to an extent depend on external parties, they are also encompassed by this risk.

### Risks related to protecting the company's intellectual property or infringements of third-party patents

The company's position with respect to patent law in the industry for medical devices is uncertain and involves complex medical, legal and technical assessments that can give rise to uncertainties regarding the validity, scope and priority of a certain patent. There is a risk that the company may be unable to develop products that are patentable or to obtain the necessary patent protection, that the patent may not have a sufficient scope to adequately protect against competitors with similar technologies or products, or that it may not be possible to maintain the patents granted. If IRRAS were to use intellectual property that belongs, or is claimed to belong, to another party, the holder of the patent could initiate an intellectual property infringement proceeding against the company.

### Litigation and other claims

IRRAS may at some point be involved in litigation, including for example product liability claims or commercial disputes. Such events could lead to considerable costs for damages, legal fees and temporary or permanent bans on the marketing of certain medicines, and this could have a material adverse effect on the business and financial position.

### Dependence on key individuals

IRRAS has a specific high-tech focus and is dependent on recruiting and retaining personnel. Should IRRAS lose key employees, or fail to recruit new qualified employees, this could negatively impact the company.

### Risks related to IT

IRRAS is exposed to the risk of system failures, security breaches, viruses and other forms of issues relating directly or indirectly to the Company's IT infrastructure. In spite of what is currently deemed to be adequate investments in security and back-up solutions, any problems related to the IT infrastructure could have adverse effects on the Company's operations and financial position.

### Risks relating to cyber security

In spite of continuous awareness and implementation of what is currently deemed to be an adequate cyber security solution, there is always a risk that security deficiencies lead to IT downtime and potentially loss of data. Any such breach of security could affect the financial viability of the company adversely.

### Currency risks

The Group is exposed to currency risks in the form of transaction exposure and translation exposure. As long as the key subsidiaries in the US and Germany do not provide a profit, they are dependent on funding from the Parent Company. Since the funds in the Parent Company are denominated in SEK while key operations are denominated in USD and EUR respectively, the transaction exposure is relatively high. Since revenue and expenses for the German subsidiary are primarily in EUR, and the US subsidiary's revenue and expenses are primarily in USD, some of the exposure is mitigated.

Translation exposure is relatively high. The consolidation of income statements and balance sheets in the Group entails an exposure to currency rate fluctuations in SEK vs the operational currencies USD (for the operations of the US subsidiary) and EUR (for the operations of the German subsidiary). At present, the Group does not use derivatives to hedge its exposure to currency risks. Currency rate fluctuations could negatively impact the company's continued development, growth and financial position.

### Risks related to historic losses

IRRAS remains a young company which started as a development company and has been forced to adjust to changing needs and insights. The Company has yet to show a profit. There is a risk that the Company's projects and subsequent commercialization strategies prove to be fruitless, driving the need for external financing longer than expected. In the event that the Company would not reach profitability, it might need to restructure parts or all of its operations, find alternative financing, apply for restructuring or as a last resort bankruptcy.

### Going concern

The company's available cash and cash equivalents is not sufficient to cover the planned operations in the next 12 months. In light of this, work is underway on possible financial solutions, and the Board considers that the prospects are good to finance the company's operations. However, if sufficient financing is not obtained, there is a risk that conditions for going concern are not fulfilled. Overall, this implies that there are circumstances that may give rise to significant doubts about the company's ability to continue to operate.

### Risk of trading in the share

IRRAS share is traded on Nasdaq main market. The price to which the share has been traded has historically been volatile and the trading volume has from time to time been limited. The liquidity of the share is driven by factors that are directly related to IRRAS, but also by factors beyond IRRAS control such as, but not limited to, the macroeconomic climate, industry factors, interest rates etc. There is, hence, a risk that investors in the Company are not able to sell their shares when they want to and/or at a price they deem reasonable.

### Risk related to product liability requirements

Since the company develops and sells medical devices, the company could be exposed to liability requirements. A risk of product liability requirements could arise in conjunction with manufacturing, clinical studies, inappropriate handling, and sales and marketing of products. Given the nature and scope of the operations, the company's management is of the opinion that the current insurance coverage is adequate. However, the company will need to continuously review its insurance coverage which might show to be inadequate such that insurance coverage and payout amounts will be subject to limitations. Accordingly, there are no guarantees that IRRAS' insurance coverage will be adequate to fully cover any future legal requirements, which could adversely impact the Company's operations and earnings.



## Tax

IRRAS is subject to complex tax laws in many countries, jurisdictions and operations include cross-border transactions. Changes in tax laws or challenges to the tax position could adversely affect the business and have significant cash-flow and regulatory implications. In spite of IRRAS's efforts to adhere to all applicable laws and regulations, there is always a risk that costly audits result in expensive processes independent of IRRAS in the end having been found to have acted wrongful or correct.

The Company might also experience altered transfer pricing regulations, and localization/increased taxes requiring local presence driving or making a certain country or region unprofitable forcing IRRAS to exit which could adversely affect the Company's financial position.

## Corporate governance report

IRRAS AB (publ) applies the Swedish Corporate Governance Code. The Corporate governance report is an integrated part of the Administration Report and is to be found on pages 68–71. The Group's system for internal control and risk management is described in the section "Internal control report" in the corporate governance report.

## Significant events after the end of the 2022 fiscal year

### Superiority of IRRAf<sup>low</sup> system confirmed in head-to-head clinical study

Neurosurgeons from the University at Buffalo published results of their comparative clinical study in the Operative Neurosurgery journal that compared outcomes when treating chronic subdural hematoma patients with IRRAf<sup>low</sup> against passive drainage alone. The study demonstrated that IRRAf<sup>low</sup> treatment resulted in faster hematoma clearance and a reduction in catheter-related infections, leading to favorable clinical outcomes and lower complication and revision rates.

### Proposed appropriation of the company's earnings

The Board proposes that the unappropriated earnings as of December 31, 2022 – SEK 402,361,523 – to be carried forward.

## Consolidated statement of profit or loss

AMOUNTS IN TSEK	Note	2022	2021
Net revenue	5	39,998	22,386
Cost of goods sold		-31,633	-50,365
<b>Gross loss</b>		<b>8,365</b>	<b>-27,979</b>
Other operating income	7	658	8,097
Marketing and sales costs		-63,205	-53,065
Administrative costs	9	-66,544	-39,505
Research and development costs		-46,182	-23,679
Other operating expenses	7	-1,181	-391
<b>Operating loss (EBIT)</b>	<b>6</b>	<b>-168,090</b>	<b>-136,522</b>
Financial income		2,275	299
Financial expenses		-765	-112
<b>Loss from financial items</b>	<b>8</b>	<b>1,510</b>	<b>187</b>
<b>Loss before tax</b>		<b>-166,580</b>	<b>-136,335</b>
Income tax	12	-24	-
<b>Net loss for the year</b>		<b>-166,604</b>	<b>-136,335</b>
Earnings per share before and after dilution, SEK	26	-0.52	-1.89
Average number of shares before dilution		320,538,445	72,316,866
Average number of shares after dilution		320,538,445	72,316,866

## Consolidated statement of profit or loss and other comprehensive income

AMOUNTS IN TSEK	Note	2022	2021
<b>Net loss for the year</b>		<b>-166,604</b>	<b>-136,335</b>
<b>Other comprehensive income for the year:</b>			
<i>Items that may be recognized to profit and loss</i>			
Exchange differences on the translation of foreign operations		1,113	2,851
<b>Other comprehensive income for the year, net after tax</b>		<b>1,113</b>	<b>2,851</b>
<b>Total comprehensive income for the year</b>		<b>-165,491</b>	<b>-133,484</b>

## Consolidated statement of financial position

AMOUNTS IN TSEK	Note	2022-12-31	2021-12-31
<b>ASSETS</b>			
<b>Non-current assets</b>			
Capitalized development expenses	13	20,321	28,592
Patents	13	5,713	6,057
Tangible assets	14	1,860	1,103
Right-of-use assets	14	6,891	4,038
Financial investments	15	–	–
<b>Total non-current assets</b>		<b>34,785</b>	<b>39,790</b>
<b>Current assets</b>			
Inventories	16	29,144	12,368
Advance payments to suppliers		–	1,007
Trade receivables		29,407	16,262
Other receivables	17	8,956	1,631
Prepaid expenses and accrued income	18	67	5,680
Current financial investments	15	–	–
Cash and cash equivalents		69,259	55,855
<b>Total current assets</b>		<b>136,833</b>	<b>92,804</b>
<b>TOTAL ASSETS</b>		<b>171,618</b>	<b>132,594</b>
<b>EQUITY</b>			
Share capital		23,844	2,384
Other paid-in capital		965,513	787,811
Reserves		–2,317	–3,430
Retained earnings, including profit/loss for the year		–840,998	–675,132
<b>Total equity</b>		<b>146,043</b>	<b>111,633</b>
<b>LIABILITIES</b>			
<b>Non-current liabilities</b>			
Lease liabilities		5,920	161
<b>Total non-current liabilities</b>		<b>5,920</b>	<b>161</b>
<b>Current liabilities</b>			
Lease liabilities		424	3,515
Trade payables		7,085	5,459
Other liabilities		701	2,423
Accrued expenses and deferred income	20	11,445	9,403
<b>Total current liabilities</b>		<b>19,655</b>	<b>20,800</b>
<b>TOTAL EQUITY AND LIABILITIES</b>		<b>171,618</b>	<b>132,594</b>

## Consolidated statement of changes in equity

AMOUNTS IN TSEK	Note	Share capital	Other paid-in capital	Reserves	Retained earnings, including net loss for the year	Total equity
<b>Opening balance as of 2021-01-01</b>		<b>1,988</b>	<b>726,668</b>	<b>-6,281</b>	<b>-540,023</b>	<b>182,353</b>
<b>Comprehensive income</b>						
Net loss for the year					-136,335	-136,335
Other comprehensive income						
Exchange difference on the translation of foreign operations				2,851		2,851
<b>Total comprehensive income</b>		<b>-</b>	<b>-</b>	<b>2,851</b>	<b>-136,335</b>	<b>-133,484</b>
<b>Transactions with shareholders</b>						
Incentive programs	10				1,195	1,195
New share issues		396	65,604			66,000
Issue expenses			-4,461		31	-4,430
<b>Total</b>		<b>396</b>	<b>61,143</b>	<b>-</b>	<b>1,226</b>	<b>62,765</b>
<b>Closing balance as of 2020-12-31</b>	<b>19</b>	<b>2,384</b>	<b>787,811</b>	<b>-3,430</b>	<b>-675,132</b>	<b>111,633</b>
<b>Opening balance as of 2022-01-01</b>		<b>2,384</b>	<b>787,811</b>	<b>-3,430</b>	<b>-675,132</b>	<b>111,633</b>
<b>Comprehensive income</b>						
Net loss for the year					-166,604	-166,604
<b>Other comprehensive income</b>						
Exchange differences on the translation of foreign operations				1,113		1,113
<b>Total comprehensive income</b>		<b>-</b>	<b>-</b>	<b>1,113</b>	<b>-166,604</b>	<b>-165,491</b>
<b>Transactions with shareholders</b>						
Incentive programs					739	739
New share issues		21,460	193,140			214,600
Issue expenses			-15,438			-15,438
<b>Total</b>		<b>21,460</b>	<b>177,702</b>	<b>-</b>	<b>739</b>	<b>199,901</b>
<b>Closing balance as of 12/31/2022</b>		<b>23,844</b>	<b>965,513</b>	<b>-2,317</b>	<b>-840,997</b>	<b>146,043</b>



## Consolidated statement of cash flows

AMOUNTS IN TSEK	Note	2022	2021
<b>Cash flow from operating activities</b>			
Operating loss (EBIT)		-168,090	-136,522
Adjustments for non-cash items			
- Reversals of depreciation and amortization		17,302	16,819
- Other non-cash items		14,559	-1,923
- Incentive programs	10	625	1,195
Interest received		0	1
Interest paid		-602	-151
Tax paid		-24	-
<b>Cash flow from operating activities before changes in working capital</b>		<b>-136,230</b>	<b>-120,581</b>
<b>Changes in working capital</b>			
Increase/decrease in inventory		-29,157	1,970
Increase/decrease in operating receivables		-7,648	-12,900
Increase/decrease in operating liabilities		-2,800	971
<b>Cash flow from operating activities</b>		<b>-175,835</b>	<b>-130,540</b>
<b>Cash flow from investing activities</b>			
Investments in intangible assets		-2,083	-6,707
Investments in tangible assets		-1,361	-565
Sales of financial investments		-	-
<b>Cash flow from investing activities</b>		<b>-3,444</b>	<b>-7,272</b>
<b>Cash flow from financing activities</b>			
New share issues		214,600	66,000
Issue expenses		-15,438	-4,461
Loans from credit institutions		-	-
Amortization of lease liabilities		-5,165	-4,320
<b>Cash flow from investing activities</b>		<b>193,997</b>	<b>57,219</b>
<b>Cash flow for the period</b>		<b>14,718</b>	<b>-80,593</b>
Cash and cash equivalents at the beginning of the period		55,855	135,604
Effects of exchange rate changes on cash and cash equivalents		-1,314	844
<b>Cash and cash equivalents at the end of the period</b>		<b>69,259</b>	<b>55,855</b>

## Parent Company income statement

AMOUNTS IN TSEK	Note	2022	2021
Net revenue		414	742
Cost of goods sold		-10,354	-11,953
<b>Gross loss</b>		<b>-9,940</b>	<b>-11,211</b>
Other operating income		25	282
Marketing and sales costs		-7,784	-6,742
Administrative costs		-26,623	-20,289
Research and development costs		-432	35
Other operating expenses		-28	-150
<b>Operating loss (EBIT)</b>		<b>-44,782</b>	<b>-38,076</b>
Write down of shares in subsidiaries		-16,931	-220,784
Interest income and similar items		2,680	350
Interest expense and similar items		-405	-
<b>Loss from financial items</b>		<b>-14,657</b>	<b>-220,176</b>
<b>Loss before tax</b>		<b>-59,438</b>	<b>-258,252</b>
Income tax for the year		-	-
<b>Net loss for the year</b>		<b>-59,438</b>	<b>-258,252</b>

## Parent Company statement of profit or loss and other comprehensive income

AMOUNTS IN TSEK	Note	2022	2021
Net loss for the year		-59,438	-258,252
Other comprehensive income for the year, net after tax		-	-
<b>Total comprehensive income for the year</b>		<b>-59,438</b>	<b>-258,252</b>

