



ANNUAL REPORT 2024



SEAL SQ
semiconductors + quantum

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1.

CEO LETTER TO SHAREHOLDERS

1. CEO LETTER TO SHAREHOLDERS

It is my pleasure to present SEALSQ's 2024 Annual Report. This past year was a transformative period as we laid the foundation for long-term growth through strategic innovation and investment. While the industry-wide shift toward next-generation semiconductor technologies resulted in a temporary slowdown in revenue growth, we are well-positioned to capitalize on emerging opportunities. Key drivers include the expansion of revenue streams through Matter certification adoption and the implementation of new Cyber Trust Mark standards, reinforcing trust and interoperability across IoT ecosystems.



SEAL Quantum Roadmap: Pioneering the Future of Post-Quantum Security and Semiconductors

SEALSQ has officially embarked on its SEAL Quantum Roadmap, a strategic initiative driving the development of our next-generation post-quantum platform and semiconductors. In 2025, this initiative will culminate in the launch of SEAL Quantum-as-a-Service (QaaS), designed to eliminate hardware barriers and accelerate the widespread adoption of quantum computing across multiple industries. By enabling companies to leverage diverse architectures and computing paradigms tailored to their specific challenges, SEALSQ empowers organizations to unlock new computational possibilities.

Our partnerships with leading quantum computing companies further enhance this vision, providing customers with access to an extensive ecosystem of cutting-edge technologies. To support enterprises in this transition, we offer specialized expertise and training to help them develop and implement quantum-ready use cases.

Advancing Quantum-Resistant Security

A major milestone in 2024 was SEAL SQ's progress in quantum-resistant chip technology, a critical breakthrough in securing digital infrastructures against quantum cyber threats. Our advanced post-quantum chip is engineered to deliver unmatched security, protecting IoT networks, critical infrastructure, and financial systems from future quantum-enabled cyberattacks. This innovation solidifies SEAL SQ's leadership in quantum security while opening new market opportunities as businesses and governments prepare for the quantum era. The full-scale commercial deployment of this technology is projected to generate substantial returns starting in 2025.

Post-Quantum Security: A Cornerstone for AI

The rise of artificial intelligence (AI) has amplified the need for robust post-quantum security. AI systems increasingly process sensitive data and operate in security-critical environments, making them prime targets for quantum-powered cyber threats. Given that quantum computing could render existing encryption obsolete, AI-driven enterprises must adopt quantum-resistant solutions to safeguard their training data, decision-making models, and confidential insights from potential breaches.

SEAL SQ's quantum-resistant semiconductors provide the necessary security foundation for AI applications, ensuring trusted data exchange, intellectual property protection, and compliance with emerging cybersecurity regulations. By integrating these chips into AI infrastructure, organizations can gain a competitive edge, fostering greater adoption of secure AI solutions across industries such as healthcare, finance, and autonomous systems.

Expanding IoT and Satellite Connectivity

Further emphasizing SEAL SQ's innovation, we have advanced our role in satellite-IoT connectivity through the WISat picosatellite constellation. This initiative, in partnership with WISat.Space, enhances IoT connectivity in low-bandwidth and remote regions, generating new revenue streams and addressing critical global IoT challenges.

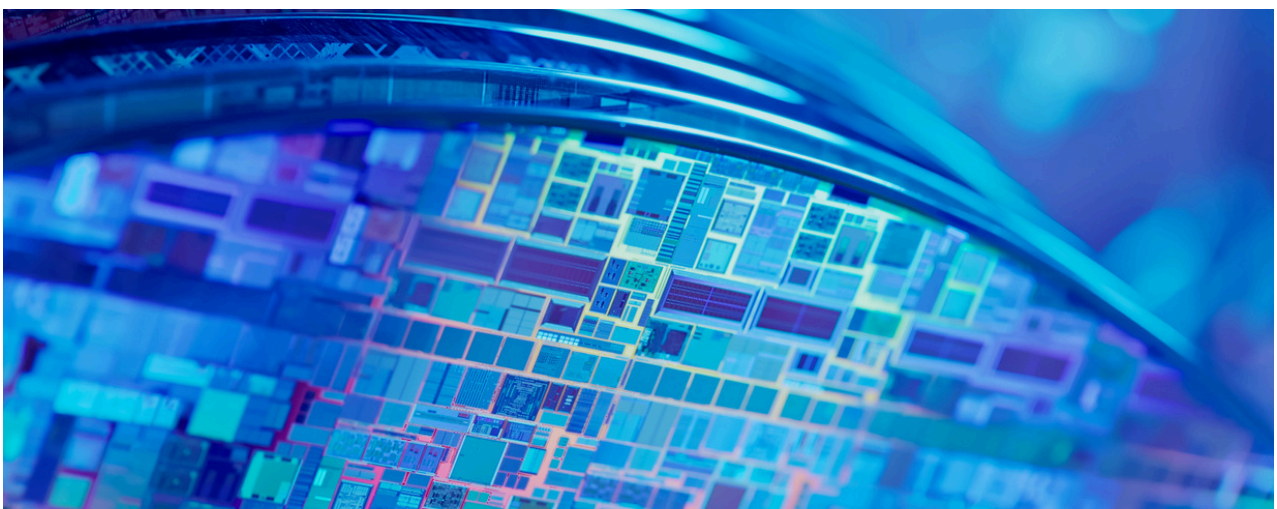
Financial Strength and Strategic Growth Initiatives

SEAL SQ has built a robust financial foundation with a strong cash position of over \$90million, supporting ongoing innovation, operational scalability, and global expansion. The company has also successfully cleaned its balance sheet of all convertible debt and warrants, removing restrictions that previously limited investment potential.

SEAL SQ's FY 2024 revenue reflects our transition toward post-quantum semiconductor technologies. While revenue declined from \$30 million in FY 2023 to approximately \$11 million in FY 2024, this is in line with market normalization and the shift toward next-generation quantum-resistant solutions. Our focus on research and development, with over \$5 million invested in 2024, will drive future revenue growth, with the first revenues from new quantum-resistant technology expected in 2026.

Upcoming Developments and Market Expansion

SEAL SQ is in advanced negotiations regarding the establishment of Open Semiconductor Assembly and Test (OSAT) facilities across Europe, the Middle East, Asia, and America. These facilities will enhance supply chain resilience, ensuring uninterrupted access to critical semiconductor components. Additionally, our global footprint expanded in 2024 through strategic channel partnerships in the USA, India, Japan, Israel, and Europe, reinforcing SEAL SQ's market recognition and unlocking substantial growth opportunities.



Strategic Priorities for 2025

SEAL SQ remains committed to advancing excellence in quantum-resilient technologies with a focus on:

- Scaling production capacity for two new quantum-resistant chips launching in 2025.
- Developing a new business line of post-quantum ASICs and IPs, building on advanced commercial discussions with major tech companies.
- Expanding partnerships with governments and enterprises to fortify digital ecosystems.
- Continuing research and development in advanced cryptographic algorithms.
- Expanding SSL/TLS and GSMA certificate offerings to strengthen our cybersecurity ecosystem.

Quantum Investments and the Future

As part of the SEAL Quantum Roadmap, SEAL SQ has allocated \$20 million to invest in pioneering startups specializing in quantum computing, QaaS, and AI-driven semiconductor technologies. These investments support companies at the forefront of developing quantum computers, quantum networking solutions, and cloud-based quantum services secured by SEAL SQ's advanced security protocols.

Quantum computing represents a paradigm shift in computational power, yet it also poses a significant threat to current cryptographic standards. Conventional encryption methods, such as RSA and ECC, are vulnerable to quantum attacks, and nation-state actors are already harvesting encrypted sensitive data in anticipation of decrypting it once quantum technology reaches large-scale fault tolerance.

SEALSQ is at the forefront of addressing these challenges, integrating post-quantum encryption solutions directly into semiconductor architectures, ensuring seamless implementation across multi-cloud, hybrid, and edge computing environments.