## Parent Company balance sheet

AMOUNTS IN TSEK	Note	2022-12-31	2021-12-31
<b>ASSETS</b>			
<b>Non-current assets</b>			
Intangible assets			
Capitalized development expenses	13	20,321	28,592
Patents	13	949	1,266
<b>Total intangible assets</b>		<b>21,270</b>	<b>29,858</b>
<b>Tangible assets</b>			
Equipment, tools and plant	14	18	97
<b>Total tangible assets</b>		<b>18</b>	<b>97</b>
<b>Financial assets</b>			
Participations in Group companies	23	341,947	227,816
Receivables, Group companies	11	34,374	13,685
Long-term financial investments	15	–	–
<b>Total financial assets</b>		<b>376,321</b>	<b>241,501</b>
<b>Total non-current assets</b>		<b>397,609</b>	<b>271,456</b>
<b>Current assets</b>			
<b>Current receivables</b>			
Trade receivables			
Receivables, Group companies	11	414	173
Other receivables	17	850	808
Prepaid expenses and accrued income	18	73	983
<b>Total current receivables</b>		<b>1,337</b>	<b>1,964</b>
<b>Current financial investments</b>	15	–	–
<b>Cash at bank</b>		<b>67,430</b>	<b>45,836</b>
<b>Total current assets</b>		<b>68,768</b>	<b>47,800</b>
<b>TOTAL ASSETS</b>		<b>466,377</b>	<b>319,256</b>

AMOUNTS IN TSEK	Note	2022-12-31	2021-12-31
<b>TOTAL EQUITY AND LIABILITIES</b>			
<b>Equity</b>			
<b>Restricted equity</b>			
Share capital	19	23,844	2,384
Reserve for development expenses		27,979	27,979
<b>Total restricted equity</b>		<b>51,823</b>	<b>30,363</b>
<b>Unrestricted equity</b>			
Share premium reserve		931,936	754,266
Retained earnings		–470,136	–212,512
Net loss for the year		–59,438	–258,252
<b>Total unrestricted equity</b>		<b>402,362</b>	<b>283,501</b>
<b>Total equity</b>		<b>454,185</b>	<b>313,864</b>
<b>Current liabilities</b>			
Trade payables		527	925
Payables, Group companies	11	6,586	104
Other liabilities		309	402
Accrued expenses and deferred income	20	4,770	3,960
<b>Total current liabilities</b>		<b>12,192</b>	<b>5,391</b>
<b>TOTAL EQUITY AND LIABILITIES</b>		<b>466,377</b>	<b>319,256</b>

## Parent Company statement of changes in equity

AMOUNTS IN TSEK	Note	Restricted equity			Unrestricted equity		Total equity
		Share capital	Reserve for development expenses	Share premium reserve	Retained earnings	Net loss for the year	
<b>Opening balance as of 2021-01-01</b>		<b>1,988</b>	<b>30,589</b>	<b>693,092</b>	<b>-175,094</b>	<b>-41,224</b>	<b>509,352</b>
<b>Comprehensive income</b>							
Appropriation of earnings as decided at AGM					-41,224	41,224	
Net loss for the year						-258,252	-258,252
<b>Total comprehensive income</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-41,224</b>	<b>-217,029</b>	<b>-258,252</b>
<b>Transactions with shareholders</b>							
Incentive programs					1,195		1,195
New share issues		396		65,604			66,000
Issue expenses				-4,430			-4,430
<b>Total transactions with shareholders</b>		<b>396</b>	<b>-</b>	<b>61,174</b>	<b>1,195</b>	<b>-</b>	<b>62,765</b>
Dissolution, reserve for development expenses			-2,611		-2,611		-
<b>Closing balance as of 2021-12-31</b>		<b>2,384</b>	<b>27,979</b>	<b>754,266</b>	<b>-212,512</b>	<b>-258,252</b>	<b>313,864</b>
<b>Opening balance as of 2022-01-01</b>		<b>2,384</b>	<b>27,979</b>	<b>754,266</b>	<b>-212,512</b>	<b>-258,252</b>	<b>313,864</b>
<b>Comprehensive income</b>							
Appropriation of earnings as decided at AGM					-258,252	258,252	0
Net loss for the year						-59,438	-59,438
<b>Total comprehensive income</b>		<b>-</b>	<b>-</b>		<b>-258,252</b>	<b>198,814</b>	<b>-59,438</b>
<b>Transactions with shareholders</b>							
Incentive programs					628		628
New share issues		21,460		193,140			214,600
Issue expenses				-15,470			-15,470
<b>Total transactions with shareholders</b>		<b>21,460</b>	<b>-</b>	<b>177,670</b>	<b>628</b>	<b>-</b>	<b>199,758</b>
Dissolution, reserve for development expenses							-
<b>Closing balance as of 2021-12-31</b>		<b>23,844</b>	<b>27,979</b>	<b>931,936</b>	<b>-470,136</b>	<b>-59,438</b>	<b>454,185</b>



## Parent Company statement of cash flows

AMOUNTS IN TSEK	Note	2022	2021
<b>Cash flow from operating activities</b>			
Operating loss (EBIT)		-44,781	-38,076
Adjustments for non-cash items			
- Reversals of depreciation and amortization		10,750	11,832
- Incentive programs	10	81	365
Interest received		-2,743	-11
Interest paid		-	-
<b>Cash flow from operating activities before changes in working capital</b>		<b>-36,693</b>	<b>-25,890</b>
<i>Changes in working capital</i>			
Changes in working capital		627	-116
Increase/decrease in other current receivables		5,140	2,485
<b>Total changes in working capital</b>		<b>5,767</b>	<b>2,369</b>
<b>Cash flow from operating activities</b>		<b>-30,927</b>	<b>-23,522</b>
<b>Cash flow from investing activities</b>			
Participations in subsidiaries		-144,558	-102,389
Investments in intangible assets		-2,083	-6,707
Sales of financial investments		-	-
Repayments of loans to subsidiaries		-	-
<b>Cash flow from investing activities</b>		<b>-146,641</b>	<b>-109,096</b>
<b>Cash flow from financing activities</b>			
New share issues		214,600	66,000
Issue expenses		-15,438	-4,461
<b>Cash flow from financing activities</b>		<b>199,162</b>	<b>61,539</b>
<b>Cash flow for the period</b>		<b>21,595</b>	<b>-71,078</b>
Cash and cash equivalents at the beginning of the period		45,836	116,914
<b>Cash and cash equivalents at the end of the period</b>		<b>67,430</b>	<b>45,836</b>

# Notes

## Note 1 General information

IRRAS AB (publ) is registered in Sweden and has its registered office in Stockholm. The address of its head office is Vasagatan 16, Stockholm, Sweden.

All amounts are presented in thousands of SEK (TSEK) unless otherwise stated. Figures in brackets refer to the previous year. Rounding differences may occur.

On April 26, 2023, the Board approved this Annual Report and consolidated financial statements, to be proposed for adoption at the AGM on June 7, 2023.

## Note 2 Summary of principal accounting policies

### Basis for the preparation of the financial statements

The consolidated financial statements have been prepared in accordance with the International Financial Reporting Standards (IFRS) as adopted by the EU and RFR 1 Supplementary Accounting Rules for Groups.

The Parent Company's financial statements have been prepared in accordance with RFR 2 Accounting for Legal Entities and the Swedish Annual Accounts Act. Where the Parent Company applies different accounting policies than the Group, this is stated separately at the end of this accounting policy section.

The principal accounting policies applied when preparing these consolidated financial statements are set out below.

The preparation of financial statements in accordance with the IFRS requires the use of significant estimates for accounting purposes. Management is also required to make certain judgements when applying the Group's accounting policies. The areas involving a high degree of judgement or complexity, or where the assumptions and estimates are material to the consolidated financial statements, are stated in Note 4.

### New and amended standards applied by the Group in the current period

No new or amended standards have had a material impact on the Group's financial statements.

Standards, amendments and interpretations of existing standards are active from 2022 or later that are expected to have or are already having an impact on the financial statements.

Amendments to IFRS 3, IAS 16 and IAS 37 were introduced as of 2022.

No future or amended standards are expected to have a material impact on the Group's financial statements.

### Consolidated financial statements

#### Subsidiaries

Subsidiaries are all the companies where the Group has a controlling influence. The Group controls an entity if it is exposed to, or has the right to receive, variable returns from its investment in the entity, and is able to effect those returns through its influence over the entity. Subsidiaries are included in the consolidated financial statements from the date on which control was transferred to the Group. Subsidiaries are removed from the consolidated financial statements from the date on which control ceases.

### Segment reporting

As IRRAS' equity instruments is traded in a public market, IFRS 8 Operating Segments is applied. An operating segment is a part of a company whose operating performance is regularly reviewed by the Group's "Chief Operating Decision Maker", who decides on the resources to be allocated to the segment and evaluates the segment's performance.

IRRAS' activities are currently focused on development and sales in the IRRAS flow product area. Management has therefore decided to monitor the business as a single reporting entity. The company therefore has only one segment for the time being, which is fully reflected in the Group's financial statements. The chief operating decision makers are considered to be the Chief Executive Officer and Senior Executive Team.

### Earnings per share

Earnings per share have been calculated as the net profit/loss divided by the average number of shares. Where a loss is reported, the diluted earnings per share are equal to the basic earnings per share. When a profit is made in the future, the options may have a dilutive effect.

### Foreign currency translation

#### Functional and reporting currency

The items included in the financial statements for the Group's various entities are measured in the currency of the economic environment in which each entity principally operates (the functional currency). The reporting currency used in the consolidated financial statements is the Swedish krona (SEK), which is also the Parent Company's functional and reporting currency.

#### Transactions and balance sheet items

Foreign currency transactions are translated into the functional currency at the exchange rates prevailing on the transaction date. Foreign exchange gains/losses arising from the settlement of such transactions, and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies, are recognized in the income statement. Exchange differences on loans and borrowings are recorded in net financial income, while other exchange differences are included in operating profit/loss.

#### Group companies

The earnings and financial position of all Group companies that have a functional currency other than the reporting currency are translated into the Group's reporting currency as follows:

- the assets and liabilities in each balance sheet are translated at the exchange rate on the balance sheet date;
- the income and expenses in each income statement are translated at the average exchange rate (if this average rate is a reasonable approximation of the cumulative effect of the exchange rates prevailing on the transaction date, otherwise the income and expenses are translated at the exchange rate on the transaction date); and
- any exchange differences arising are recognized as a separate component of other comprehensive income.

On consolidation, exchange differences arising from the translation of net investments in foreign operations are taken to equity. On the disposal of a foreign operation, in whole or in part, the exchange differences recognized in equity are recorded in the income statement in capital gains/losses.

### Intangible assets

#### Capitalized development costs

Development costs that are directly attributable to the development and testing of identifiable products adapted for IRRAS are recognized as intangible assets if they have probable economic benefits.

Capitalized development costs are reported at acquisition value less the accumulated depreciation and any impairment losses. Assets are depreciated on a straight-line basis over their estimated useful lives as of the date the product is fully ready for use. Assets' residual values and useful lives are tested at each reporting date and adjusted as needed.

Residual values and useful lives of the assets are tested at each reporting date and adjusted as required. Capitalized development expenditure includes subcontracting and personnel costs incurred in the development of the retained asset.

Development costs are reported as intangible assets when the following conditions are met:

- It is technically feasible to complete the asset and there are adequate resources to do so
- The Company intends to complete it
- The Company can demonstrate that the asset will generate future economic benefits
- The costs attributable to the asset during its development can be reliably calculated.

Other development costs that do not meet these criteria are expenses as they arise.

Capitalized development costs are recognized in intangible assets and amortized from the date when assets are ready for use.

Development costs that have been previously expensed are not reported as assets in subsequent periods. An assessment is made of expected useful life upon completion.

#### Patents

Patents acquired separately are stated at cost. Patents acquired through business combinations are stated at fair value on the acquisition date. Patents have a finite useful life and are recognized at cost less accumulated amortization and any impairment losses. Patent costs incurred are recognized as intangible assets only when patents are granted.

#### Amortization period for intangible assets

Patents	4 to 18 years
Capitalized expenditure on development and similar projects	5 years

#### Tangible assets

All tangible assets are stated at cost less depreciation. The cost includes expenditure directly attributable to the acquisition of the asset.

The Group's tangible assets consist of equipment. Additional expenditure is added to the carrying amount of an asset, or recognized as a separate asset, as appropriate, only when it is probable that the future economic benefits associated with the asset will flow to the Group and the cost of the asset can be reliably measured. The carrying amount of replaced parts is removed from the balance sheet. All other repairs and maintenance are expensed in the income statement in the period in which they occurred.

Tangible assets are depreciated on a straight-line basis, in order to spread their acquisition cost down to their estimated residual value over their estimated useful lives, as follows:

#### Depreciation period for tangible assets

Equipment, tools and plant 3 to 5 years

Gain and losses on disposals for disposals are determined by comparing the sales proceeds and the carrying amount, and are recognized in other operating income and operating expenses in profit and loss.

#### Leases

When an arrangement is entered into, the Group assesses whether the arrangement is, or contains, a lease and should be accounted for in accordance with IFRS 16 Leases. An arrangement is, or contains, a lease if it assigns the right to control an identified asset's use for a specified period in return for consideration. An arrangement may contain both lease and non-lease components. The Group allocates the contractual consideration to lease and non-lease components based on their relative stand-alone prices. For lease payments relating to real estate of which the Group is the lessee, it has been decided not to separate the lease and non-lease components and instead to account for them as a single lease component. The leases do not contain any specific conditions or restrictions, except that the lessor retains the rights in respect of the pledged leased assets. The leased assets may not be used as collateral for loans.

Assets and liabilities arising from leases are initially recognized at their present value. The lease liabilities include the present value of the following lease payments:

- fixed payments after the deduction of any lease incentives received
- variable lease payments linked to an index or a price, initially measured using the index or price on the commencement date
- the amounts expected to be paid by the lessee under residual value guarantees
- the exercise price of any option to buy if the Group is reasonably certain to exercise such an option
- the penalties payable on the termination of the lease, if the lease term reflects that the Group will exercise an option to terminate the lease.

The lease payments that will be made for reasonably certain renewal options are also included in the valuation of the liability.

Lease payments are discounted at the implied interest rate for the lease, or at the marginal lending rate, which is the interest rate that would be payable in order to borrow the funds necessary to purchase an asset of a similar value to the right-of-use asset in a similar economic environment with similar terms and collateral. If changes are made to the lease, the lease liability is revalued and adjusted against the right-of-use asset.

Right-of-use assets are valued at cost and include the following:

- the amount of the lease liability originally measured as
- the lease payments made on or before the commencement date, net of any lease incentives received
- the initial direct costs
- the cost of restoring the asset to the condition specified under the terms of the lease.

Right-of-use assets are amortized on a straight-line basis over the shorter of the useful life and the lease term. If the Group is reasonably certain to exercise a purchase option, the right-of-use asset is amortized over the useful life of the underlying asset. Payments for short-term arrangements relating to premises and vehicles, and all low-value leases, are charged to the income statement on a straight-line basis as with previous operating leases. Short-term arrangements are leases with a term of 12 months or less. Low-value leases include office equipment.

#### Impairment of non-financial assets

Tangible assets and amortizable intangible assets are assessed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognized in the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and its value in use. When assets are assessed for impairment, the assets are grouped together at the lowest levels for which there are separate identifiable cash flows (cash-generating units).

An impairment loss is reversed if there is an indication that the impairment no longer exists and there has been a change in the assumptions used to calculate the recoverable amount.