Startups seeking investment must demonstrate groundbreaking advancements in quantum computing, quantum security, or AI-powered semiconductor development. SEALSQ's rigorous evaluation process includes assessing cryptographic resilience, hardware-software integration capabilities, and regulatory compliance. We prioritize companies focused on developing quantum key distribution (QKD), lattice-based cryptographic protocols, and quantum-secured cloud environments, ensuring that SEALSQ remains a global leader in quantum security.

As the digital economy moves towards an era dominated by quantum computing, AI-driven automation, and hyper-connectivity, SEALSQ remains at the forefront of securing the future. Through strategic investments in cutting-edge startups and continued advancements in post-quantum cryptography, SEALSQ is reinforcing its commitment to building a quantum-resilient world. Our unwavering focus on driving innovation, securing and nurturing valuable business opportunities, and delivering exceptional products and services to our clients will strengthen our market position and ensure sustainable growth.

Thank you for your continued support.

Sincerely,

Carlos Moreira
Chairman & CEO, SEALSQ Corp

Carlos Moreira
CEO



2.

ABOUT SEALSQ

2. About SEAL SQ

SEAL SQ is a leading innovator in post-quantum Technology hardware and software solutions. Our technology seamlessly integrates Semiconductors, PKI (Public Key Infrastructure), and Provisioning Services, with a strategic emphasis on developing state-of-the-art Quantum Resistant Cryptography and Semiconductors designed to address the urgent security challenges posed by quantum computing. Our products are engineered to safeguard critical systems, enhancing resilience and security across diverse industries.

SEAL SQ was established as a subsidiary of WISeKey International Holding AG, combining decades of expertise in cryptographic security and trusted digital infrastructure. Headquartered in Switzerland, we operate across Europe, the United States, and other strategic markets. Our solutions provide the foundation of digital trust for businesses and governments worldwide.

SEAL SQ's comprehensive portfolio, which includes secure microcontrollers, PKI services, compliance with IoT standards like Matter, GSMA eUICC root certificates, tailored ASICs, and post-quantum cryptography capabilities, uniquely positions the company to address evolving market needs. These capabilities, combined with SEAL SQ's entry into the TPM market, ensure strong growth potential and market leadership in the cybersecurity and IoT sectors.

2.1. What does SEAL SQ do?

SEAL SQ delivers integrated digital security solutions that combine four critical components into a unified offering: Root-of-Trust, Secure Chips, trusted Identity Generation and Management (PKI), and Personalization Services. Together, these components ensure the confidentiality, integrity, and authenticity of connected devices and digital communications.



Post Quantum Root of Trust

Provisioning Services

Quantum Resistant Secure Elements

Managed PKI

Our offerings are structured around four foundational technology pillars:

1. Our Swiss-based Post Quantum Root of Trust:

Offering neutrality, reliability, and is certified by leading industry standards such as WebTrust (browsers), Matter (Smart Home), and Wi-SUN (Smart Grid).

2. Public Key Infrastructure services:

Leveraging this root-of-trust we offer a SaaS solution to issue and manage cryptographic credentials that authenticate users, devices, and systems. Our platform uses quantum resistant Cryptographic Algorithms recommended by the National Institute of Standards and Technology (NIST).

3. Personalization Services:

Industrial-scale systems for embedding digital identities into secure microcontrollers, enabling seamless integration and secure operation at scale.

4. Quantum Resistant certified secure microcontrollers:

Designed to protect and store digital identities, ensuring robust authentication for connected devices and systems.

SEAL SQ's comprehensive product range meets the growing demand for secure, certified solutions across industries:

- **Post-Quantum Chips:** SEAL SQ is developing two secure microcontrollers with quantum-resistant cryptographic capabilities, scheduled for market release in Q4 2025.
- **VaultIC Secure Microcontrollers:** pre-provisioned cryptographic chips for IoT devices, enabling secure authentication and protection against cyber threats. Recent innovations include VaultIC292 for Matter devices, and VaultIC408 for smart meters and industrial IoT.
- **Public Key Infrastructure (PKI):** INeS, our PKI-as-a-Service software leverages on our Swiss-based Root of Trust to conveniently and scalably issue and manage trusted device identities ensuring IoT device compliance with protocols such as Matter, Wi-SUN, and WebTrust. Our PKI solutions now include post-quantum algorithms to protect against quantum threats.
- **Personalization Services:** Enabling clients to pre-provision private keys and certificates into chips within 4 weeks, reducing costs and time-to-market. But also, on-line or off-line during device manufacturing using our INeS Box device.

2.2. Which industries do we serve?





SEAL SQ solutions serve high-growth industries requiring secure, scalable, and certified solutions. Some examples of the use cases of our products are as follows:

- **Smart Homes & Consumer electronics:** SEAL SQ products help device makers accelerating time to market and reducing costs by easing compliance with the growingly adopted Matter protocol that ensures secure and seamless interoperability across connected devices, addressing a market projected to reach \$78 billion by 2025 (Source: Statista 2023).

- **Automotive:** Securing Plug-and-Charge infrastructure (EV Charging stations), a sector expected to grow at a 31% CAGR through 2030 (Source: Fortune Business Insights 2022).
- **IoT and Smart Cities:** Protecting billions of IoT devices, with the number of connected devices requiring protection anticipated to reach 28.3 billion units by 2027 (Source: IoT Analytics 2023).
- **Critical Infrastructure:** Securing smart grids and utilities through FIPS 140-3 certified solutions.
- **Healthcare:** Enabling secure communication for medical devices and sensitive patient data.
- **Industrial IoT:** Providing tamper-resistant chips for sensors and mission-critical systems.

SEAL SQ semiconductors and PKI services contribute to secure millions of objects: luxury products, routers, gateways, utilities meters, E.V. chargers, drones, authentication dongles, storage memory USB sticks, medical devices, connected door-locks, and a variety of other electronic consumers devices.

Use Cases

 <p>Smart Home</p> <p>Secure Elements pre-provisioned with Matter Device Attestation Certificates: Faster compliance, easier scale-up, and highest security for lower costs</p> <p>inventec</p>	 <p>Smart Grid</p> <p>Full Root to Chip security solution FIPS 140-3 certified for leading smart meter manufacturers</p> <p>Landis+Gyr</p>	 <p>EV Charging</p> <p>Managed PKI solution & ready-to-use FIPS certified secure elements for Charging Stations and Vehicles</p> <p>VESTEL</p>	 <p>Military & Government</p> <p>Specific integrated solutions for secure communications and vehicles: P25 radios, Secure UAVs</p> <p>Parrot</p>
 <p>IP Protection</p> <p>Personalized secure elements embedded in electronic boards to protect design Intellectual Property and avoid grey market and counterfeiting.</p> <p>CISCO</p>	 <p>Anti-Counterfeiting</p> <p>Secure elements & PKI to prevent use of counterfeit parts, accessories or consumables</p> <p>SIEMENS</p>	 <p>Healthcare</p> <p>Solutions to protect patient data confidentiality, track and trace bio-sensitive materials, and avoid counterfeit medical devices or products</p> <p>Medtronic</p>	 <p>Secure Access:</p> <p>Open hardware platform to run sensitive applications that control access to data (Crypto Wallets, Secure USB storage) or facilities (Smart cards, SIP designs)</p> <p>LEGIC</p>

2.3. Our Key Differentiators, Our Value Proposition

1. Digital Security PURE player:

We focus only on security, unlike our biggest hardware competitors who specialize in a broad range of embedded components.

2. Digital Security FULL player:

The only market player integrating all aspects of a connected device's security from the Root-of-Trust to the Secure Elements (secure microcontrollers), including PKI Services and industrial-scale personalization services. This end-to-end approach streamlines security deployment for connected devices and systems, reducing complexity and enhancing protection.

3. Post-Quantum Technology:

A key focus and competitive differentiator. SEALSQ is developing two quantum-resistant chips scheduled for release in Q4 2025 and has already integrated post-quantum algorithms into its PKI solutions.

4. Fabless:

A cost-efficient, flexible business model focusing on the core profit area of the value chain (semiconductor design and trust services).

5. Customization / ASICS:

SEALSQ designs and delivers tailor-made chips to meet the specific performance and security needs of its clients.

6. Neutral Post Quantum Root of Trust:

Our Swiss-based Post-Quantum Root of Trust (PQ-RoT), accredited by numerous industry ecosystems and standards such as WebTrust, Matter, GSMA, and Wi-SUN, ensures compliance, neutrality, and reliability while integrating quantum-resistant cryptographic capabilities. Designed to withstand future quantum threats, it provides long-term security for device authentication, encryption, and digital identity management, ensuring a smooth transition to a post-quantum world.

Our differentiators allow us to serve highly demanding global customers such as **CISCO, THALES, SIEMENS, TOSHIBA, and PARROT.**

2.4. Key Market Drivers Fueling SEALSQ's Market Share Growth in 2025

During the year 2024, we have created a record 38 new "Design-IN's" for our existing solutions which should feed our 2025 revenue and we anticipate our 2025 growth to be driven by:

1. Entry into the TPM Market (2025):

We closed the financial year 2024 with over 60 Qualified leads and already 1 "Design-IN" in relation to our TPM market offering. SEALSQ's planned entry into the Trusted Platform Module (TPM) market in 2025 will leverage its expertise in post-quantum cryptography and hardware security. The booming TPM market, expected to grow significantly in the coming years, presents a new avenue for SEALSQ to expand its market share and address hardware-based security needs.

2. Tailor-Made Security ICs (ASICs):

SEALSQ's ability to offer custom security ASICs, integrated with quantum-resistant features, provides a competitive advantage in sectors requiring specialized hardware solutions, such as automotive, industrial, and telecommunications.

3. Adoption of Post-Quantum Cryptography (PQC):

The threat of quantum computing to traditional encryption methods is accelerating the adoption of PQC. SEALSQ's integration of quantum-resistant algorithms into its PKI services and secure microcontrollers positions the company as a leader in this emerging field.

4. Regulatory Compliance:

Stringent data protection regulations (e.g., GDPR, HIPAA) and global initiatives to adopt PQC standards (e.g., NIST) are pushing industries to adopt secure solutions that SEALSQ can provide.

5. Rising Cybersecurity Threats:

Increasing frequency and sophistication of cyberattacks are driving the demand for advanced security solutions, including secure microcontrollers, PKI services, and ASICs with quantum-resistant features.

6. IoT Expansion and Interoperability Standards:

The proliferation of IoT devices requires secure communication and data integrity. SEAL SQ's commitment to compliance with IoT interoperability standards such as Matter enhances the appeal of its secure microcontrollers and ASICs, ensuring seamless integration across connected ecosystems.

7. Inclusion of GSMA eUICC Root Certificates:

SEAL SQ's GSMA eUICC root certificates enable secure mobile connectivity and SIM management, positioning the company as a trusted provider for telecommunications and IoT applications requiring secure provisioning and authentication.

8. Growth in Digital Transactions:

Increasing reliance on digital payments, e-commerce, and online banking is driving the need for secure PKI services to authenticate users and protect data.

9. Cloud Adoption and Remote Work:

As businesses move to the cloud and adopt remote work models, there is a growing need for secure PKI-based solutions to protect data and ensure seamless authentication.

10. Competitive Edge Through Innovation:

SEAL SQ's focus on integrating post-quantum cryptography into its products, coupled with its expertise in secure microcontrollers, PKI services, and TPMs, positions it at the forefront of the rapidly evolving security market.

11. Global Collaborations and Initiatives:

Participation in global standards development for PQC, IoT, and GSMA certification enhances SEAL SQ's credibility and market reach.

2.5. Strategic Projects for 2025

a) Quantix Edges: Semiconductor personalization & design center in Spain

WISeKey and SEALSQ jointly, together with ODINS and TProtege, two Spanish companies with extensive experience in R&D&i (Research & Development & Innovation) worldwide and in the design and manufacturing of IoT devices and solutions, plan to establish in the Region of Murcia a "Center of Excellence in Cybersecurity and Microchips" under the financial umbrella of the Microelectronics and Semiconductors Plan (PERTE CHIP) initiated by Spain.

The project called Quantix Edges is in the final stages of the approval process by the Sociedad Espanola para la Transformacion Tecnologica (SETT), the Spanish government's entity responsible for funding under the PERTE budgets. The project features a EUR 20 million investment by WISeKey, SEALSQ, OdinS and TProtege and SETT over a period of 3 years, involving the creation of up to 200 highly qualified direct jobs (300 indirect). The projection estimates of the Internal Rate of Return ("IRR") for this project at the end of year 7 are at 18% with a net present value of EUR 120 million.

The project will focus on three key areas of the semiconductor value chain, as the most appropriate response to the global geo factors that condition this market, particularly to reduce the excessive geostrategic dependence on a few countries, located mainly in Southeast Asia:

- Design of microcontrollers and their validation chain, prior to their production at industrial scale.
- Testing and assembly: Each chip must be individually tested and assembled in a suitable package, ready to be integrated into the final electronic card: Process known as OSAT (Open Semiconductors Assembly and Test).
- Personalization Phase in which the software and identifiers are loaded into the semiconductors. This stage is strategically important in several markets, such as automotive and IoT, where each semiconductor must contain an inviolable identity for full protection in terms of cybersecurity, according to the demands of government regulators.

The project would be developed through a "fabless" environment and offers a series of significant advantages that respond not only to the current needs of the industry, but also to the future demands at U.S., European and global level. Advantages of our project are rooted in several key factors:

Expertise in Design with RISC-V Technology:

- Leveraging experienced designers and RISC-V technology enables the creation of highly tailored chips, meeting specific market requirements.
- Ensures project relevance on a national and international scale, aligning with the PERTE strategy and the EU CHIP Act.

Compliance with Safety Standards and Certifications:

- Emphasis on developing products that strictly adhere to safety standards, including Common Criteria and NIST.
- Reinforces user confidence and facilitates product adoption in European, US, and Latin American markets.
- Aligns with the EU's commitment to certification issues.

Collaboration with Third-Party Partners:

- Partnering for silicon wafer production enhances operational efficiency and enables large-scale production to meet market demands.

Rigorous Quality Control System:

- Establishing a comprehensive quality control system with individual chip testing ensures high standards, allowing only functional chips in the production process.

Security in Sensitive Operations:

- Guaranteeing security in critical processes like data injection, firmware, certificates, and keys.
- Conducting operations in a Common Criteria EAL5+ certified environment and aligning with the EU's EUCS for heightened security.

Late Customization and Flexibility:

- Customizing chips at an advanced stage and employing "late customization" offers agility in responding to specific customer demands.
- Reduces lead times and minimum quantities from order, enhancing responsiveness.

WISeKey Root-of-Trust Accreditation:

- Utilizing WISeKey Root-of-Trust, accredited by recognized organizations like WebTrust, Matter, GSMA, and WI SUN, enhances the security of certificates and injected keys.
- Establishes greater trust in the products.

Adaptability to European, American, and Latin American Markets:

- Project flexibility and customization cater to diverse market needs in Europe and America, contributing to greater acceptance and local adaptation. [\[1\]](#)



[1] "Critical Infrastructure Security", ABI Research, February 2021.

b) QUASAR Program Update

In 2022, we were excited to announce the kick-off of the QUASAR (QUAntum resistant Secure ARchitecture) project, our next generation of secure microcontrollers built on our new Secure RISC-V CPU.

We expect that our new quantum resistant secure chips will be available to the market in Q4 2025, and we are already delivering (Q1 2025) the first samples to some pilot customers.

SEALSQ has integrated advanced post-quantum cryptographic algorithms, such as CRYSTALS-Kyber and CRYSTALS-Dilithium, into the INeS PKI offering. These algorithms are designed to withstand the computational power of future quantum computers, ensuring the long-term security of encrypted data and communications.

This project marks a significant leap into the post quantum cryptography era, as it will implement an “hybrid solution” (i.e., combining “traditional” cryptographic algorithms such as ECC and RSA, as well as “post quantum” algorithms): that aligns with the recommendations of France's National Cybersecurity Agency (“ANSSI”). The French SCS Cluster's endorsement of our QUASAR project further underscores our leading role in semiconductor innovation.