#### Impairment of tangible assets

The useful lives of assets are reviewed on each balance sheet date and adjusted if necessary. The carrying amount of an asset is immediately written down to its recoverable amount if the asset's carrying amount exceeds its estimated recoverable amount.

#### Impairment of intangible assets

Intangible assets are tested for impairment quarterly.

#### Financial instruments

##### General principles

Purchases and sales of financial assets and liabilities are recognized on the issue date. Other Financial assets and liabilities are recognized when the Group is included in the terms of an agreement. Financial assets and liabilities that are not recognized at fair value through profit or loss are initially recognized at fair value plus transaction costs. Financial assets and liabilities at fair value through profit or loss are initially recognized at fair value, while the related transaction costs are recognized in the income statement. Financial assets are derecognized when the right to receive cash flows from instruments has lapsed or been transferred and the Group has transferred substantially all the risks and rewards of ownership. Financial liabilities are derecognized when the obligations under contracts have been discharged or otherwise extinguished.

Trade receivables, trade payables and other financial liabilities are stated after the acquisition date at amortized cost using the effective interest method. The fair value of borrowings is calculated, for disclosure purposes, by discounting the future contracted cash flows at the current market rate of interest available to the Group for similar financial liabilities.

##### Classification of financial assets and liabilities

The Group classifies financial assets and liabilities in accordance with IFRS 9 Financial Instruments. The classification of financial assets and liabilities determines how they are measured and recognized. The Group's policies for the classification and measurement of financial assets are based on an assessment of both (i) the company's business model for the management of financial assets, and (ii) the characteristics of the contractual cash flows from the financial assets.

Financial assets measured at amortized cost are debt instruments that are managed with the aim of realizing the instruments' cash flows by receiving contractual

cash flows consisting solely of principal and interest on the principal amounts outstanding. The following financial assets are measured at amortized cost as the assets are held as part of a business model whose aim is to hold financial assets for the purpose of collecting contractual cash flows, and the assets' contractual terms give rise to cash flows at specified times that consist solely of payments of principal and interest on the principal amounts outstanding;

- Financial investments
- Other receivables
- Accrued income
- Short-term investments
- Cash and cash equivalents

The Group does not currently hold any financial assets that are measured at fair value through profit or loss or at fair value through other comprehensive income.

All of the Group's financial liabilities, consisting of borrowings and trade payables, are classified as other financial liabilities and are measured at amortized cost.

#### Impairment of financial assets

The provision for expected credit losses is calculated and recognized for financial assets measured at amortized cost, and for financial assets measured at fair value through other comprehensive income. The Group has no financial assets measured at fair value through other comprehensive income. The provision for credit losses is initially calculated and recognized based on twelve months' expected credit losses. If the credit risk has significantly increased since a financial asset was first recognized, a provision for credit losses is calculated and recognized based on the expected credit losses for the entire remaining life of the asset. For trade receivables, which do not contain a significant financing component, a simplified approach is taken and the provision for credit losses is calculated and recognized based on the expected credit losses for the entire remaining term, whether or not the credit risk has significantly increased. Expected credit losses are calculated based mainly on historical loss data for similar receivables and counterparties. The historical information is continually evaluated and adjusted based on the current situation and the Group's expectations of future events.

#### Trade receivables

Trade receivables are initially recognized at fair value and subsequently at amortized cost using the effective interest method, including any provision for impairment. The carrying amount of trade receivables, net of any impairment, is assumed to be equal to their fair value, as this item is short-term in nature.

#### Cash and cash equivalents

Cash and cash equivalents include cash in hand, bank deposits and other short-term investments maturing three months or less after their acquisition date.

#### Share capital

Common shares are classified as equity. Transaction costs directly attributable to the issuing of new shares are recognized, net of tax, in other paid-in capital, as a deduction from the proceeds of the issue.

#### Trade payables

Trade payables are initially recognized at fair value and subsequently at amortized cost using the effective interest method. The carrying amount of trade payables is assumed to be equal to their fair value, as this item is short-term in nature.

#### Borrowings

Borrowings (borrowings from credit institutions, borrowings from related parties and other long-term borrowings) are initially recognized at fair value, net of transaction costs. Borrowings are subsequently stated at amortized cost, and any difference

between the amount received (net of transaction costs) and the amount to be repaid is recognized in the income statement over the term of the loan, using the effective interest rate method.

Borrowings are classified as current liabilities, unless the Group has an unconditional right to defer the repayment of the debt for at least 12 months after the balance sheet date.

Borrowing costs (interest and transaction costs) are recognized in the income statement in the period to which they relate. Accrued interest is recorded in borrowings in the balance sheet. As of the balance sheet date, neither the Group nor the Parent Company had any loans.

#### Inventories

IRRAS accounts for all physical inventory at standard cost. The value of the products in inventory consists of direct purchase costs, and indirect costs, such as personnel costs, depreciation and maintenance. Indirect production costs are calculated using a standard costing method.

The standard cost is re-evaluated on a quarterly basis and adjusted if underlying assumptions change. Inventory is counted fully twice a year with cycle counts done twice a year.

Changes to the method for calculating indirect production costs may have an impact on the gross margin and the overall valuation of inventory.

Inventory is evaluated quarterly to compare selling price with placed cost to determine if inventory should be accounted for as cost of goods sold or impaired.

Inventory is evaluated annually for the lower value of cost or net realizable value. An impairment loss is calculated when there is a decrease in net carrying value of the asset compared to future cash flow.

Inventory is evaluated quarterly to determine excess and obsolete, assuming a prudent 12-month durable life expectation. Adjustments vs standardized harvestability/scrap-ability percentages are made if required.

#### Current and deferred tax

The current tax expense is calculated based on the tax rules enacted, or substantively enacted, at the balance sheet date, in the countries where the Parent Company's subsidiaries operate and generate taxable income. Management regularly evaluates claims made in tax returns relating to situations where the applicable tax rules are subject to interpretation and, where deemed appropriate, recognizes provisions for the amounts likely to be due to the tax authorities.

Deferred tax is recognized in full, using the balance sheet approach, on all temporary differences arising between the value of assets and liabilities for tax purposes and their carrying amounts in the consolidated financial statements. Deferred tax is calculated based on the tax rates (and laws) that have been enacted, or substantively enacted, at the balance sheet date, and are expected to apply when the relevant deferred tax assets are realized or deferred tax liabilities are settled.

Deferred tax assets are recognized to the extent that it is probable that future taxable profits will be available against which the temporary differences can be utilized. As of the balance sheet date, the Group has not recognized any tax losses as deferred tax assets.

#### Employee benefits

##### Pension obligations

The Group has defined contribution pension plans for German, the Netherlands and Swedish residents. For its defined contribution pension plans, IRRAS pays contributions to publicly- or privately-administered pension insurance plans on a mandatory,

contractual or voluntary basis.

The Group has no further payment obligations once the contributions have been paid.

The contributions are recognized as personnel costs as employees earn them by rendering services to the company. Prepaid contributions are recognized in assets to the extent that cash repayments or reductions in future payments may flow to the Group. Costs relating to services rendered in previous periods are recognized directly in the income statement. Compensation for dismissal is directly expensed in the period in which employment ceased.

The Group does not pay pensions to, or have pension obligations towards, employees living in the US.

##### Share-based payments

The Group has share-based payment plans whereby employees render services to the company as consideration for Group equity instruments. Information about these plans is provided in Note 10.

##### Incentive programs

IRRAS has four outstanding incentive programs for employees, key personnel and Board members. The value of the employee stock option plans is recognized in personnel costs with a corresponding increase in equity. The total amount expensed is based on the estimated fair value of the options granted on the introduction of the plans and is amortized on a straight-line basis over the vesting period.

Non-market vesting conditions, such as continued employment conditions, are taken into account in the assumption regarding the number of options that are expected to vest. The options granted under some incentive programs vest over 1 and 3 years respectively, and in one case 4 years (so called 'graded vesting'). See Note 10. The cost of each sub-program is spread over the respective vesting period, meaning that the cost of each incentive program is greatest in the first year and decreases each year thereafter. At the end of each reporting period, the entity reassesses its estimates of the number of shares that are expected to vest based on the non-market vesting conditions. Any difference from the original estimates arising from the reassessment has an impact on the cumulatively recognized expense and the expense for the current period.

The fair value of the options is not revalued after the programs' inception. When the options are exercised, the company issues new shares. The payments received, net of any directly attributable transaction costs, are credited to the share capital (quota value) and other paid-in capital when the options are exercised.

Social security contributions on the benefits expected from any appreciation in value are recognized over the vesting period, taking any changes in value into account, where applicable depending on the employee's country of residence.

##### Provisions

Provisions are recognized when the Group has a legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required to settle the obligation, and the amount has been reliably estimated. No provisions are made for future operating losses. As of the balance sheet date, the Group has not recognized any provisions for individual endowment policies. Provisions are measured at the market value of the amount expected to be required to settle the obligation.

##### Revenue recognition

The Group's revenues are generated from the sale of products developed and produced within the Group.

The Group recognizes revenue from the sale of goods in line with IFRS 15

1. identify the contract with the customer
2. separate performance obligations

3. determine transaction price
4. allocate transaction price to performance obligations
5. recognize revenue when performance obligations are fulfilled

For contracts including multiple performance obligations, the transaction price is allocated to each individual performance obligation based on their stand-alone sales price. Any subsequent events directly relating to the sale are reported as a gain or loss during the period the revaluation occurs. Services delivered in excess of payment are reported as contract assets. Payments made in excess of services delivered are reported as contract liabilities.

##### Interest income

Interest income is recognized in income over the relevant period using the effective interest method.

##### Accounting policies of the Parent Company

The accounting policies of the Parent Company are substantially consistent with the Group's. The Parent Company's financial statements have been prepared in accordance with RFR 2 Accounting for Legal Entities and the Swedish Annual Accounts Act. RFR 2 sets out exemptions from and amendments to the standards issued by the IASB and the statements issued by the IFRIC. The exemptions and amendments will be applied from the date on which the legal entity applies the specified standard or statement to its consolidated financial statements.

The Parent Company uses the presentation formats set out in the Swedish Annual Accounts Act, which has implications that include a different presentation of equity.

The Parent Company does not apply IFRS 9 Financial Instruments. Financial instruments are measured at cost. The impairment testing and loss allowance policies under IFRS 9 are applied to financial assets, including amounts owed by other Group companies.

The Parent Company applies the exemption rule in RFR 2 and does not apply IFRS 16 Leases. Lease payments made as a lessee are expensed on a straight-line basis over the term of leases.

Shares in subsidiaries are reported in the parent company at acquisition value less accumulated impairments. When there is an indication that shares and investments in subsidiaries have decreased in value, their recoverable amount is calculated. If this is less than their carrying amount, an impairment loss is recognized. Impairment losses are recognized in the item Profit/ loss from investments in Group companies.

The acquisition cost of shares in subsidiaries includes transaction costs. In the consolidated financial statements, transaction expenses are expensed in the period in which they arise.

Shareholder contributions made are reported in the Parent Company as an increase in the carrying value of shares in subsidiaries and in the recipient company as an increase in equity.

Marketing contributions are recognized in the Parent Company as an increase in the carrying value of shares in subsidiaries and in the recipient company as revenue.

In the consolidated financial statements, transaction costs are expensed in the period in which they are incurred.

For the Parent Company, issues of equity instruments in connection with option plans are considered to be shareholder contributions to subsidiaries from the Parent Company, insofar as they relate to the cost of options for the subsidiaries' employees, and are therefore recognized as investments in subsidiaries rather than as personnel costs in the income statement. The investments are then assessed for impairment, like other contributions. If investments in subsidiaries need to be impaired, this results in the recognition of a financial expense in the Parent Company's income statement.



**Note 3** Financial risk management

In the course of its operations, the Group is exposed to various types of financial risks including currency risk, interest rate risk, credit risk and liquidity/financing risk. The Group's overall risk management policy focuses on the unpredictability of financial markets and seeks to minimize potential adverse effects on earnings and liquidity due to financial risks. As of December 31, 2022, the Group's financial risks were continued limited, since the business is still in a relatively early stage.

The Group's CFO is responsible for risk management, in accordance with guidelines established by the Board.

The risk function includes identifying and evaluating financial risks. The Group does not apply hedge accounting in accordance with the regulations of IAS 39.

**Currency risk**

The Group is exposed to currency risks in the form of transaction exposure and translation exposure. Transaction exposure means the exposure to currency risk that arises in conjunction with deposits and payments in foreign currencies. Translation exposure means the exposure to currency risks that arises upon the translation of the assets and liabilities of foreign subsidiaries and upon the translation of receivables and liabilities in foreign currency at the closing day rate. The primary exposure to currency risk derives from the translation of the subsidiary in the US (translation exposure). The Group's transaction exposure is relatively low, since the Group companies operate primarily in the same currency.

The Group's net profit for the year include exchange differences in EBIT and net financial items; see Notes 7 and 8 for further information.

**Transaction exposure**

If the average exchange rate for the EUR against the SEK had been 10% higher/lower compared to the average exchange rate during the fiscal year, with all other variables unchanged, the Group's sales would have been positively/negatively impacted by approximately TSEK 1,330 (851). If the average exchange rate for the USD against the SEK had been 10% higher/lower compared to the average exchange rate during the fiscal, with all other variables unchanged, the Group's sales would have been positively/negatively impacted by approximately TSEK 2,670 (1,338).

**Translation exposure**

The average exchange rate is used in the translation of the statements of profit or loss of foreign subsidiaries, while total 2,670 (1,338) assets are measured at the closing day rate. The relevant currencies in this context are the EUR and the USD.

If the average exchange rate for the EUR against the SEK had been 10% higher/lower compared to the average exchange rate during the fiscal year, with all other variables unchanged, the Group's loss before tax for the fiscal year would have been impacted by approximately TSEK -310 tkr (-0.3) upon translation of the foreign subsidiary's statement of profit or loss.

If the average exchange rate for the USD against the SEK had been 10% higher/lower compared to the average exchange rate during the fiscal year, with all other variables unchanged, the Group's loss before tax for the fiscal year would have been impacted by approximately TSEK -12,026 (-9,854) upon translation of the foreign subsidiary's statement of profit or loss.

The Group's cash and cash equivalents and accounts payable are largely denominated in the local currencies of the respective companies, which means that translation exposure for changed exchange rates has no material impact on the Group's earnings. This is due to the fact that translation effects on receivables and liabilities in the local currencies of the respective Group companies impact equity and not profit or loss.

**Interest rate risk**

Interest rate risk is the risk that net interest will vary and/or develop negatively due to changes in the market since most of the Group's cash is in the Swedish Parent Company and the Group has limited interest-bearing liabilities. Where possible, the level of interest rate risk is to be kept low by fixing interest rates through the purchase of bonds.

**Sensitivity analysis – interest rate risk**

If the interest rate level during the year had been 100 basis points higher, net interest income and equity would have been affected by TSEK 573 (1200) before tax. The sensitivity analysis is based on an interest rate scenario that company management considers to be reasonably possible over the coming 12 months.

**Credit risk**

Credit risk, or counterparty risk, is the risk that the counterparty to a financial transaction may default on the maturity date. Credit risk is managed at the Group level through a careful evaluation of new counterparties, and subsequently, a continual evaluation of existing counterparties. Credit risks are primarily attributable to accounts receivable, investments in bonds and balances in banks and financial institutions. As of December 31, 2022, outstanding claims against third parties were minimal, apart from bank balances. All bonds had matured as of December 31, 2022.

Bank balances are invested in banks with a credit rating of A or higher, and are available on demand. Considering the short tenor and the counterparties' high level of creditworthiness, the credit risk associated with these balances is deemed to be low and the expected credit losses are deemed to be negligible.

	Group		Parent company	
	2022-12-31	2021-12-31	2022-12-31	2021-12-31
Cash and cash equivalents (amounts in TSEK)				
Rating				
AA-	68,444	53,603	67,430	45,836
A+	815	2,252	-	-
<b>Total</b>	<b>69,259</b>	<b>55,855</b>	<b>67,430</b>	<b>45,836</b>

**Financial position and going concern**

On December 31, 2022, the company's cash position amounted to SEK 69.3 million (55.9), and equity to SEK 146.0 million (111.6). The company has an unutilized loan facility from the EIB amounting to EUR 10 M. The loan facility become available provided that the company reaches certain commercial and R&D related milestones.

The Board of Directors and the CEO continuously assess the Group's short- and long-term liquidity and financial resources. This annual report has been prepared with the assumption that the Company has the ability to continue operations for the next 12 months, in line with the going concern assumption. However, the Board of Directors and the CEO conclude that the Company will need additional financing to fully secure going concern in accordance with the company's strategic plan during the upcoming 12-month period. Given the EIB facility, the continuous interest from the capital market, and the strong current ownership base, the Board of Directors and the CEO's assessment is that the Group will attract and receive sufficient financing to

continue for at least the next 12 months. They further acknowledge that should decisive conditions not be met, for example, by sales not developing as expected, the Group's continued operation might be at risk. This means that there are circumstances that may give rise to significant doubts about the company's ability to continue operations without additional financing.

	Group		Parent company	
	2022-12-31	2021-12-31	2022-12-31	2021-12-31
Net debt (amounts in TSEK)				
Interest-bearing liabilities				
Cash and cash equivalents	-69,259	-55,855	-67,430	-45,836
Current investments	-	-	-	-
Total borrowing	-	-	-	-
Lease liabilities	424	3,676	-	-
<b>Net debt</b>	<b>-68,835</b>	<b>-52,179</b>	<b>-67,430</b>	<b>-45,836</b>

**Maturity analysis**

Other financial liabilities in the Group comprise operating payables and lease liabilities. Operating payables fall due for payment within one year. The nominal undiscounted cash flow that is to be settled within one year corresponds to the carrying amounts as of the balance sheet date. Lease liabilities are effectively secured as the rights to the leased assets recognized in the financial statements revert to the lessor in the event of default. Of the total lease liability, SEK 424 thousands falls due within 12 months.

Financial instrument by category	Amortized cost	Amortized cost
Group	2022-12-31	2021-12-31
<b>Assets in the balance sheet</b>		
Accounts receivable	29,407	16,262
Other receivables	8,956	1,631
Cash and cash equivalents	69,259	55,855
<b>Total</b>	<b>107,622</b>	<b>73,748</b>

cont. Note 3

Financial instrument by category	Other financial liabilities	Other financial liabilities
Group	2022-12-31	2021-12-31
<b>Liabilities in the balance sheet</b>		
Non-current lease liabilities	250	161
Accounts payable	7,085	5,459
Lease liabilities	424	3,515
Other liabilities	701	2,423
Accrued expenses	11,445	9,403
<b>Total</b>	<b>19,905</b>	<b>20,961</b>

The carrying amount of financial investments, current receivables and current liabilities is a reasonable approximation of fair value.

#### Note 4 Critical accounting estimates and assumptions in applying the group's accounting policies

##### Critical accounting estimates and assumptions

The Group makes estimates and assumptions concerning the future. The accounting estimates resulting from these will, by definition, seldom correspond to the actual outcome. The estimates and assumptions that could cause a risk of material adjustment to the carrying amounts of assets and liabilities within the next fiscal year are summarized below.

##### Incentive programs

In 2016, a personnel option program was introduced for a number of employees in IRRAS foreign subsidiaries and during 2017 and 2018, an additional four incentive programs were introduced for employees in Sweden and abroad.

During 2020 to 2022, an additional three programs for employees in Sweden and abroad was introduced at the same time as two incentive programs expired.

The vesting and exercise periods of the options span several fiscal years, and assumptions and estimates have therefore been made regarding the probable exercise date. Furthermore, additional assumptions and estimates were made concerning the inputs for the valuation of the options. Two of the incentive programs contains non-market-based performance conditions. This means that estimates need to be made concerning when it will be more likely than not that the conditions will be met; only at that point will an expense be recognized for the incentive program.

For additional information regarding assumptions in the measurement of the options and conditions, see Summary of significant accounting principles.

##### Capitalized development expenses

IRRAS regularly assesses the value of capitalized development expenses.

The most critical assumption, which has been the subject of evaluation by management, is whether capitalized expenses will generate future economic benefits that, at a minimum, correspond to the amounts capitalized. Project capitalization starts when a research project is transferred to development of a clearly defined sellable product or product enhancement.

Capitalization ends and amortization begins when the product is ready for launch. As of the balance sheet date, management's assessment is that future cash flows will be more than sufficient to cover the investments, and that no need for impairment therefore exists.

#### Note 5 Net revenue

	Group		Parent company	
	2022-01-01 2022-12-31	2021-01-01 2021-12-31	2022-01-01 2022-12-31	2021-01-01 2021-12-31
Net revenue is divided into different groups of countries as follows:				
Germany	4,468	1,999	414	742
Europe, excluding Germany	4,354	4,997	–	–
USA	22,396	13,391	0	–
Other countries	8,780	1,999	–	–
<b>Total net revenue by geographic market</b>	<b>39,998</b>	<b>22,386</b>	<b>414</b>	<b>742</b>

Parent company sales refers entirely to management fees and other remunerations from subsidiaries.

#### Note 6 Breakdown of expenses by cost

	Group		Parent company	
	2022-01-01 2022-12-31	2021-01-01 2021-12-31	2022-01-01 2022-12-31	2021-01-01 2021-12-31
Operating profit/loss by type of cost				
Net revenue	39,998	22,386	414	742
Capitalized work for own account	2,083	6,707	2,083	6,707
Other operating income	658	8,097	25	282
Raw materials and consumables	–8,221	–20,212	–	–
Other external costs	–89,057	–52,489	–23,931	–17,947
Personnel costs	–95,068	–83,801	–12,596	–15,877
Depreciation, amortization and impairment	–17,302	–16,819	–10,750	–11,832
Other operating expenses	–1,181	–391	–28	–150
<b>Operating loss (EBIT)</b>	<b>–168,090</b>	<b>–136,522</b>	<b>–44,783</b>	<b>–38,076</b>

**Note 7 Other operating income and other operating expenses**

	Group		Parent company	
	2022-01-01 2022-12-31	2021-01-01 2021-12-31	2022-01-01 2022-12-31	2021-01-01 2021-12-31
Other operating income				
Exchange differences	220	355	25	282
Gain on disposal of equipment	–	–	–	–
Gain on disposal of right-of-use assets	–	–	–	–
Other	438	7,742	–	–
<b>Total other operating income</b>	<b>658</b>	<b>8,097</b>	<b>25</b>	<b>282</b>

	Group		Parent company	
	2022-01-01 2022-12-31	2021-01-01 2021-12-31	2022-01-01 2022-12-31	2021-01-01 2021-12-31
Other operating expenses				
Exchange differences	1,181	391	28	150
Loss on disposal of equipment	–	–	–	–
<b>Total other operating expenses</b>	<b>1,181</b>	<b>391</b>	<b>28</b>	<b>150</b>

**Note 8 Financial items**

	Group		Parent company	
	2022-01-01 2022-12-31	2021-01-01 2021-12-31	2022-01-01 2022-12-31	2021-01-01 2021-12-31
Operating profit/loss by type of cost				
<b>Financial income</b>				
Exchange differences	1,789	298	2,481	298
Interest income	0	1	–	350
Other financial income	–	–	–	–
<b>Total financial income</b>	<b>1,789</b>	<b>299</b>	<b>2,481</b>	<b>648</b>
<b>Financial expenses</b>				
Exchange differences	–	–29	–	–28
Impairment of participations in Group Companies	–	–	–16,931	–220,784
Interest expenses	279	–12	–207	–12
Funding costs	–	–	–	–
- leasing, dissolution of discount effect	–	–71	–	–
Other financial expenses	–	–	–	–
<b>Total financial expenses</b>	<b>279</b>	<b>–112</b>	<b>–17,138</b>	<b>–220,825</b>
<b>Loss from financial items, net</b>	<b>1,510</b>	<b>187</b>	<b>–14,657</b>	<b>–220,176</b>

**Note 9 Audit fees**

Audit engagements include statutory audits of the annual accounts and consolidated financial statements and the administration by the Board and CEO as well as audits and other reviews performed under agreement or contract.

Audit engagements also include other duties that are incumbent upon the company's auditors as well as advisory services or other assistance resulting from observations made during such a review or the completion of other such duties.

During 2018 and 2019, KPMG invoiced for consulting services in connection with the company's preparations for a change of listing, but the majority of this work was carried out in 2018.

	Group		Parent company	
	2022-01-01 2022-12-31	2021-01-01 2021-12-31	2022-01-01 2022-12-31	2021-01-01 2021-12-31
KPMG				
Audit engagement	1,353	916	1,353	916
Other audit engagements	–	144	–	144
Other advisory services	–	–	–	–
<b>Total</b>	<b>1,353</b>	<b>1,059</b>	<b>1,353</b>	<b>1,059</b>

**Note 10** Salaries, other remuneration and social security expenses

	Group					Parent company				
	2022-01-01 2022-12-31	2021-01-01 2021-12-31	2020-01-01 2020-12-31	2019-01-01 2019-12-31	2018-01-01 2018-12-31	2022-01-01 2022-12-31	2021-01-01 2021-12-31	2020-01-01 2020-12-31	2019-01-01 2019-12-31	2018-01-01 2018-12-31
Costs for salaries, other remuneration and social security expenses										
Salaries and remuneration	74,526	66,413	68,026	62,197	41,505	6,697	11,516	13,692	14,054	12,675
<i>of which variable, etc</i>	11,098	8,948	6,099			777	1,546	3,225		
Social security expenses	6,617	6,231	6,092	5,308	3,272	1,889	2,183	2,332	2,149	1,464
Incentive programs	739	365	-361	2,224	7,442	628	365	754	1,939	4,313
Pension costs	609	870	903	558	673	609	870	903	558	673
<b>Total</b>	<b>82,491</b>	<b>73,880</b>	<b>74,660</b>	<b>70,287</b>	<b>52,891</b>	<b>9,823</b>	<b>14,935</b>	<b>17,681</b>	<b>18,700</b>	<b>19,124</b>
Other staff costs	12,578	8,835	10,547	8,466	4,390	3,316	903	1,795	513	152
<b>Total personnel costs</b>	<b>95,069</b>	<b>82,714</b>	<b>85,207</b>	<b>78,754</b>	<b>57,281</b>	<b>13,139</b>	<b>15,838</b>	<b>19,476</b>	<b>19,213</b>	<b>19,275</b>

Group	2022					2021				
	Salaries and other remuneration	Fixed Remuneration	Variable Remuneration	Pension cost	Incentive programs	Sales and other remuneration	Fixed Remuneration	Variable Remuneration	Pensions cost	Incentive programs
Salaries, other remuneration and social security costs										
<b>Board members, executive directors and other senior executives</b>	<b>18,319</b>	<b>14,319</b>	<b>3,248</b>	-	-	<b>14,611</b>	<b>12,690</b>	<b>1,720</b>	<b>201</b>	-
CEO Will Martin	6,670	4,452	1,760	-	458	3,204	2,200	1,004	-	-
CFO Sabina Berlin	-	-	-	-	-	992	791	-	201	-
CEO and Board member Kleanthis G. Xanthopoulos	530 <sup>1)</sup>	530	-	-	-	2,668	2,668	-	-	-
Board member Anita Tollstadius	380	380	-	-	-	380	380	-	-	-
Chairman of the Board Marios Fotiadis	540	540	-	-	-	540	540	-	-	-
Board member Eva Nilsagård	395	395	-	-	-	395	395	-	-	-
Board member Catherine Gilmore-Lawless	471	471	-	-	-	471	471	-	-	-
Other senior executives	9,332	7,550	1,487	-	294	5,961	5,245	716	-	-
<b>Total</b>	<b>18,319</b>	<b>14,319</b>	<b>3,248</b>	-	<b>753</b>	<b>14,611</b>	<b>12,690</b>	<b>1,720</b>	<b>201</b>	-

Parent company	2022					2021				
	Salaries and other remuneration	Fixed Remuneration	Variable Remuneration	Pension cost	Incentive programs	Sales and other remuneration	Fixed Remuneration	Variable Remuneration	Pensions cost	Incentive programs
Salaries, other remuneration and social security costs										
<b>Board members, executive directors and other senior executives</b>	<b>2,316</b>	<b>2,316</b>	-	-	-	<b>2,778</b>	<b>2,577</b>	<b>0</b>	<b>201</b>	-
CEO Will Martin	-	-	-	-	-	0	0	0	-	-
CFO Sabina Berlin	-	-	-	-	-	992	791	-	201	-
CEO and Board member Kleanthis G. Xanthopoulos	530 <sup>1)</sup>	530	-	-	-	0	0	-	-	-
Board member Anita Tollstadius	380	380	-	-	-	380	380	-	-	-
Chairman of the Board Marios Fotiadis	540	540	-	-	-	540	540	-	-	-
Board member Eva Nilsagård	395	395	-	-	-	395	395	-	-	-
Board member Catherine Gilmore-Lawless	471	471	-	-	-	471	471	-	-	-
Other senior executives	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>2,316</b>	<b>2,316</b>	-	-	-	<b>2,778</b>	<b>2,577</b>	<b>0</b>	<b>201</b>	-

1) Reflects payments due for 2021 and 2022 as approved by the AGM. No payments were made in 2021 why 2022 reflects payments for both years.



cont. Note 10

Parent company	Average number of employee		Of which men	
	2022-01-01 2022-12-31	2022-01-01 2022-12-31	2021-01-01 2021-12-31	2021-01-01 2021-12-31
Sweden	4	100%	7	80%
<b>Parent company total</b>	<b>4</b>	<b>100%</b>	<b>7</b>	<b>80%</b>
<b>Subsidiaries</b>				–
Germany	4	50%	4	24%
USA	43	50%	42	49%
<b>Subsidiaries Total</b>	<b>47</b>	<b>50%</b>	<b>46</b>	<b>47%</b>
<b>Group total</b>	<b>51</b>	<b>54%</b>	<b>53</b>	<b>51%</b>

Gender distribution for directors and senior executives:

Group	Number at balance sheet date		Of which men	
	2022-01-01 2022-12-31	2022-01-01 2022-12-31	2021-01-01 2021-12-31	2021-01-01 2021-12-31
Directors	5	40%	5	40%
Executive director and other senior executives	4	75%	4	75%
<b>Group total</b>	<b>9</b>	<b>56%</b>	<b>9</b>	<b>56%</b>

Parent company	2022-01-01 2022-12-31		2021-01-01 2021-12-31	
	Directors	5	40%	5
Executive director and other senior executives	–	0%	–	50%
<b>Parent company total</b>	<b>5</b>	<b>40%</b>	<b>5</b>	<b>40%</b>

**Fixed fee plans**

There are defined contribution pension plans that are secured through insurance in SPP. This year's premiums for pension insurance.