Post-quantum cryptography (“PQC”) refers to cryptographic methods that are secure against an attack by a quantum computer. As quantum computers become more powerful, they may be able to break many of the cryptographic methods that are currently used to protect sensitive information, such as Rivest-Shamir-Aelman (“RSA”) and Elliptic Curve Cryptography (“ECC”). PQC aims to develop new cryptographic methods that are secure against quantum attacks. One example of a post-quantum technology is lattice-based cryptography. It is a type of public-key cryptography that is based on the hardness of a mathematical problem called the Shortest Vector Problem (“SVP”) which is thought to be too difficult for a quantum computer to solve. Lattice-based cryptography can be used for tasks such as digital signatures, key exchange, and encryption. Another example is code-based cryptography which is based on the difficulty of decoding certain algebraic structures called error-correcting codes. These codes can be used to create digital signatures, key exchanges, and encryption schemes that are secure against quantum attacks.

This post-quantum cryptography toolbox will help to protect against the security threat posed by quantum computers, allowing hybrid solutions by no later than 2025 as recommended by the French ANSSI. In addition to this, SEALSQ plans to upgrade its PKI offer, adding new post-quantum features for the IoT market: Secure authentication, Brand protection, Network communications, future FIDO ("Fast Identity Online") evolutions and additional generally web- connected smart devices that obtain, analyze, and process the data collected from their surroundings. SEALSQ is executing this project under the name "QUASARS" (QUANTum resistant Secure ARchitectureS.).

c) Capital Investments

SEALSQ has successfully rolled out a significant investment project that ended in 2024 with the intention of increasing and upgrading the overall capacity of production within its supply chain. While SEALSQ does not manufacture its own semiconductors, it does own certain capital materials required in order for its suppliers to undertake and complete the production process. The investment project has allowed for more flexibility in the number of production and testing lines that SEALSQ can resort to.

SEALSQ is also developing a brand-new generation of Secure Elements implementing new technologies in order to optimize its footprint, and thus its cost, a Flash memory providing more customization flexibility, and a new generation of Crypto Processor capable to run post-quantum algorithms selected by the NIST. This project will require an investment of approximately USD 3.0 million and will be funded by a combination of cash flow from operating activities, grants and other available subsidies from local, national and international funding agencies.

Our current focus on R&D extends our portfolio along the following technological evolutions:

- the QUASAR (QUAntum resistant Secure ARchitecture) project, a radical innovative solution, based upon the new WISeKey Secure RISC V based platform that is paving the way for the post-quantum cryptography era.
- silicon techniques to bolt our secure vault to general purpose processors in a certifiable tamperproof way,
- software techniques to secure and automate the onboarding of a connected device with a platform in a cloud,
- cryptographic techniques to combine post-quantum attack resistance with our side channel attack resistance in a certifiable way,
- ledger and blockchain techniques to offer a transparent, immutable, and cryptographically verifiable journal of our lifecycle management,
- countermeasure techniques to stay ahead of the cyberattack evolutions, and
- in partnership with FOSSA and WISeKey, the launch of the WISeSat constellation, picosatellites, manufactured by FOSSA, to enable the direct connection of satellites to IoT devices.

While our current products serve our current markets well, we believe the products resulting from our R&D will create additional opportunities in upgrade markets, in different sectors, and in new applications of our technology in innovating markets.

d) Quantum as a Service

In 2025, SEAL SQ advanced its commitment to quantum computing by investing in ColibriTD, a pioneering quantum technology company. This strategic investment aims to integrate ColibriTD's Quantum-as-a-Service (QaaS) platform into SEAL SQ's Quantum Roadmap, facilitating a hybrid quantum-classical computing environment. The collaboration is expected to enhance various industrial applications, including secure communications, satellite navigation, advanced cryptographic security, and complex simulations in fields such as combustion, fluid dynamics, and material deformation.

Additionally, SEAL SQ is working with its partners to bring quantum computing to the cloud, making this transformative technology more accessible to businesses, researchers, and developers. This initiative will enable SEAL SQ to offer quantum-enhanced cryptography, post-quantum security, quantum simulations, and optimization services through its cloud platform.

These efforts underscore SEAL SQ's dedication to integrating cutting-edge quantum technologies into its product offerings, positioning the company at the forefront of the emerging quantum computing landscape.





3.

**MANAGEMENT
DISCUSSION &
ANALYSIS OF
FINANCIAL
CONDITION AND
RESULTS OF
OPERATIONS**

3. Management Discussion & Analysis of Financial Condition and Results of Operations

The following Management Discussion and Analysis ("MD&A") is intended to provide a reader of SEALSQ's financial statements with a narrative explanation from management's perspective of the financial and other significant factors that have impacted and could impact the company's performance.

3.1. FY2024 Key Milestones

The key highlights of the year ended December 31, 2024 ("FY2024") are:

- First engineering samples of our new quantum resistant secure microcontroller delivered in Q4 2024, in line with our R&D plan initiated in 2022 and on target to ensure that our QVault-TPM, our next generation of secure microcontrollers built on our new Secure RISC-V CPU, is available to the market in Q4 2025.
- 39 new "Design-IN's" across all product lines and over 60 Qualified leads in relation to our Trusted Platform Module (TPM), QVault-TPM, expected to be released in 2025.
- \$84.6 million cash balance allowing SEALSQ to pursue M&A interests while maintaining its strong R&D investments to offer technologically up-to-date solutions.
- \$11 million revenue, an expected sharp decrease as a result of a transitional year with customers gradually shifting to our next-generation quantum-resistant solutions and delayed building inventory until the release alongside the impact of the excess inventory accumulation by customers in 2023.
- \$5 million investments in R&D, this investment is essential to develop our post-quantum chip and next-generation product range and support our growth in future years.

A summary of the key performance metrics of the Group is set out in the table below:

US GAAP (\$'000)	<u>12 months ended December 31,</u>	
	<u>2024</u>	<u>2023</u>
Net sales	10,981	30,058
Gross profit	3,728	14,049
Operating loss as reported	(17,191)	(4,141)
Net loss as reported	(21,201)	(3,268)
Cash and cash equivalents	84,624	6,895

3.2. Discussion & Analysis

Liquidity and Capital Resources

Cash and cash equivalents at December 31, 2024 were \$84.6 million, compared to \$6.9 million at December 31, 2023. Our strong cash balance at the end of 2024 is mainly due to the cash injection from three Direct Offerings and the exercise of most of our outstanding warrants in December 2024. We expect to use this liquidity to fund our operations, develop our sales team, support our R&D expenses for our next-generation solutions and to finance our M&A activity.

The most significant sources of funding of the Group are external financing, customer sales, research tax credits provided by the French government and, when needed, loans extended by WISeKey.

We anticipate that our ability to resort to external funding in future will be closely linked to the performance of the SEALSQ ordinary shares on the Nasdaq.

Revenue

Our total revenue for the year ended December 31, 2024, decreased by USD 19.1 million or 63% from prior period. This decrease was expected and reflects the Company's transition towards post-quantum semiconductor technologies as customers gradually shifted from our traditional semiconductors to our next-generation quantum-resistant solutions and delayed building inventory until the release of our new post-quantum resistant semiconductor.

The Group is developing its next-generation secure semiconductors range built on the new Secure RISC-V CPU with a state-of-the art secure firmware stack on it, compliant with the Trusted Computing Group definition of a Trusted Platform Module 2.0 (TPM 2.0) and with the NIST FIPS 140.3 certification requirements, under the project name QUASAR for QUAntum resistant Secure ARchitecture (see section 2.5.b for detail).

Management believes that the QUASAR project is essential to ensure that the Group remains competitive in the future because customers and IT providers are turning to more secure equipment. For instance, one of Windows 11's operating system requirements is TPM 2.0 implementation. Microsoft has stated that this is to help increase security against firmware attacks^[2]. Additionally, the United States Department of Defense (DoD) specifies that "new computer assets (e.g., server, desktop, laptop, thin client, tablet, smartphone, personal digital assistant, mobile phone) procured to support DoD will include a TPM version 1.2 or higher where required by Defense Information Systems Agency (DISA) Security Technical Implementation Guides (STIGs) and where such technology is available"^[3]. We have involved our customers in this transition to make sure that our new product range will suit their needs. With this strategy, we expect to get their buy-in for our long-term product strategy but, in the short term, this has also led some of our customers to also prepare the transition into the next-generation products and we expect some holdback on volumes during this transition.