IRRAS has introduced share-based remuneration for employees in the form of incentive programs for the purpose of motivating and rewarding employees through participation in order to benefit the company's long-term interests. The fair value of the options at the start of the program is recognized as a personnel cost with a corresponding increase directly in equity. The cost of the incentive programs awarded to employees in the subsidiaries is recognized in the Parent Company's accounts as a participation in Group companies. See Note 23.

Cost of share-based remuneration	Group		Parent company	
	2022-01-01 2022-12-31	2021-01-01 2021-12-31	2022-01-01 2022-12-31	2021-01-01 2021-12-31
Incentive program 1	67	157	67	–
Incentive program 2	0	6	0	–
Incentive program 5	14	89	10	47
Incentive program 6	234	794	184	299
Incentive program 7	311	150	258	19
Incentive program 8	113	–	109	–
<b>Total</b>	<b>739</b>	<b>1,195</b>	<b>628</b>	<b>365</b>

Options whose vesting depends on performance conditions that are not market conditions were measured using the Black & Scholes valuation model. The share price and the risk-free interest rate used are those in effect on the valuation date. The assessment of the volatility taken into account in the valuation is based on historical share volatility for equivalent companies.

**Incentive program 1**

In May 2016, employees were allotted 1,900,000 options at no cost, which based on the terms of employment are vested over periods of one to four years, respectively, with one quarter vested annually starting in May 2016. The deadline to exercise the vested options is September 30, 2025. As of December 31, 2022, there were 1,654,905 options outstanding, of which 126,476 were issued to company management.

**Incentive program 6**

A new incentive program was approved at the Annual General Meeting on April 28, 2020. The total program comprises 1,050,000 personnel options. The options are granted based on the achievement of corporate goals and are vested over three years with one third vested annually. Each option entitles the holder to subscribe for one new share at an exercise price calculated at the grant date and can be exercised between the third and the eight anniversaries of the commencement date, subject to the requirement that the options are vested. The deadline to exercise the vested options is April 28, 2028. As of December 31, 2022, there were 664,214 options outstanding, of which 188,920 were issued to company management.

**Incentive program 7**

A new incentive program was approved at the Annual General Meeting on April 28, 2021. The total program comprises 1,050,000 personnel options. The options are granted based on the achievement of corporate goals and are vested over three years with one third vested annually. Each option entitles the holder to subscribe for one new share at an exercise price calculated at the grant date and can be exercised between the third and the eight anniversaries of the commencement date, subject to the requirement that the options are vested. The deadline to exercise the vested options is April 28, 2029. As of December 31, 2022, there were 887,304 options outstanding, of which 333,500 were issued to company management.

**Incentive program 8**

A new incentive program was approved at the Emergency General Meeting on Aug 3, 2022. The total program comprises 12,100,000 personnel options. The options are granted based on the achievement of corporate goals and are vested over three years with one third vested annually. Each option entitles the holder to subscribe for one new share at an exercise price calculated at the grant date and can be exercised between the third and the eight anniversaries of the commencement date, subject to the requirement that the options are vested. The deadline to exercise the vested options is August 3, 2030. As of December 31, 2022, there were 9,130,000 options outstanding, of which 7,210,000 were issued to company management.

cont. Note 10

**Number of personnel options allotted**

Incentive programs

	Program 1	Program 2	Program 5	Program 6	Program 7	Program 8
<b>As of Dec 31, 2018</b>	<b>1,880,000</b>	<b>643,000</b>	<b>268,750</b>	<b>0</b>	<b>0</b>	<b>0</b>
Forfeited during the period	-187,142	-130,000	-187,000	-	-	-
Exercised during the period	-	-	-	-	-	-
Allotted during the period	15,476	6,912	553,487	-	-	-
<b>As of Dec 31, 2019</b>	<b>1,708,334</b>	<b>519,912</b>	<b>635,237</b>	<b>0</b>	<b>0</b>	<b>0</b>
Forfeited during the period	-154,786	-152,472	-150,505	-	-	-
Exercised during the period	-	-	-	-	-	-
Allotted during the period	254,500	0	32,500	507,024	-	-
<b>As of Dec 31, 2020</b>	<b>1,808,048</b>	<b>367,440</b>	<b>517,232</b>	<b>507,024</b>	<b>0</b>	<b>0</b>
Forfeited during the period	-122,768	-89,440	-172,488	-49,938	-	-
Exercised during the period	-	-	-	-	-	-
Allotted during the period	-	-	-	346,587	450,500	-
<b>As of Dec 31, 2021</b>	<b>1,685,280</b>	<b>278,000</b>	<b>344,744</b>	<b>803,673</b>	<b>450,500</b>	<b>0</b>
Forfeited during the period	-30,375	-278,000	-344,744	-139,459	-127,696	-2,500
Exercised during the period	-	-	-	-	-	-
Allotted during the period	-	-	-	-	564,500	9,105,500
<b>As of Dec 31, 2022</b>	<b>1,654,905</b>	<b>0</b>	<b>0</b>	<b>664,214</b>	<b>887,304</b>	<b>9,103,000</b>

**Personnel options per year**

	No. outstanding as of Dec 31, 2022	No. vested as of Dec 31, 2022	Exercise price	Share price on valuation date, range	Volatility, expected	Option value per share, range	Expected dividend per share	Maturity
Incentive program 1	1,654,905	1,569,536	13.6	5.8–34.6	30%	0.0–21.5	-	30 September 2025
Incentive program 6	664,214	489,139	1)	5.7–7.5	50%	1.0–2.8	-	28 April 2028
Incentive program 7	887,304	180,268	1)	2.5–7.5	50%	0.1–1.9	-	28 April 2029
Incentive program 8	9,103,000	0	1)	0.4–1.2	50%	0.0–0.3	-	3 August 2030
<b>Total incentive programs</b>	<b>12,309,423</b>	<b>2,238,943</b>						

1) The redemption price depends on the allotment date.

**Note 11 Related-party transactions**

Related parties are defined as the members of company management in the Parent Company, the Board of Directors of the Parent Company and subsidiaries. Shares in the subsidiaries and lending between Group companies are eliminated in the consolidated financial statements, which is why detailed accounts of these amounts are not presented. For the Parent Company, the subsidiaries constitute related parties.

Parent Company	2022-12-31	2021-12-31
Receivables from Group Companies, non-current	34,374	13,685
Receivables from Group Companies, current	414	173
Liabilities from Group Companies, current	6,586	104

During the fiscal year, Parent Company sales regarding Marketing contribution fees to subsidiaries totaled TSEK 0 (0). Purchases from subsidiaries regarding allocation of earnings amounted to TSEK 414 (742). No portion of this amount was outstanding on the balance sheet date.

Apart from the information in Note 10, the following transactions took place with related parties during the fiscal year and comparison years:

The Group has purchased educational training from a person related to board member Kleanthis G. Xanthopoulos.

The expense for the period January to December 2022 totaled SEK 217.7 thousand (608.3).

**Note 12** Income tax

	Group		Parent company	
	2022-01-01 2022-12-31	2021-01-01 2021-12-31	2022-01-01 2022-12-31	2021-01-01 2021-12-31
Current tax on profit for the year	24	-	-	-
Current tax in respect of prior year	-	-	-	-
<b>Total income tax</b>	<b>24</b>	<b>-</b>	<b>-</b>	<b>-</b>

The differences between income tax expense and an estimated tax expense based on current tax rates are as follows:

Profit/loss before tax	-166,580	-136,335	-59,438	-258,252
Income tax calculated in accordance with the Group's current tax rate	34,315	28,085	12,244	53,200
Non-taxable income	-	77	-	77
Non-deductible expenses	144	-342	-26	-45,653
Non-recognized deductible expenses	-	919	-	919
Re-measurment of deferred tax - change in the Swedish tax rate	-	-	-	-
Tax losses for which no deferred income tax asset was recognised	-45,904	-37,885	-12,218	-8,544
Utilisation of previously unrecognised tax losses	-	-	-	-
Effects of foreign tax rates	11,402	9,146	-	-
Tax adjustments in respect of prior years	24	-	-	-
<b>Income tax</b>	<b>-20</b>	<b>0</b>	<b>0</b>	<b>0</b>

The Group's effective tax rate was deemed to be 21.4% (21.4) which is the tax rate for the Swedish Parent Company. The effect of foreign tax rates is therefore attributable to the fact that the tax rate in the countries where the subsidiaries operate is different to that of the Group. The tax rate applied for Germany is 30% (31) and the tax rate applied for the US is 29.84% (29.85). The company tax rate should remain the same for 2023.

**Temporary differences**

Temporary differences arise in the event that the recognized taxable value of assets and liabilities are different. Deferred tax liabilities pertaining to temporary differences attributable to investments in subsidiaries are not recognized since the Parent Company can govern the point in time for reversal of the temporary differences. Temporary differences also with respect to pension obligations and incentive programs, which the Group has chosen to recognize at SEK 0 for the year.

	Group		Parent company	
	2022-01-01 2022-12-31	2021-01-01 2021-12-31	2022-01-01 2022-12-31	2021-01-01 2021-12-31
Accumulated losses amount to	989,836	743,556	382,582	323,272

**Note 13** Intangible Assets

	Group		Parent company	
	2022-12-31	2021-12-31	2022-12-31	2021-12-31
<b>Capitalized expenditure for research and development</b>				
Opening acquisition cost	71,593	64,887	71,594	64,887
Acquired in business combinations	-	-	-	-
Assets capitalized during the year	2,083	6,707	2,083	6,707
Reclassifications	-	-	-	-
Exchange differences	-	-	-	-
<b>Closing accumulated acquisition cost</b>	<b>73,677</b>	<b>71,594</b>	<b>73,676</b>	<b>71,594</b>
Opening amortisation	-43,001	-31,592	-43,001	-31,592
Acquired in business combinations	-10,354	-11,409	-10,354	-11,409
Reclassifications	-	-	-	-
Exchange differences	-	-	-	-
<b>Closing accumulated amortisation</b>	<b>-53,355</b>	<b>-43,001</b>	<b>-53,355</b>	<b>-43,001</b>
<b>Closing net book value</b>	<b>20,321</b>	<b>28,592</b>	<b>20,321</b>	<b>28,592</b>

	Group		Parent company	
	2022-12-31	2021-12-31	2022-12-31	2021-12-31
<b>Patents</b>				
Opening acquisition cost	10,990	10,369	4,429	4,429
Acquired in business combinations	-	-	-	-
Exchange differences	1,011	620	-	-
<b>Closing accumulated acquisition cost</b>	<b>12,001</b>	<b>10,990</b>	<b>4,429</b>	<b>4,429</b>
Opening amortisation	-4,933	-3,848	-3,163	-2,847
Acquired in business combinations	-1,354	-1,084	-316	-316
Exchange differences	-	-	-	-
<b>Closing accumulated amortisation</b>	<b>-6,287</b>	<b>-4,933</b>	<b>-3,480</b>	<b>-3,164</b>
<b>Closing net book value</b>	<b>5,713</b>	<b>6,057</b>	<b>949</b>	<b>1,266</b>

Amortization and impairment of capitalized development expenses are recognized in profit or loss under "Cost of sales", and amortization and impairment of patents are recognized under "R&D costs".

**Note 14 Tangible Assets****Equipment, tools and plant**

	Group		Parent company	
	2022-12-31	2021-12-31	2022-12-31	2021-12-31
Opening acquisition cost	2,321	2,034	532	532
Investments	1,123	285	–	–
Sales and disposals	–	–	–	–
Exchange differences	282	2	–	–
<b>Closing accumulated acquisition cost</b>	<b>3,726</b>	<b>2,321</b>	<b>532</b>	<b>532</b>
Opening depreciation	–1,219	–724	–435	–329
Sales and disposals	–	–	–	–
Depreciation for the year	–520	–485	–79	–106
Exchange differences	–129	–10	–	–
<b>Closing accumulated depreciation</b>	<b>–1,868</b>	<b>–1,219</b>	<b>–514</b>	<b>–435</b>
<b>Closing net book value</b>	<b>1,860</b>	<b>1,103</b>	<b>17</b>	<b>97</b>

**Leases**

	Group		Parent company	
	2022-12-31	2021-12-31	2022-12-31	2021-12-31
Right-of-use assets				
Properties		5,743		3,364
Vehicles		1,148		674
<b>Group</b>	<b>2022-12-31</b>	<b>2021-12-31</b>	<b>2022-12-31</b>	<b>2021-12-31</b>
Opening acquisition cost		4,038		3,788
Investments		7,865		4,140
Accumulated depreciation		–5,165		–4,007
Exchange differences		153		116
<b>Net book value</b>		<b>6,891</b>		<b>4,038</b>

**Lease liabilities**

	2022-12-31	2021-12-31
Short-term	424	3,515
Long-term	5,920	161
<b>Closing carrying amount</b>	<b>6,344</b>	<b>3,676</b>

In 2019, a lease agreement was signed by IRRAS Inc, and in 2022 an amendment was signed to extend the lease until Dec 31, 2023.

The statement of profit or loss shows the following amounts relating to leases:

Group	2022-12-31	2021-12-31
Depreciation of right-of-use assets		
Properties	–4,850	–3,673
Vehicles	–315	–335
Disposal of right-of-use assets	–	–
<b>Total</b>	<b>–5,165</b>	<b>–4,007</b>

Revenue attributable to the disposal of vehicles (included in other operating income)	–	–
Revenue attributable to the disposal of properties (included in other operating income)	–	–
Interest expenses (included in financial expenses)	–259	–71
Expenditure attributable to short-term leases (included in administrative and selling expenses)	–935	–904
Expenditure attributable to leases for which the underlying asset is of a low value that are not short-term leases (included in administrative expenses)	0	–47
Expenditure attributable to lease payments not included in lease liabilities (included in administrative expenses)	–	–

The total cash outflow for leases in 2022 was TSEK 4,277 (4,320).

The leases are calculated for three offices. The leases do not contain any specific conditions, except that the lessor retains the rights in respect of the pledged leased assets. The leases run until 12/31/2023.

Assets and liabilities arising from leases are initially recognized at their present value. Lease liabilities include the present value of fixed payments after the deduction of any lease incentives. The lease payments are discounted at the lease's marginal lending rate of 3.5%. Lease payments are split between debt repayment and interest. Interest is recognized in the income statement over the lease term in such a way as to ensure a fixed rate of interest for the lease liability recognized in the respective period. Right-of-use assets are valued at cost and include the amount that the lease liability was originally valued at, the lease payments made on or before the commencement date less lease incentives, the initial direct costs, and the cost of restoring the asset to the condition specified under the terms of the lease. Right-of-use assets are amortized over the lease term. Payments for short-term arrangements and low-value leases are charged to the income statement on a straight-line basis. Short-term arrangements are leases with a term of 12 months or less. Low-value leases include vehicles and office equipment.

**Note 15 Financial investments**

	Group		Parent company	
	2022-12-31	2021-12-31	2022-12-31	2021-12-31
At the beginning of the year	–	–	–	–
Purchases	–	–	–	–
Sales	–	–	–	–
<b>Closing carrying amount</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>
Bonds, non-current	–	–	–	–
Bonds, current	–	–	–	–
<b>Closing carrying amount</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>

In the parent company, the bonds are classified as Other long-term securities holdings respectively Short-term investments.



**Note 16 Inventory**

	Group		Parent company	
	2022-12-31	2021-12-31	2022-12-31	2021-12-31
Finished goods and goods for resale	29,144	12,368	0	0
<b>Closing carrying amount</b>	<b>29,144</b>	<b>12,368</b>	<b>0</b>	<b>0</b>

**Note 17 Other receivables**

	Group		Parent company	
	2022-12-31	2021-12-31	2022-12-31	2021-12-31
Tax account	–	68	–	68
Cash deposits	982	865	0	104
VAT receivables	–18	490	46	428
Other receivables	7,993	208	804	208
<b>Total other receivables</b>	<b>8,956</b>	<b>1,631</b>	<b>850</b>	<b>808</b>

**Note 18 Prepaid expenses and accrued income**

	Group		Parent company	
	2022-12-31	2021-12-31	2022-12-31	2021-12-31
Prepaid credit expenses	–	–	–	–
Prepaid rent	–	48	–	48
Prepaid insurance costs	0	284	0	82
Accrued interest	–	–	–	–
Pension expenses	2	–	2	–
Accrued income, other	72	–	72	–
Other items	–6	5,349	–	853
<b>Total</b>	<b>67</b>	<b>5,680</b>	<b>73</b>	<b>983</b>

Other items primarily comprise prepaid expenses to Nasdaq and IT licenses.

**Note 19 Share capital**

Parent Company	No. of shares	Share capital (SEK)
<b>Opening balance at January 1, 2020</b>	<b>28,817,974</b>	<b>864,539</b>
New share issue	37,463,366	1,123,901
<b>Opening balance at December 31, 2020</b>	<b>66,281,340</b>	<b>1,988,440</b>
New share issue	13,200,000	396,000
<b>Closing balance at December 31, 2021</b>	<b>79,481,340</b>	<b>2,384,440</b>
New share issue	715,332,060	21,459,962
<b>Closing balance at December 31, 2022</b>	<b>794,813,400</b>	<b>23,844,402</b>

The number of shares shown in the above table is the number that is recorded in the Parent Company share register. For more information, refer to the Parent Company statement of changes in equity. A specification of changes in equity is presented in the statement of changes in equity, which follows the company's balance sheet.

The shares have a quota value SEK 0.03 per share.

**Note 20 Accrued expenses and deferred income**

	Group		Parent company	
	2022-12-31	2021-12-31	2022-12-31	2021-12-31
Accrued salaries	7,100	5,439	1,953	1,629
Accrued vacation pay	1,951	1,452	434	217
Accrued social security contributions	468	466	468	466
Other personnel-related items	313	388	313	388
Consultancy fees	578	898	578	539
Audit	670	660	670	660
Other	365	100	354	62
<b>Total accrued expenses and deferred income</b>	<b>11,445</b>	<b>9,403</b>	<b>4,770</b>	<b>3,960</b>

**Note 21 Commitments****Commitments in respect of operating leases**

	Group		Parent company	
	2022-12-31	2021-12-31	2022-12-31	2021-12-31
Within one year	828	904	523	570
After one year but within five years	–	–	–	–
Later than five years	–	–	–	–
	<b>828</b>	<b>904</b>	<b>523</b>	<b>570</b>

See also note 14 regarding right-of-use assets in addition to the commitments reported in this note.

**Note 22 Events after the balance sheet date**

- IRRASflow system confirmed to more effectively remove collected blood and reduce catheter infection rates than passive drainage in head-to-head analysis.
- IRRAS secures short-term financing agreement of MSEK 40 (Apr 2023)

**Note 23 Participations in group companies**

	2022-12-31	2021-12-31
Parent Company		
Opening cost	227,816	340,893
Investment	144,563	102,389
Incentive programs	653	830
Impairment of participations	-30,943	-216,296
<b>Closing carrying amount</b>	<b>342,089</b>	<b>227,816</b>

**The Parent Company holds participations in the following subsidiaries, both of which were formed in 2016:**

Name	Corp. Reg. No.	Domicile	% of capital and votes	No. of shares	Carrying amount Dec 31, 2022	Carrying amount Dec 31, 2021
IRRAS GmbH	DE308005079	Munich	100%	1	722	696
IRRAS USA Inc	611800152	La Jolla	100%	9,500,000	341,367	227,120
IRRAS BV	33420622	Assendelft	100%	1	-	-
					<b>342,089</b>	<b>227,817</b>

For the Parent Company, the option programs entail (to the extent they give rise to option expenses in the subsidiaries) that the issue of equity instruments is deemed to be a shareholder contribution in the subsidiaries from the Parent Company, which is why it is recognized as an investment in subsidiaries and not as a personnel cost in profit or loss. Like other contributions, the investment is tested for impairment. If impairment is required for shares in subsidiaries, a financial expense is recognized in Parent Company profit or loss.

**Note 24 Proposed appropriation of earnings**

The Board proposes that the unappropriated earnings as of December 31, 2022 – SEK 402,361,526 – be carried forward. For changes in equity during the fiscal year, refer to the Parent Company and consolidated statement of changes in equity.

**Note 25 Earnings per share**

	Before dilution		After dilution	
SEK	2022	2021	2022	2021
Earnings per share	-0.52	-1.89	-52.00	-1.89

The amount used in the numerator corresponds with the net loss for the year attributable to the Parent Company's shareholders, TSEK -166,604 (-136,335). The amount used in the denominator is recognized below.

The weighted average number of shares totaled 320,538,445 (72,316,866), which was impacted by new share issues during the fiscal year in question and the preceding fiscal year. The number of shares out-standing at the end of the year was 794,813,400 (79,481,340).

**Instruments that could give rise to dilution effects and changes after the balance sheet date**

The weighted average number of shares after dilution and earnings after dilution are the same as before dilution. Since the Group recognized a loss for the year and for the preceding fiscal year, potential ordinary shares would not give rise to dilution in terms of the average number of shares. There are incentive programs which, as of the date on which the Group recognizes a profit, will result in a dilution effect. For more information regarding the terms of the incentive programs and the number of options issued, refer to Notes 2 and 10. No changes in the number of shares before or after dilution have taken place after the balance sheet date.

The annual report has been prepared in accordance with the accounting principles generally accepted in Sweden, and the consolidated financial statements have been prepared in accordance with the international accounting standards referred to in Regulation (EC) No 1606/2002 of the European Parliament and of the Council of July 19, 2002 on the application of international accounting standards. The annual report and the consolidated financial statements give a true and fair view of the position and performance of the Parent Company and the Group. The administration report for the

Parent Company and the Group gives a true and fair view of the development of the Parent Company's and the Group's operations, position and performance, and describes the principal risks and uncertainties faced by the Parent Company and the companies within the Group.

The consolidated statement of profit or loss and other comprehensive income, the statement of financial position and the Parent Company statement of profit or loss and balance sheet will be submitted for adoption at the Annual General Meeting on June 7, 2023.

Stockholm, 27 April, 2023

**Marios Fotiadis**  
Chairman of the Board

**Eva Nilsagård**  
Board member

**Kleanthis G. Xanthopoulos**  
PhD Board member

**Catherine Gilmore-Lawless**  
Board member

**Anita Tollstadius**  
Board member

**Will Martin**  
President and CEO

Our Auditor's Report was submitted on 29 April, 2023  
KPMG AB

**Stefan Lundberg**  
Authorized Public Accountant

# Auditor's Report

To the general meeting of the shareholders of IRRAS AB (publ), corp. id 556872-7134

## Report on the annual accounts and consolidated accounts

### Opinions

We have audited the annual accounts and consolidated accounts of IRRAS AB (publ) for the year 2022, except for the corporate governance statement on pages 68–71. The Company's annual report and consolidated accounts is included on pages 33–63 in this document.

In our opinion, the annual accounts have been prepared in accordance with the Annual Accounts Act, and present fairly, in all material respects, the financial position of the parent company as of 31 December 2022 and its financial performance and cash flow for the year then ended in accordance with the Annual Accounts Act. The consolidated accounts have been prepared in accordance with the Annual Accounts Act and present fairly, in all material respects, the financial position of the group as of 31 December 2022 and their financial performance and cash flow for the year then ended in accordance with International Financial Reporting Standards (IFRS), as adopted by the EU, and the Annual Accounts Act. Our opinions do not cover the corporate governance statement on pages 68–71.

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.

Our opinions in this report on the the annual accounts and consolidated accounts are consistent with the content of the additional report that has been submitted to the parent company's audit committee in accordance with the Audit Regulation (537/2014) Article 11.

### 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. This includes that, based on the best of our knowledge and belief, no prohibited services referred to in the Audit Regulation (537/2014) Article 5.1 have been provided to the audited company or, where applicable, its parent company or its controlled companies within the EU.

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

### Material uncertainty as to going concern

We would like to bring attention to the annual report's administration report (p. 35) and note 3 (p. 53) which states that the board of directors and the Managing Director estimate that the company will need additional financing to fully ensure continued operation in accordance with the company's strategic plan during the coming 12-month period. It is also stated in the Directors' Report that given the EIB facility, the continued interest from the capital market and the strong current shareholder base, the assessment is that the group will attract and obtain sufficient financing, but should key conditions not be met, the group's continued operation may be at risk. These circumstances indicate that there is a material uncertainty that may cast significant doubt on the company's ability to continue as a going concern. We have not modified our statements because of this.

### Key Audit Matters

Key audit matters of the audit are those matters that, in our professional judgment, were of most significance in our audit of the annual accounts and consolidated accounts of the current period. These matters were addressed in the context of our audit

of, and in forming our opinion thereon, the annual accounts and consolidated accounts as a whole, but we do not provide a separate opinion on these matters.

### *Intangible assets and investment in subsidiaries*

See notes 4, 13, 23 and accounting policies on pages 44 and 45 of the annual report and consolidated financial statements for detailed disclosures and description of the area.

### *Description of key audit matter*

The Group recognized the value as at 31 December 2022 of capitalized development expenditure of SEK 20 million. These intangible assets represent approximately 12% of total assets and are subject to an impairment test.

An impairment test requires management's estimates and judgments to identify estimates of its future revenue, operating profit, working capital and investment needs. Another key assumption is the discount rate to be used to reflect market assessments of the time value of money and the specific risks faced by the operations.

As of December 31, 2022, the Parent Company reported shares in group companies of SEK 342 million. The same type of test is also performed on the value of the investments, using the same techniques and inputs as described above.

### *Response in the audit*

We have assessed whether the impairment tests performed for capitalized development costs and shares in group companies are prepared in accordance with the prescribed technique and assessed the reasonableness of the Group's test of the carrying amount of intangible assets in the Group and shares in group companies in the parent company.

Furthermore, we have assessed the reasonableness of assumptions about future cash flows and the discount rates used by reviewing and evaluating the group's written documentation and plans. An additional part of our work was to review the group's sensitivity analysis of the valuation in order to assess how rea-



sonable changes in assumptions can affect the valuation.

We have also assessed compliance with the accounting principles and disclosures regarding capitalized development costs and shares in group companies in the annual report and the consolidated financial statements.

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

This document also contains other information than the annual accounts and consolidated accounts and can be found on pages 1-31 and pages 74-75. The other information also consists of the remuneration report which we obtained before the date of this audit report. 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 Directors 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 and, concerning the consolidated accounts, in accordance with IFRS as adopted by the EU. 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.

The Audit Committee shall, without prejudice to the Board of Director's responsibilities and tasks in general, among other things oversee the company's financial reporting process.

### **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.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the annual accounts and consolidated accounts, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve

collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of the company's internal control relevant to our audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board of Directors and the Managing Director.
- Conclude on the appropriateness of the Board of Directors' and the Managing Director's, use of the going concern basis of accounting in preparing the annual accounts and consolidated accounts. We also draw a conclusion, based on the audit evidence obtained, as to whether any material uncertainty exists related to events or conditions that may cast significant doubt on the company's and the group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the annual accounts and consolidated accounts or, if such disclosures are inadequate, to modify our opinion about the annual accounts and consolidated accounts. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause a company and a group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the annual accounts and consolidated accounts, including the disclosures, and whether the annual accounts and consolidated accounts represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient and appropriate audit evidence regarding the financial information of the entities or business activities within the group to express an opinion on the consolidated accounts. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our opinions.

We must inform the Board of Directors of, among other matters, the planned scope and timing of the audit. We must also inform of significant audit findings during our audit, including any significant deficiencies in internal control that we identified.

We must also provide the Board of Directors with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, measures that have been taken to eliminate the threats or related safeguards.

From the matters communicated with the Board of Directors, we determine those matters that were of most significance in the audit of the annual accounts and consolidated accounts, including the most important assessed risks for material misstatement, and are therefore the key audit matters. We describe these matters in the auditor's report unless law or regulation precludes disclosure about the matter.

## Report on other legal and regulatory requirements

### *Auditor's audit of the administration and the proposed appropriations of profit or loss*

#### Opinions

In addition to our audit of the annual accounts and consolidated accounts, we have also audited the administration of the Board of Directors and the Managing Director of IRRAS AB (publ) for the year 2022 and the proposed appropriations of the company's profit or loss.

We recommend to the general meeting of shareholders that the loss be dealt with in accordance with the proposal in the statutory administration report and that the members of the Board of Directors 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 Directors 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.

As part of an audit in accordance with generally accepted auditing standards in Sweden, we exercise professional judgment and maintain professional scepticism throughout the audit. The examination of the administration and the proposed appropriations of the company's profit or loss is based primarily on the audit of the accounts. Additional audit procedures performed are based on our professional judgment with starting point in risk and materiality. This means that we focus the examination on such actions, areas and relationships that are material for the operations and where deviations and violations would have particular importance for the company's situation. We examine and test decisions undertaken, support for decisions, actions taken and other circumstances that are relevant to our opinion concerning discharge from liability. As a basis for our opinion on the Board of Directors' proposed appropriations of the company's profit or loss we examined whether the proposal is in accordance with the Companies Act.

## The auditor's examination of the ESEF report Opinion

In addition to our audit of the annual accounts and consolidated accounts, we have also examined that the Board of Directors and the Managing Director have prepared the annual accounts and consolidated accounts in a format that enables uniform electronic reporting (the ESEF report) pursuant to Chapter 16, Section 4(a) of the Swedish Securities Market Act (2007:528) for IRRAS AB (publ) for year 2022.