In the semiconductor industry, the development of a new product range involves complex engineering which takes months. The QUASAR project was launched in 2022. The design phase was completed in Q2 2024 as planned, with the first engineering samples available by Q4 2024; the first samples of QVault-TPM were shared with key customers in Q1 2025 and the commercial release is planned for Q4 2025, with full production expected in 2026.

SEAL SQ's current revenue is comparable to that of its quantum-focused peer group due to the early-stage adoption of the technology. Our next-generation quantum-resistant semiconductors are due to be released in the last quarter of 2025.

The revenue trend also highlights the impact of market normalization following the semiconductor supply chain disruptions caused by the COVID-19 pandemic. The excess inventory accumulation by customers in 2023 resulted in lower 2024 order volumes as clients utilized existing stock before making new purchasing commitments.

^[2] Warren, Tom (2021-06-25). "Why Windows 11 is forcing everyone to use TPM chips". The Verge. Retrieved November 13, 2021.

^[3] US Department of Defense. Instruction 8500.01. March 14, 2014. p. 43.

Gross Profit

Our gross profit decreased by USD 10.3 million to USD 3.7 million (gross margin of 34%) in the year ended December 31, 2024 in comparison with a gross profit of USD 14.0 million (gross margin of 47%) in the year ended December 31, 2023. Most of the decrease in gross profit is the direct result of the decrease in revenue year-on-year.

Our gross profit margin decreased by 13 percentage points from 47% in 2023 to 34% in 2024. This decrease in gross profit margin is expected to be temporary and is essentially due to the costs of inventory that remain high, with some incompressible fixed costs, while our customers are using their own stock and we are therefore shipping less parts until customers can take delivery of new products. This is illustrated by the increase in our Days Sales of Inventory (DSI) from 145 in the year 2023 to 168 in 2024. As customers use up the stock they have built and progressively resume ordering new products and next-generation products, the gross profit margin is expected to rise back to previous average levels.

Other operating income

We do not have recurring other operating income that contributes to our profit.

In 2024, our other operating income consisted of services provided to the WISeKey Group in an amount of USD 226,809 and the release of unused provisions in an aggregate amount of USD 132,191.

In 2023, our other operating income consisted of the release of a provision for USD 39,902 and a liability written off after expiration of the statute of limitation for USD 8,420.

Research & development expenses

Our research and development ("R&D") expenses includes expenses related to the research of new technology, products and applications, as well as their development and proof of concept, and the development of further application for our existing products and technology. They include salaries, bonuses, pension costs, stock-based compensation, depreciation and amortization of capitalized assets, costs of material and equipment that do not meet the criteria for capitalization, as well as any tax credit relating to R&D activities, among others.

Our R&D expenses increased by USD 1 million between 2024 and 2023. This reflects the investment required to develop our next-generation products and solutions, especially our post-quantum QUASAR program. R&D remains a large part of our operating expenses with USD 5.0 million spent in the year ended December 31, 2024, representing 24% of total operating expenses. Our Group being technology-driven, the level of our R&D expenses reflects our engagement to act as a leader in semiconductor security solutions and future applications.

Research tax credits are provided by the French government to give incentives for companies to perform technical and scientific research. Our subsidiary SEALSQ France SAS is eligible to receive such tax credits. The credit is deductible from the entity's income tax charge for the year or payable in cash the following year, whichever event occurs first.

Selling & marketing expenses

Our selling & marketing ("S&M") expenses include advertising and sales promotion expenses such as salaries, bonuses, pension costs, stock-based compensation, business development consultancy services, and costs of supporting material and equipment that do not meet the criteria for capitalization, among others.

With a total of USD 5.5 million net of stock-based compensation, our S&M expenses decreased by USD 0.2 million in comparison with our 2023 S&M expenses of USD 5.6 million net of stock-based compensation. Due to the decrease in revenue, the Group paid less sales commission in 2024 compared to 2023.

General & administrative expenses

Our general & administrative ("G&A") expenses cover all other charges necessary to run our operations and supporting functions, and include salaries, bonuses, pension costs, stock-based compensation, lease and building costs, insurance, legal, professional, accounting and auditing fees, depreciation and amortization of capitalized assets, and costs of supporting material and equipment that do not meet the criteria for capitalization, among others.

Net of stock-based compensation, our G&A expenses of USD 10.7 million has increased by USD 2.1 million in comparison with the USD 8.6 million G&A expense net of stock-based compensation for the year ended December 31, 2023. The main components of the G&A expenses are an increase in management bonuses by USD 1.3 million following a one-off award in recognition of the exceptional fundraising activities of the Group in 2024, an increase in legal and audit fees by USD 1.1 million mainly in relation to registration statements filed with the SEC, an increase in non-income tax expenses by USD 0.2 million in relation to the tax residency of SEALSQ in Switzerland, and a decrease in professional fees by USD 0.5 million due to the one-off listing fees incurred by the Group in 2023.

Our G&A expenses remain and will remain high due to SEALSQ initiatives to expand our geographical footprint and revenue streams, including through M&A initiatives. These initiatives require specific professional expertise and legal advice which contribute to our G&A cost base.

Operating Results

As a result of the factors described in the above sections, our USD 17.2 million operating loss for the year ended December 31, 2024 increased by USD 13.1 million compared with our USD 4.1 million operating loss for the year 2023.

Non-operating income and expenses

The net balance of our non-operating activities in the year ended December 31, 2024 was a net non-operating expense of USD 0.9 million compared a USD 1.1 million net income from non-operating activities in the year ended December 31, 2023. The USD 2.0 million increase in non-operating expense is mostly attributable to a non-recurring write-off of indebtedness to related parties of USD 2.2 million in 2023 and an increase in interest and amortization of debt discount by USD 0.3 million due to the various financing facilities negotiated by the Group.

Net Results

In the year ended December 31, 2024, the Company made a net loss of USD 21.2 million. This represents a USD 17.9 million increase in net loss compared to a net loss position of USD 3.3 million for the year ended December 31, 2023.

The main factors explaining the increase in net loss in the year ended December 31, 2024, are the sharp decrease in revenue by USD 19.1 million resulting in a decrease in gross profit by USD 10.3 million, an overall increase in operating expenses by USD 2.7 million mainly in relation to our R&D and G&A spendings, and an increase in non-operating expenses by USD 2 million linked to our financing facilities and a one-off write-off in 2023. Also, in the year ended December 31, 2024, the Group recorded a USD 3.1 million income tax expense for the write-off of its deferred tax asset balance, which represented a USD 2.9 million increase in income tax expense from 2023.



Consolidated Income Statement of SEALSQ Corp

US GAAP (\$'000)	12 months ended December 31,		Year-on- Year Variance
	2024	2023	
Net sales	10,981	30,058	-63%
Cost of sales	(6,775)	(15,589)	-57%
Depreciation of productions assets	(478)	(420)	14%
Gross profit	3,728	14,049	-73%
Other operating income	359	48	648%
Research & development expenses	(4,985)	(3,946)	26%
Selling & marketing expenses	(5,453)	(5,648)	-3%
General & administrative expenses	(10,840)	(8,644)	25%
Total operating expenses	(20,919)	(18,190)	15%
Operating (loss) / income	(17,191)	(4,141)	315%
Non-operating income	1,061	2,442	-57%
Gain / (loss) on debt extinguishment	(100)	-	-
Interest and amortization of debt discount	(1,003)	(689)	46%
Non-operating expenses	(883)	(655)	35%
(Loss) / income from before income tax expense	(18,116)	(3,043)	495%
Income tax (expense) / income	(3,085)	(225)	1271%
Net (loss) / income	(21,201)	(3,268)	549%

Non-GAAP Financial Measures

In managing the business on a consolidated basis, management develops an annual operating plan, which is approved by our Board of Directors, using non-GAAP financial measures including EBITDA and adjusted net income. In measuring performance against this plan, management considers the actual or potential impacts on these non-GAAP financial measures from actions taken to reduce costs with the goal of increasing our gross margin and operating margin and when assessing appropriate levels of research and development efforts. In addition, management relies upon these non-GAAP financial measures when making decisions about product spending, administrative budgets, and other operating expenses. We believe that these non-GAAP financial measures, when coupled with the GAAP results and the reconciliations to corresponding GAAP financial measures, provide a more complete understanding of the Company's results of operations and the factors and trends affecting business. We believe that they enable investors to perform additional comparisons of our operating results, to assess our liquidity and capital position and to analyze financial performance excluding the effect of expenses unrelated to operations, certain non-cash expenses related to acquisitions and share-based compensation expense, which may obscure trends in the Company's underlying performance. This information also enables investors to compare financial results between periods where certain items may vary independent of business performance and allows for greater transparency with respect to key metrics used by management.