Our examination and our opinion relate only to the statutory requirements.

In our opinion, the Esef report has been prepared in a format that, in all material respects, enables uniform electronic reporting.

### **Basis for opinion**

We have performed the examination in accordance with FAR's recommendation RevR 18 Examination of the Esef report. Our responsibility under this recommendation is described in more detail in the Auditors' responsibility section. We are independent of IRRAS AB (publ) 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 evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### **Responsibilities of the Board of Directors and the Managing Director**

The Board of Directors and the Managing Director are responsible for the preparation of the Esef report in accordance with the Chapter 16, Section 4(a) of the Swedish Securities Market Act (2007:528), and for such internal control that the Board of Directors and the Managing Director determine is necessary to prepare the Esef report without material misstatements, whether due to fraud or error.

### **Auditor's responsibility**

Our responsibility is to obtain reasonable assurance whether the Esef report is in all material respects prepared in a format that meets the requirements of Chapter 16, Section 4(a) of the Swedish Securities Market Act (2007:528), based on the procedures performed.

RevR 18 requires us to plan and execute procedures to achieve reasonable assurance that the Esef report is prepared in a format that meets these requirements. Reasonable assurance is a high level of assurance, but it is not a guarantee that an engagement carried out according to RevR 18 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 aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the Esef report.

The audit firm applies ISQC 1 Quality Control for Firms that Perform Audits and Reviews of Financial Statements, and other Assurance and Related Services Engagements and accordingly maintains a comprehensive system of quality control, including documented policies and procedures regarding compliance with professional ethical requirements, professional standards and legal and regulatory requirements.

The examination involves obtaining evidence, through various procedures, that the Esef report has been prepared in a format that enables uniform electronic reporting of the annual accounts and consolidated accounts. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement in the report, whether due to fraud or error.

In carrying out this risk assessment, and in order to design procedures that are appropriate in the circumstances, the auditor considers those elements of internal control that are relevant to the preparation of the Esef report by the Board of Directors and the Managing Director, but not for the purpose of expressing an opinion on the effectiveness of those internal controls. The examination also includes an evaluation of the appropriateness and reasonableness of the assumptions made by the Board of Directors and the Managing Director.

The procedures mainly include a validation that the Esef report has been prepared in a valid XHTML format and a reconciliation of the Esef report with the audited annual accounts and consolidated accounts.

Furthermore, the procedures also include an assessment of whether the consolidated statement of financial performance, financial position, changes in equity, cash flow and disclosures in the Esef report have been marked with iXBRL

### **The auditor's examination of the corporate governance statement**

The Board of Directors is responsible for that the corporate governance statement on pages 68–71 has been prepared in accordance with the Annual Accounts Act.

Our examination of the corporate governance statement is conducted in accordance with FAR's auditing standard RevR 16 The auditor's examination of the corporate governance statement. This means that our examination of the corporate governance statement is different and substantially less in scope than an audit conducted in accordance with International Standards on Auditing and generally accepted auditing standards in Sweden. We believe that the examination has provided us with sufficient basis for our opinions.

A corporate governance statement has been prepared. Disclosures in accordance with chapter 6 section 6 the second paragraph points 2-6 of the Annual Accounts Act and chapter 7 section 31 the second paragraph the same law are consistent with the other parts of the annual accounts and consolidated accounts and are in accordance with the Annual Accounts Act.

### **Other matters**

The company has failed several times to perform its obligations to make timely payments of taxes and fees.

KPMG AB, Box 382, 101 27, Stockholm, was appointed auditor of IRRAS AB (publ) by the general meeting of the shareholders on the 28 04 2022. KPMG AB or auditors operating at KPMG AB have been the company's auditor since 2015.

Stockholm 29 April 2023  
KPMG AB

### **Stefan Lundberg**

Authorized Public Accountant

# Corporate governance report

Corporate governance at IRRAS AB defines the decision-making systems, clarifies roles and the allocation of responsibilities among the Board, management and controlling bodies, and safeguards transparency in relation to the Group's stakeholders.

## Corporate governance at IRRAS AB

Corporate governance is defined by Swedish law, particularly the Swedish Companies Act and the listing agreement with Nasdaq Stockholm. IRRAS AB follows the Swedish Code of Corporate Governance ("the Code").

## Annual General Meetings

The Annual General Meeting (AGM) is the company's highest decision-making body. The shares in the company are all of the same type; each share grants the right to one vote. The Annual General Meeting elects the Board of Directors and auditors, and passes resolutions in accordance with the Companies Act and the Articles of Association. At the AGM, the Board presents the Annual Report and the consolidated financial statements for resolution.

The auditors present the Auditor's Report and the report on the consolidated financial statements. The notice to attend the AGM, which is published through a press release and on the company's website, provides information on the matters to be dealt with at the meeting. Resolutions passed at the AGM are made public through a press release and can be found on the company's website.

The 2023 AGM will be held on June 7.

## Nomination Committee

The Nomination Committee represents IRRAS shareholders. The Nomination Committee evaluates the composition of the Board and nominate candidates to the AGM for election as; chairman of the AGM, Chairman of the Board and Board members, and auditors. Furthermore, the Nomination Committee propose remuneration for the Board members and auditors. Shareholders can make proposals to the AGM through the Nomination Committee.

No remuneration is paid for the work performed in the Nomination Committee.

At the Extraordinary General Meeting on September 1, 2017 it was decided on the principles to appoint the Nomination Committee, which applies until further notice. This implies that the AGM does not vote each year for the principles on, how to nominate the Nomination Committee and its mission, unless the principles or the mission needs adaption. The Nomination Committee should consist of, the Chairman of the Board of Directors and three members, who been nominated by the three largest shareholders per the voting right at the end of the third quarter each year. By the three largest shareholders per the voting rights, it references, the largest registered shareholders, or shareholders known by other means, at the end of the third quarter each year. The Nomination Committee should between themselves nominate their Chairman. The Chairman of the Board or any other Board member can not be the Chairman of the Nomination Committee. The composition of the Nomination Committee needs to be published on the Company's website.

On these conditions, the Nomination Committee in front of the AGM 2023 consists of:

Name	Nominated by	Ownership share % December 31, 2022
Christer Hellström	Bacara Holdings Ltd.	23.51
Philippe Audi	Spetses Investments Limited	29.50
Yana Vlasova	Lexington Holding Assets Limited	3.79
Marios Fotiadis	Chairman of the Board, IRRAS AB	-

Christer Hellström, who represents the Company's largest shareholder at this time, Bacara Holdings Ltd., was elected Chairman of the Nomination Committee.

## The Board of Directors

Under the Articles of Association, the Board of Directors must consist of no less than three and no more than seven members, without deputies. Changes to the Articles of Association are resolved by a General Meeting. The Board of Directors consists of five members. At the AGM on May 24, 2022, Marios Fotiadis was re-elected Chairman of the Board and Eva Nilsagård, Catherine Gilmore-Lawless, Anita Tollstadius and Kleanthis G. Xanthopoulos were re-elected as Board members.

The responsibilities of the Board are regulated in the Companies Act and the rules of procedure. The rules of procedure establish the allocation of the Board's duties between the Board and the Board committees, as well as, in between the Board and the CEO. Under the rules of procedure, the Board is to decide on: strategy and budget, adopt the annual report and other external financial reporting, important policies and authorization instructions, elect the CEO and evaluate the CEO's activities, establish rules for internal control and monitor how internal control is functioning, decide on major investments and far-reaching agreements, decide on the direction of the Board's activities, appoint the Audit Committee and Remuneration Committee, and evaluate the Board's activities.

Moreover, the Board is also to adopt the required guidelines for the company's conduct in society for the purpose of ensuring its long-term ability to create value. The Board must also monitor compliance with adopted guidelines on remuneration to senior executives and propose guidelines for remuneration to the AGM.

The Chairman of the Board leads the Board's activities. The Chairman of the Board is to monitor the development of the company and ensure that the Board of Directors receives the information required for them to fulfill their commitments.

In accordance with the rules of procedure, the Chairman of the Board is to represent the company in ownership issues.

The Group has a simple legal and operational structure, and structured governance and internal control systems. In light of this, the Board has chosen not to have a separate internal audit function.

## Members of the Board after the Annual General Meeting on 24 May 2022

Boardmembers	Elected	Independent in relation to the company and senior executive team	Independent in relation to major shareholders	Shareholding	Attendance Board Meeting (13)	Attendance Audit Committee (3)	Attendance Remuneration Committee (1)
Marios Fotiadis, chairman	2012	Yes	No	218,390,660	11/13		
Catherine Gilmore-Lawless	2019	Yes	Yes	–	12/13		1/1
Eva Nilsagård	2018	Yes	Yes	115,000	12/13	3/3	
Anita Tollstadius	2017	Yes	Yes	115,000	13/13	3/3	1/1
Ph.D. Kleanthis G. Xanthopoulos	2015	No	No	13,014,870	11/13		

### Remuneration to Board members

At the AGM in May 2022, it was resolved that a fee of SEK 540,000 would be paid to the Chairman of the Board, and a fee of SEK 265,000 to each and every one of the Board members who are not employed by the company. To Board members who are not employed by the company but living in the US an additional fee is to be paid corresponding to SEK 106,000. For work performed in the audit committee a fee of SEK 130,000 is to be paid to the Chairman of the Audit Committee, and SEK 65,000 for other members. For work performed in the remuneration committee a fee of SEK 100,000 is to be paid to the Chairman of the Remuneration Committee, and SEK 50,000 to other members.

### Board activities

Board meetings are prepared by the Chairman of the Board together with the CEO and CFO of the company. The Board receives printed material prior to every meeting. Certain issues are addressed by the Audit Committee and the Remuneration Committee. Recurring matters addressed at Board meetings include a review of the business situation as well as financial reporting. The minutes are taken by the company's CFO.

### Evaluating Board activities

The Board of Directors evaluates the Board activities in accordance with the rules of procedure. This takes place both through discussions within the Board and through an annual external

evaluation. No evaluation was held, but the nomination committee has held evaluation meetings with all Board members.

### Summary of Board meetings during the year

In 2022, the Board held 13 meetings. At each ordinary Board meeting, the business situation and financial reporting were discussed. The external auditors took part in two meetings during the year and took part in two audit committee meetings during the year. Issues discussed in addition to recurring agenda items include continual reviews of long-term strategies, financing, reviews of new product opportunities, product quality, production strategy, revenue forecasts and the 2023 budget.

### Audit Committee

Since the inaugural Board meeting in May 2022, the Audit Committee has consisted of Board members Eva Nilsagård (Chairman) and Anita Tollstadius.

The primary task of the Committee is to ensure the quality of the financial reports, which includes internal control, review of material reporting and measurement issues, and review of the company's external reports. The Audit Committee evaluates the audit work and assists the Nomination Committee with proposals for the election of auditors and fees for the audit work.

The Audit Committee establishes which services, other than audit services, the company can procure from its auditors. Certain meetings, between the Audit Committee and the external auditors, are to take place without the presence of

employees. The Audit Committee reports to the Board of Directors. A total of three meetings were held in 2022.

### Remuneration Committee

From the inaugural Board meeting in May 2022, the Remuneration Committee has consisted of Board member Catherine Gilmore-Lawless (Chairman) and Anita Tollstadius.

The primary task of the Committee is to propose salaries, other remuneration and terms of employment for the CEO. The Committee develops proposals for remuneration policies and terms of employment for other senior executives, as well as, proposals for incentive programs.

The Remuneration Committee is to ensure compliance with the established guidelines for remuneration to senior executives. The Committee held one meeting during the year.

### Authorization for the Board

At an extraordinary general meeting on Aug 3, 2022, the Board was authorized to, with or without deviation from the shareholders' preemptive rights, on one or more occasions prior to the next AGM, to make decisions regarding an increase in the company's share capital through new issue of shares, convertibles and/or warrants, corresponding to 20% of the total number of shares in the company at the time for the Extra General Meeting conducted in August 2022.



### **Policies for remuneration and other terms of employment for Group management**

The AGM establishes policies for remuneration to Group management. Proposals are prepared by the Remuneration Committee. The core principle is that IRRAS is to offer market-based terms that allow the company to recruit and retain skilled personnel. Remuneration to Group management is to consist of fixed salary, variable remuneration, a long-term incentive program, pension and other customary benefits. The remuneration is based on the individual's commitment and performance in relation to predetermined individual and companywide goals. Individual performance is evaluated on a continual basis.

### **Audit**

The company's auditors are elected at the AGM for a period of one year. At the AGM in 2022, KPMG was elected as the company's auditor, with Authorized Public Accountant Stefan Lundberg serving as auditor in charge for the audit in the Group. The company's auditor conducts a review of at least one interim report per year on the company's behalf. Other statutory audits of the Annual Report, the consolidated financial statements and accounting, as well as, the administration of the Board and the CEO, are performed in accordance with the International Standards on Auditing and good auditing practice in Sweden.

The auditors meet with the Board and Audit Committee on a yearly basis, both with and without company management present and summarizes audits and reviews and provides updates on coming changes in the regulations.

### **Financial reporting to the Board of Directors**

The Board of Directors establishes which reports are to be prepared to enable the Board to monitor the company's development. The quality of the financial reporting to the Board is evaluated primarily by the Audit Committee.

### **External financial information**

In accordance with the company's information policy, which is adopted annually by the Board, the company submits financial information in the form of interim report, year-end reports,

annual reports and press releases in conjunction with significant events that could affect the share price. The disclosure of information follows the requirements indicated in the listing agreement with Nasdaq Stockholm. The Board of Directors discusses external financial reports before they are published. The information policy also establishes how communication is to take place, and who is to represent the company. The information distributed through press releases is also made available on the company's website, as is other information that is deemed valuable.

### **Internal control report**

Under the Companies Act and the Code, the Board of Directors is responsible for internal control. The Board's internal control activities are based on the company's control environment, risk assessment, control activities, information and communication, and monitoring. Internal control is a process that is impacted by the Board, company management and other employees, and is designed to provide reasonable assurance that the company's goals with respect to suitable and efficient operations, reliable financial reporting and compliance with laws and regulations are achieved.

### **Control environment**

The Board of Directors has overall responsibility for establishing and maintaining proper internal control by shaping the organization, decision making channels, authorizations and responsibilities as expressed in policies and guidelines. Shared values create consensus and strengthen internal control. The structure created in 2017 and improved during the following years worked well in 2022 and only minor adjustments to specific controls were made. The Board establishes certain policies and instructions, including authorization instructions. The Board and company management consider quick, correct reporting to be important.

The accounting function ensures that all operations are evaluated and their efficiency enhanced. The evaluation of internal control in the Group follows a plan approved annually by the Audit Committee. Responsibility for creating processes with suitable internal control lies with the respective department manager.