These non-GAAP financial measures are provided in addition to, and not as a substitute for, or superior to, measures of financial performance prepared in accordance with GAAP. The presentation of these and other similar items in non-GAAP financial results should not be interpreted as implying that these items are non-recurring, infrequent, or unusual. Reconciliations of these non-GAAP measures to the most comparable measures calculated in accordance with GAAP are provided in the financial statements portion of this release in a schedule entitled "Financial Reconciliation of GAAP to non-GAAP Results (unaudited)."

EBITDA is defined as Operating income/(loss) for the reporting period before depreciation and amortization for the same reporting period.

Non-GAAP to GAAP Reconciliations - SEAL SQ Corp

	12 months ended December 31,	
Million USD	2024	2023
Operating loss as reported	(17.2)	(4.1)
Non-GAAP adjustments:		
Depreciation expense	0.6	0.6
EBITDA	(16.6)	(3.5)
Non-GAAP adjustments:		
Listing-related professional fees*	-	0.3
Adjusted EBITDA	(16.6)	(3.2)

* The Company was listed on the Nasdaq on May 24, 2023.

3.3.Outlook for 2025 and beyond

While we anticipate that our QVault-TPM, our next generation of secure microcontrollers built on our new Secure RISC-V CPU developed through our QUASAR project, will be available to the market in Q4 2025, SEAL SQ anticipates generating substantial returns from the full-scale commercial deployment of this post-quantum resistant microcontroller starting in 2026.

The Group has therefore taken several initiatives to develop new revenue streams and strengthen net results.

These initiatives include:

- **Quantix Edges: Semiconductor personalization & design center in Spain**

WISeKey and SEALSQ jointly, together with OdinS and TProtege, two Spanish companies with extensive experience in R&D&i (Research & Development & Innovation) worldwide and in the design and manufacturing of IoT devices and solutions, plan to establish in the Region of Murcia a "Center of Excellence in Cybersecurity and Microchips" under the financial umbrella of the Microelectronics and Semiconductors Plan (PERTE CHIP) initiated by Spain.

The project called Quantix Edges is in the final stages of the approval process by the Sociedad Espanola para la Transformacion Tecnologia (SETT), the Spanish government's entity responsible for funding under the PERTE budgets.

- **R&D focus on technological evolutions**

Aside from the QUASAR project, our R&D team is also working to integrate technological evolutions in the fields of silicon techniques, software techniques, cryptographic techniques, ledger and blockchain techniques, countermeasure techniques, and the direct connection of satellites to IoT devices.

The ability of SEALSQ to remain at the forefront of technological advances in relation to semiconductors is essential to maintaining competitive and attractive solutions for our clients.

- **Quantum as a Service**

In 2025, SEALSQ advanced its commitment to quantum computing by investing in ColibriTD, a pioneering quantum technology company. This strategic investment aims to integrate ColibriTD's Quantum-as-a-Service (QaaS) platform into SEALSQ's Quantum Roadmap.

- **Scaled Up Global Footprint**

Throughout 2024, SEALSQ strategically expanded its global presence, securing key partnerships with renowned distributors and sales representatives in crucial markets. These alliances have strengthened SEALSQ's market position while fueling growth by leveraging each partner's expertise and established networks.



4. BUSINESS UPDATE

4. Business Update

4.1. Market Size & Trends

Today, SEALSQ operates globally in multi-billion dollar markets, all forecasted to grow between 7% and 16% annually in the coming years:

1. The PKI services market grew from \$ 5.61 billion in 2023 to \$ 6.53 billion in 2024, and is expected to continue growing at a CAGR of 16.69%, reaching \$ 16.54 billion by 2030. [4]

2. The global secure microcontroller market is experiencing steady growth, driven by increasing demand for enhanced security in various applications such as mobile secure transactions, authentication, and smart cards. In 2023, the market was valued at approximately \$ 2.07 billion and is projected to reach \$ 3.82 billion by 2030, growing at a CAGR of 7.2% during the forecast period. [5]



[4] "Public Key Infrastructure Market – Global Industry Analysis and Forecast (2024-2030)", Maximize Market Research, July 2024.

[5] "Secure Microcontroller Market: Global Industry Analysis and Forecast (2024 -2030)", Maximize Market Research, June 2024.

Additionally, SEAL SQ will start to play on New Markets in 2025:

1. Trusted Platform Module (TPM) Market size was valued at USD 4.1 Billion in 2022 and is projected to reach USD 8.5 Billion by 2030, growing at a CAGR of 9.8% from 2024 to 2030. [\[6\]](#)
2. The global ASIC market was valued at \$ 18.35 billion in 2023 and is projected to reach \$ 39.53 billion by 2032, exhibiting a CAGR of 8.9% during the forecast period. [\[7\]](#)
3. The market for quantum-resistant cryptography solutions is experiencing significant growth, driven by the increasing need to secure digital infrastructure against potential quantum computing threats. According to Allied Market Research, the global quantum-resistant cryptography solutions market was valued at \$ 523.4 million in 2023 and is projected to reach \$ 7.8 billion by 2032, growing at a compound annual growth rate (CAGR) of 35% from 2024 to 2032. [\[8\]](#)
4. Focusing specifically on post-quantum cryptography (PQC), MarketsandMarkets reports that the PQC market size is estimated to grow from \$ 302.5 million in 2024 to \$ 1.9 billion by 2029, at a CAGR of 44.2% during the forecast period. [\[9\]](#)

[6] "Trusted Platform Module (TPM) Market Insights", Verified Market Reports, February 2025.

[7] "Global Application Specific Integrated Circuit (Asic) Industry Research Report, Competitive Landscape, Market Size by 2033", Business Research Insights, February 2025.

[8] "Quantum-resistant Cryptography Solutions Market Research, 2032", Allied Market Research, August 2024.

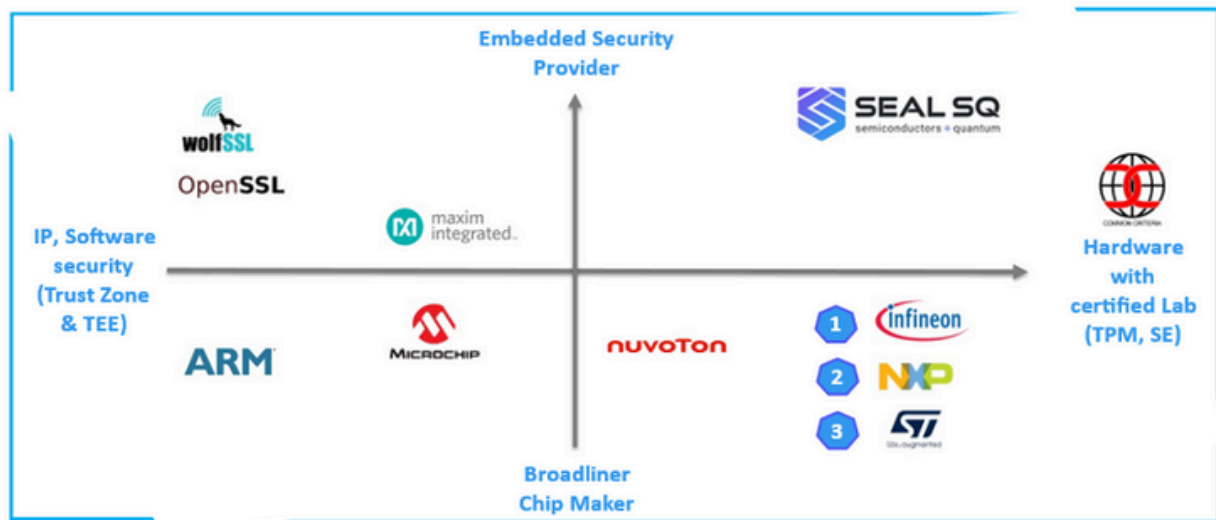
[9] "Post-Quantum Cryptography (PQC) Market", MarketsandMarkets, September 2024.