### **Risk assessment**

The company has established a process for risk assessment and risk management in order to ensure that the risks the company is exposed to are handled within the framework established by the Board. This is monitored by the Audit Committee through regular reporting from company management, which presents risk status updates and ongoing activities for managing the company's risks. Risk assessments with mitigation actions are regularly presented to the Board of Directors, which also resolves on the company's risk appetite.

Business processes are evaluated with regard to efficiency and risk. This includes identifying risks for inaccuracies in the financial reports. The company's support processes are also analyzed. An overall risk assessment is conducted yearly. The risks are graded and linked to processes. Processes deemed to be critical include development, manufacturing, sales and support processes such as accounting and IT. Processes for payments, salaries and pensions are also deemed to be critical and are included in evaluations. Any risks of material errors or shortcomings in the financial reports are to be reported to the Audit Committee.

### **Control activities**

Identified risks regarding financial reporting are managed through control measures that limit the identified risks and ensure correct and reliable reporting. Control activities are developed by documenting important processes and defining central activities, after which the controls for them are determined and implemented.

All of the company's risk management activities and controls are managed in the Stratsys support system.

### **Information and communication**

The Board and company management have established information and communication channels to ensure the company's financial reporting is complete and correct. Policy documents such as internal policies, guidelines and instructions are available through the company's quality system. Personnel from Group management regularly visit all the companies in the Group.

## Monitoring

The Board of Directors has determined that internal control is to be monitored through self-assessment and testing of controls. Self-assessment means that the person responsible for each control evaluates the process and decides how well it has performed during the period. Regular testing of all of the company's controls is conducted by an internal, independent party, and is reported to the Audit Committee together with planned measures to improve any weaknesses in the controls.

The company's improvement efforts in 2022 included improved process documentation with focus on processes related to the company's ERP. The purpose of the review is to identify the overall control environment and material risks, and to introduce shared rules regarding overall control issues.

The Audit Committee monitors the company's internal control activities through continual feedback, and has regular contact with the external auditors, which also contributes to the Board's overall picture of internal control.

## Planned activities for 2023

In 2023 the company will maintain the focus on the project processes and on an updated process mapping of all major financial processes in the company.

# Board of Directors



## MARIOS FOTIADIS

Born in 1973. Board member since 2012 and Chairman of the Board since 2020.

**Education:** Marios Fotiadis holds a B.Sc. from the University of Denver and an MBA from Columbia University.

**Other experience:** Marios Fotiadis has more than 20 years of experience from positions within private equity and venture capital in the life science sector, including as a partner of Advent International and TVM Capital. Prior to that, he started his career in private equity and venture capital at SG Capital Partners

**Other current assignments:** Marios Fotiadis is Chairman and CEO of Cerus Advisors DMCC and a Board member of Bacara Holdings Ltd, Shoreline BioSciences, Levant Capital, KLARIS S.A., Sente Inc, Opocrin S.p.A. and Plastic Unbound Limited.

**Previous assignments over the past five years:** Board member of Mediolanum Farmaceutici Spa, Rossart Ltd, Lexington Holding Assets and Vandel Group JLT.

**Shareholding in the company:** 218,390,660 shares via Lexington Holding Assets Ltd (BVI) and Bacara Holdings Limited, including through closely related parties.

Independent in relation to the company and its management, but not independent in relation to its major shareholders.



## CATHERINE GILMORE-LAWLESS

Born in 1960. Board member since 2019. Chairman of the Remuneration Committee.

**Education:** Catherine Gilmore-Lawless holds an MBA from McGill University and a BComm from Concordia University.

**Other experience:** Catherine Gilmore-Lawless has more than 30 years of experience of neurosurgery. Her experience includes more than 15 years in various senior positions at Elekta Instrument AB, including CEO of Elekta's US subsidiary, where she played an instrumental role in the US launch of new neuro technology. Her other positions at Elekta included Senior Vice President, Marketing and Vice President, Clinical Intelligence, Neuroscience.

**Other current assignments:** Vice President & General Manager, Academics GE HealthCare.

**Previous assignments over the past five years:** Catherine Gilmore-Lawless previously served as Senior Vice President of Elekta, Vice President, Strategic Intelligence and Partnerships, Americas at Elekta. Consultant to the International Stereotactic Radiosurgery Society, board member of Clinical Laserthermia Systems.

**Shareholding in the company:** – shares.

Independent in relation to the company and its management and in relation to major shareholders.



## EVA NILSAGÅRD

Born in 1964. Board member since 2018. Chairman of the Audit Committee.

**Education:** Eva Nilsagård holds an B.Sc. in finance and an Executive MBA from the School of Business, Economics and Law at the University of Gothenburg.

**Other experience:** Eva has more than 30 years of experience from senior management positions within finance, strategy and business development from global listed and private companies, mainly in the life science and automotive sectors.

**Other current assignments:** Board member of SEK (Svensk Exportkredit AB), and Board member and Chairman of the Audit Committee of AddLife AB, Bufab AB, Hansa Biopharma AB, Xbrane Biopharma AB and chairman of Spermosen AB. She is the founder and CEO of Nilsagård Consulting AB.

**Previous assignments over the past five years:** Acting CFO of OptiGroup AB, Acting Nordic Finance Director for Staples, Acting Managing Director in Sweden for BEWiSynbra AB, CFO of Plastal Industri AB and SVP Strategy & Business Development at Volvo Group Trucks Sales & Marketing EMEA.

**Shareholding in the company:** 115,000 shares.

Independent in relation to the company and its management and in relation to major shareholders.



## ANITA TOLLSTADIUS

Born in 1955. Board member since 2017. Member of the Audit Committee and Remuneration Committee.

**Education:** Anita Tollstadius holds an M.Sc. in Pharmacy from Uppsala University and an MBA from the Stockholm School of Economics.

**Other experience:** Anita Tollstadius has more than 30 years of experience from global operations in the pharmaceutical industry and has held several senior positions within strategic marketing, communication and organizational development. She has also been CEO for 9 years at a listed company.

**Other current assignments:** –

**Previous assignments over the past five years:** Board member of MediCheck AB and CEO of ContextVision AB.

**Shareholding in the company:** 115,000 shares.

Independent in relation to the company and its management and in relation to major shareholders.



## KLEANTHIS G. XANTHOPOULOS PH.D

Born in 1958. Board member since 2015.

**Education:** Kleanthis G. Xanthopoulos holds a B.Sc. in biology from Aristotle University, an M.Sc. in microbiology and a Ph.D. in molecular biology from Stockholm University, and was an Associate Professor at Karolinska Institutet in Stockholm, Sweden.

**Other experience:** Kleanthis G. Xanthopoulos has more than 25 years' experience from operational positions in the life science sector. He also has extensive experience as an investor in life science companies in the US and Europe and founded four life science companies before joining IRRAS, of which two have been listed on Nasdaq (Anadys Pharmaceuticals, Inc. which was acquired by F. Hoffmann-La Roche Inc. in 2011, and Regulus Therapeutics Inc).

**Other current assignments:** Board member of Sente Inc., Connect Biopharma, Shoreline Biosciences and of Helios Inc.

**Previous assignments over the past five years:** Chairman of the Board of Apricus Biosciences and Bioniz, Board member of LDO spa, Managing General Partner at Cerus Advisors and President and CEO of Regulus Therapeutics.

**Shareholding in the company:** 13,014,870 shares and 1,490,277 personnel options.

Not independent in relation to the company its management or its major shareholders.

## Senior executives



### WILL MARTIN

Born in 1975. CEO and President since 2021.

**Education:** B.A. in finance and computer applications from the University of Notre Dame and an MBA from Johns Hopkins University.

**Other experience:** Will Martin most recently served as General Manager of Peripheral Vascular (PV) Devices for Philips Healthcare. In this role, he oversaw the growth and expansion of Philips Healthcare into the PV interventional space and was responsible for defining and owning the global PV business strategy. During his tenure, the PV segment was one of the fastest growing businesses in Philips. Prior to Philips, Will Martin was Vice President of Commercial Operations and Vice President of Marketing and Business Development at AtheroMed, Inc. He served as Vice President of Sales and Marketing at Hotspur Technologies, Inc. and Vice President of International Sales at AccessClosure, Inc., and held other key commercial roles at Boston Scientific Corporation, Aventis Pharmaceuticals and Corning, Inc.

**Other current assignments:** Board member of Morris Innovative.

**Previous assignments over the past five years:** General Manager, Peripheral Vascular devices, Philips Healthcare.

**Shareholding in the company:** 200,000 shares, 5,160,116 personnel options.



### GRIFFEN STAPP

Born in 1960. Board member since 2019.

Born in 1986. Interim Chief Financial Officer since 2021.

**Education:** Griffen Stapp has a master's degree in Business Administration with an emphasis in Accounting from Cal State University of San Marcos.

**Other experience:** Griffen Stapp is a former CPA who has extensive experience in the areas of internal controls, auditing, and business analytics. Other current assignments: Board Member of California Communication Access Foundation and Wesley House. Advisory Board Member of Clear Blue Sea

**Previous assignments over the past five years:** From 2019 to 2021 Griffen Stapp was the Head of Finance for New Leaf Biofuel. From 2015 to 2019 Griffen Stapp was the CFO for Gaia Medical Biosciences.

**Shareholding in the company:** 817,500 personnel options.



### ADAM SAMPSON

Born in 1968. Vice President of Product Excellence since 2018.

**Education:** Adam Sampson has a B.Sc. in Mechanical Engineering from San Diego State University and holds an extensive range of technical, business and management certifications.

**Other experience:** Adam Sampson is a global executive with strategic and tactical product leadership experience spanning the life sciences, high performance computing, construction and government contracting industries. He has made a career of developing profitable new products and strengthening core revenue streams with worldwide customers such as American Express, eBay, Kohler and Roca. He has been essential to the development, commercialization and sustaining of 14 new product platforms, all IP novel, of which nine were major profit-generating engines. Adam Sampson is a catalyst for continuous growth and improvement by integrating a customer focus with operational excellence and emerging technologies. He has optimized or created five entire product life cycle processes and is the inventor, or managed the inventors, behind over 30 issued patents plus numerous active patent applications.

**Other current assignments:** None.

**Previous assignments over the past five years:** Adam Sampson served as Global VP of Engineering & Product Development at Fluidmaster.

**Shareholding in the company:** 940,160 personnel options.



### KELLIE FONTES

Born in 1961. Vice President Human Capital since 2022, employed in 2018.

**Education:** B.Sc. in Speech Communication from Montana State University and a certificate in Human Resource Management from the University of California.

**Other experience:** Kellie Fontes has vast experience in human resources within the pharmaceutical and high-tech industries and brings in-depth knowledge of HR compliance and risk management. She has also led extensive coaching of senior leaders focused on building personal capabilities and execution of business strategy.

**Other current assignments:** None.

**Previous assignments over the past five years:** Kellie Fontes most recently served as Director, Employee Relations at General Atomics. Prior to General Atomics, she held several leading positions for nearly ten years at GlaxoSmithKline, including US Director, Employee Relations.

**Shareholding in the company:** 941,120 personnel options.

# Use of performance measures not defined by IFRS

IRRAS financial statements are prepared in accordance with IFRS. The company applies the guidelines of the European Securities and Market Authority (ESMA) for alternative performance measures. To follow the financial performance of the Company, IRRAS is using certain performance measure not defined in IFRS. It is the Company's opinion that this information facilitates an analysis of the Group's development. The table below shows the Company's performance indicators and their definition. The indicators are calculated based on the financial numbers reported including IFRS 16.

	2022	2021
<b>Gross margin (Gross profit or loss/Net revenue)</b>		
Gross profit/loss, SEK million	8.4	-28.0
Net revenue, SEK million	40	22.4
Gross margin, %	21%	Neg.
<b>EBIT margin (Operating loss (EBIT)/Net revenue)</b>		
Operating loss (EBIT), SEK million	-168.1	-136.5
Net revenue, SEK million	40	22.4
EBIT margin, %	Neg.	Neg.
<b>EBITDA (Earnings before interest, taxes, depreciation and amortization)</b>		
Operating loss (EBIT), SEK million	-168.1	-136.5
Total depreciation and amortization	16.4	16.8
EBITDA	-151.7	-119.7
<b>EBITDA margin (EBITDA/Net revenue)</b>		
EBITDA	-151.7	-119.7
Net revenue, SEK million	40	22.4
EBITDA margin, %	Neg.	Neg.
<b>Return on equity, (Net profit or loss for the period/average equity)</b>		
Net loss for the period, SEK million	-166.6	-136.3
Average equity, SEK million	128.8	147.5
Return on equity, %	Neg.	Neg.
<b>Net debt/equity ratio</b>		
Equity	146.00	111.6
Total assets	165.9	132.6
Net debt/equity, %	88%	84%

## Definitions

### Gross profit/loss:

Net revenue less cost of sales

### Gross margin:

Gross profit/loss divided by net revenue

### EBITDA:

Earnings before net financial income/expenses, tax and depreciations and amortizations

### EBITDA margin:

EBITDA divided by net revenue

### Operating loss (EBIT):

Gross profit or loss deducted for total operating expenses

### EBIT margin:

Operating profit or loss divided by net revenue

### Return on equity:

Net profit or loss for the period divided by average equity

### Equity ratio:

Total equity divided by Total Assets



# Annual General Meeting

The Annual General Meeting is to be held on Wednesday 7 June 2023 at 13:00 CET at the premises of Setterwalls Advokatbyrå, Sturegatan 10 in Stockholm, Sweden.

## Notice of Attendance

A shareholder who would like to participate in the Annual General Meeting shall:

- be entered in the register of shareholders maintained by Euroclear Sweden AB by the record date Monday 29 May 2023; and
- register with the company no later than Wednesday 31 May 2023 via e-mail to [AGM@irras.com](mailto:AGM@irras.com) or by post at: IRRAS AB (publ), Attn: Sten Gustafsson, Box 160, 101 23 Stockholm, Sweden. When registering, please provide the shareholder's name, personal ID number (corporate registration number), address, telephone number, number of shares and any assistants (maximum two). Information submitted during registration will be processed and used for the 2023 AGM.

In order to be entitled to participate in the Annual General Meeting, a shareholder who has registered their shares in the name of a nominee, in addition to announcing their intention to participate by submit its absentee ballot, must temporarily request that their shares be registered in their own name so the shareholder is entered into the register of shareholders by Monday 29 May 2023. This registration may be temporary (so-called voting right registration) and is requested with the nominee in accordance with the nominee's procedures and in advance as determined by the nominee. Voting right registrations made no later than Wednesday 31 May 2023, will be considered when preparing the shareholder register.

If participating through a proxy, original copies of the proxy form and any additional authorization documents must be submitted to the company well in advance of the Annual General Meeting. Representatives of legal entities must additionally submit a certified copy of the proof of registration or similar authorization documents showing that they may represent the legal entity of their own accord. The company will provide shareholders with a proxy form, which can be obtained at the company's headquarters or from the company's website.

## Financial Calender

In 2023, the quarterly interim reports are planned to be published on the following dates:

May 17, 2023	Q1 2023 interim report
August 24, 2023	Q2 2023 interim report
November 9, 2023	Q3 2023 interim report
February 21, 2024	Q4 2023 interim report

## IR contacts

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