4.2. Competitive Position

SEAL SQ operates in a specialized market with strong competitors like NXP, STMicroelectronics (STM), Samsung, Microchip, and Infineon (IFX) and also identity service companies like Thales, Digicert, Keyfactor, HID, and Entrust.

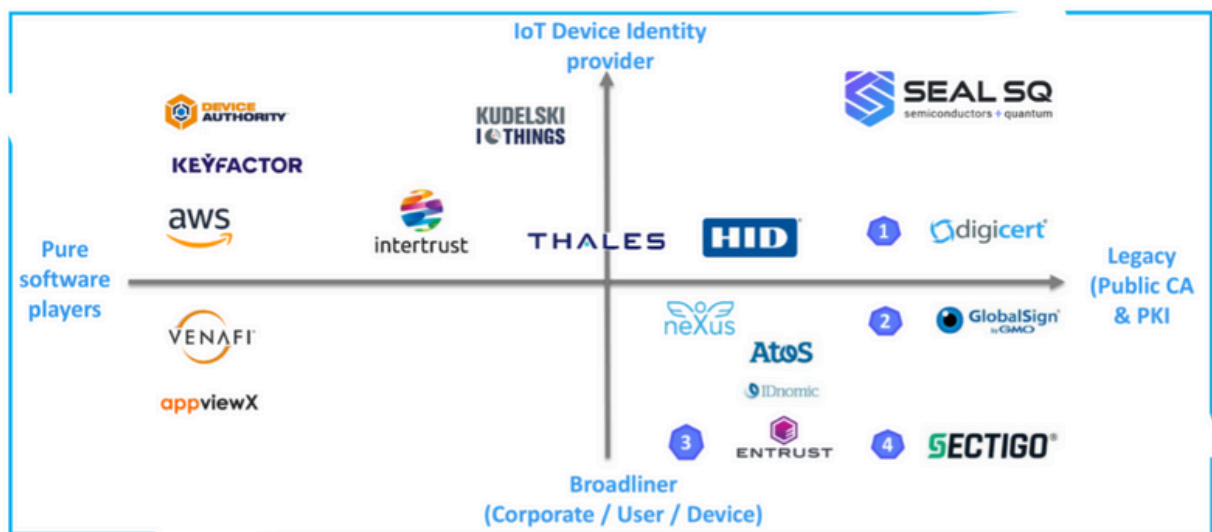
Competition Mapping on Embedded Security

(Software & Hardware)



X Ranking in Market Share

Competition Mapping on Trust Services



X Ranking in Market Share

4.3. Sales & Distribution

Operational Review: 2024 – A Record Year for New Projects

In 2024, SEAL SQ achieved a record-breaking 46 new Design-WINs and 14 new Design-INS, setting the stage for sustained pipeline growth in 2025.

SEAL SQ's 2024 activity for the 2025 pipeline has been driven by:

Existing Customers:

- TOSHIBA began production in Q1 2025 with SEAL SQ's new VaultIC408 for its latest smart meter designs.
- LEGIC engaged SEAL SQ for a new packaging form factor for its next-generation devices using the MS6001 secure chip, with production set to commence in Q3 2025.

New Customers, including:

- Numerous "Matter" Smart Home deals in Europe and Asia, where device manufacturers like DYSON or HAGER have chosen SEAL SQ's Matter-certified PKI solutions, either standalone or integrated with the VaultIC292 secure element.
- A key U.S. medical industry player specializing in innovative treatments (cardiovascular, diabetes, etc.), incorporating SEAL SQ's secure element and PKI services into multiple projects.
- Electronic smart lock manufacturers, including MIWA (Japan) and Sunion (Taiwan).

In addition, the upcoming release of the new post-quantum chips and particularly the QVault Trusted Platform Module (TPM) has attracted the market's attention with our Sales team engaging active commercial discussions with no less than 41 potential TPM customers in Q4 2024 (with an internal target of 100), generating an unweighted pipeline value of 32M\$ for the 2026-2028 period.

Strategic Outlook: Scaling Up Our Global Footprint in 2024

Throughout 2024, SEALSQ strategically expanded its global presence, securing key partnerships with renowned distributors and sales representatives in crucial markets. These alliances have strengthened SEALSQ's market position while fueling growth by leveraging each partner's expertise and established networks.

EMEA Expansion

In EMEA, SEALSQ partnered with Micon, a leading semiconductor distributor with a strong presence in Israel, the Nordics, and Italy. Micon's extensive market reach and industry expertise aligns seamlessly with SEALSQ's growth strategy, unlocking new opportunities in verticals such as Military, Consumer IoT, and Smart Grid.

To further solidify its presence in Israel, SEALSQ signed a representative agreement with V2C. Additionally, a major semiconductor distributor is set to join SEALSQ's network, further strengthening its foothold in France, Spain, and Italy.

North America Expansion

In North America, SEALSQ established strategic alliances with three sales representative organizations—CJR Associates, Rep One, and SJ England—covering the entire U.S. east coast. Simultaneously, SEALSQ entered a nationwide representation and distribution agreement with Symmetry, a leading U.S. semiconductor distributor known for its deep market knowledge and client-centric approach.

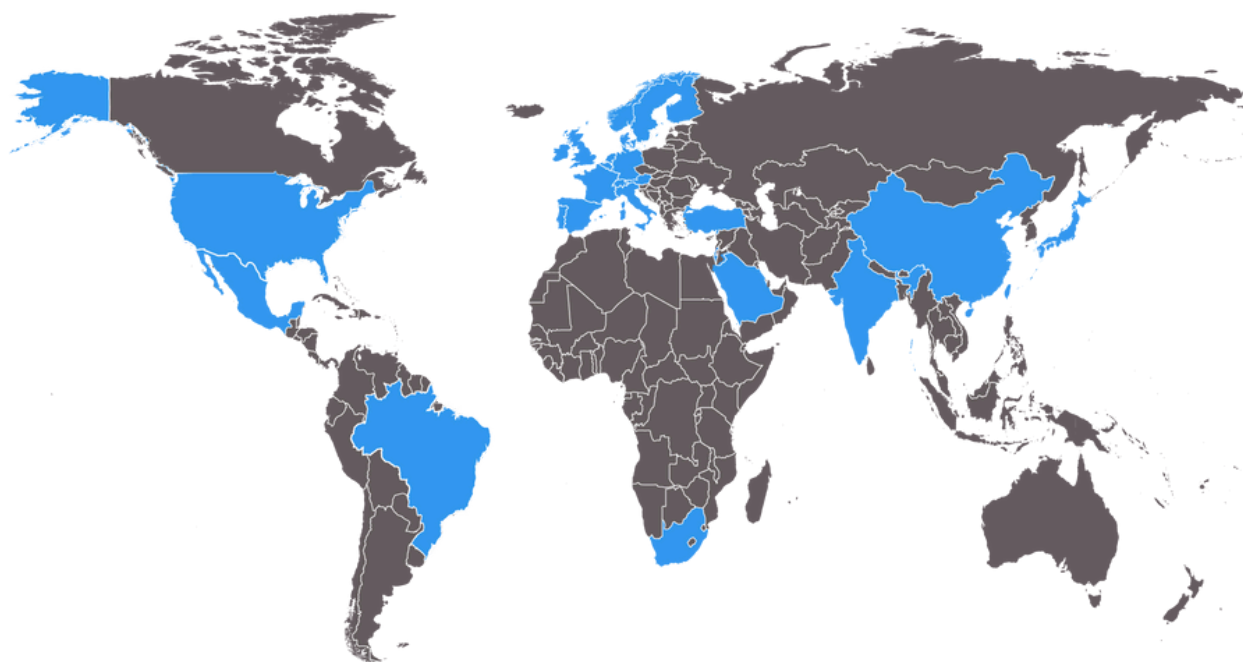
These partnerships, coupled with an expanded domestic team following SEALSQ's aggressive hiring efforts, have significantly bolstered SEALSQ's presence across the U.S. This hiring momentum will continue throughout 2025, ensuring seamless support for new and existing clients.

Asia Expansion

SEAL SQ has also strengthened its footprint in Asia, reinforcing its local sales team and forging new partnerships.

- Taiwan: SEAL SQ partnered with GRL, a global design lab, and Holystone, a prominent local electronic components distributor. These collaborations have already yielded new business, particularly in Consumer IoT, PKI, and Matter Smart Home applications.
- Japan: SEAL SQ deepened its market presence through collaborations with Okaya Electronic and Allion, two highly regarded distributors with strong industry expertise. Their local market knowledge and customer-first approach ensure SEAL SQ effectively navigates the complexities of the Japanese business landscape.
- In addition to its Okaya partnership, SEAL SQ is finalizing an agreement with another major Japanese distributor, further solidifying its position in the region.

At the close of 2024, SEAL SQ accelerated its presence in Asia by securing a distribution agreement with DTDS, a key player in semiconductor distribution. Through DTDS, SEAL SQ aims to expand into previously underserved markets, including India, Singapore, Thailand, Malaysia, Indonesia, Vietnam, and the Philippines.



4.4. Environmental, Social and Governance (“ESG”)

SEAL SQ is committed to ESG principles through the attainment of the ISO 14001 certification. This certification underscores our dedication to implementing robust environmental management systems and further aligns with our values of sustainability, responsibility and innovation.





5. CONSOLIDATED FINANCIAL STATEMENTS

Consolidated Financial Statements

of SEALSQ Corp

As at December 31, 2024

1.	Report of the Independent Registered Public Accounting Firm (BDO Ltd; Zurich, Switzerland; PCAOB ID# 5988)	F-2
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1. Report of the Independent Registered Public Accounting Firm (BDO Ltd; Zurich, Switzerland; PCAOB ID# 5988)

Shareholders and Board of Directors
SEALSQ CORP
VG 1110
British Virgin Islands

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of SEALSQ CORP (the "Company") as of December 31, 2024 and 2023, the related consolidated statements of income and comprehensive income/(loss), stockholders' equity, and cash flows for each of the years then ended, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2024 and 2023, and the results of its operations and its cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audit, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

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

Zurich, Switzerland, March 20, 2025

Philipp Kegele ppa. Thomas Richard de Ferrars

We have served as the Company's auditor since 2023.

2. Report of the Independent Registered Public Accounting Firm (BDO Rhône Alpes; Lyon, France; PCAOB ID# 3340)

Report of Independent Registered Public Accounting Firm

Shareholders and Board of Directors

WISeKey Semiconductors SAS (SEALSQ Corp Predecessor) - Meyreuil – FRANCE

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated statements of comprehensive income/loss, stockholders' equity, and cash flows of WISeKey Semiconductors SAS Group (SEALSQ Corp Predecessor) for the year ended December 31, 2022, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the results of the operations of the Company and its cash flows for the year ended December 2022, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audit we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audit included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audit provides a reasonable basis for our opinion.

Lyon (France), April 20, 2023

BDO Rhône-Alpes

Represented by Justine GAIRAUD

We have served as the Company's auditor since 2016.

3. Consolidated Statements of Comprehensive Income / (Loss)

USD'000, except earnings per share	12 months ended December 31,			Note ref.
	2024	2023	2022	
Net sales	10,981	30,058	23,198	25
Cost of sales	(6,775)	(15,589)	(13,267)	
Depreciation of production assets	(478)	(420)	(132)	
Gross profit	3,728	14,049	9,799	
Other operating income	359	48	2,007	26
Research & development expenses	(4,985)	(3,946)	(2,308)	
Selling & marketing expenses	(5,453)	(5,648)	(3,824)	
General & administrative expenses	(10,840)	(8,644)	(3,091)	
Total operating expenses	(20,919)	(18,190)	(7,216)	
Operating (loss) / income	(17,191)	(4,141)	2,583	
Non-operating income	1,061	2,442	935	28
Gain / (loss) on debt extinguishment	(100)	-	-	
Interest and amortization of debt discount	(1,003)	(689)	(355)	19
Non-operating expenses	(883)	(655)	(638)	29
(Loss) / income before income tax expense	(18,116)	(3,043)	2,525	
Income tax (expense) / income	(3,085)	(225)	3,245	
Net (loss) / income	(21,201)	(3,268)	5,770	
Earnings per Ordinary Share (USD)				
Basic	(0.60)	(0.21)	0.41	32
Diluted	(0.60)	(0.21)	0.41	32
Earnings per F Share (USD)				
Basic	(3.01)	(1.07)	2.04	32
Diluted	(3.01)	(1.07)	2.04	32
Other comprehensive income / (loss), net of tax:				
Foreign currency translation adjustments	-	(2)	(15)	
Defined benefit pension plans:				21
Net gain / (loss) arising during period	(27)	11	170	
Other comprehensive income / (loss)	(27)	9	155	
Comprehensive (loss) / income	(21,228)	(3,259)	5,925	

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

4. Consolidated Balance Sheets

USD'000, except par value	As at December 31, 2024	As at December 31, 2023	Note ref.
ASSETS			
Current assets			
Cash and cash equivalents	84,624	6,895	7
Accounts receivable, net of allowance for doubtful accounts	3,825	5,053	8
Inventories	1,418	5,231	9
Prepaid expenses	355	605	
Government assistance	2,247	1,718	10
Other current assets	593	765	11
Total current assets	93,062	20,267	
Noncurrent assets			
Deferred income tax assets	-	3,077	30
Deferred tax credits	190	-	
Property, plant and equipment, net of accumulated depreciation	3,201	3,230	12
Intangible assets, net of accumulated amortization	-	-	13
Operating lease right-of-use assets	1,031	1,278	14
Other noncurrent assets	82	83	15
Total noncurrent assets	4,504	7,668	
TOTAL ASSETS	97,566	27,935	
LIABILITIES			
Current Liabilities			
Accounts payable	10,073	6,963	16
Notes payable	4,828	1,278	17
Deferred revenue, current	5	-	25
Current portion of obligations under operating lease liabilities	327	336	14
Income tax payable	1	2	
Other current liabilities	283	138	18
Total current liabilities	15,517	8,717	
Noncurrent liabilities			
Bonds, mortgages and other long-term debt	-	1,654	19
Convertible note payable, noncurrent	-	1,519	19
Indebtedness to related parties, noncurrent	3,105	9,695	20
Operating lease liabilities, noncurrent	616	893	14
Employee benefit plan obligation	464	426	21
Total noncurrent liabilities	4,185	14,187	
TOTAL LIABILITIES	19,702	22,904	

USD'000, except par value	As at December 31, 2024	As at December 31, 2023	Note ref.
Commitments and contingent liabilities			22
SHAREHOLDERS' EQUITY			
Common stock - Ordinary shares	1,000	154	23
Par value - USD 0.01			
Authorized - 200,000,000 and 200,000,000			
Issued and outstanding - 100,039,519 and 15,446,807			
Common stock - F shares	75	75	23
Par value - USD 0.05			
Authorized - 10,000,000 and 10,000,000			
Issued and outstanding - 1,499,700 and 1,499,700			
Additional paid-in capital	117,944	24,730	
Accumulated other comprehensive income / (loss)	758	784	24
Accumulated deficit	(41,913)	(20,712)	
Total shareholders' equity	77,864	5,031	
TOTAL LIABILITIES AND EQUITY	97,566	27,935	

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

5. Consolidated Statements of Changes in Shareholders' Equity

USD'000 except share numbers	Number of ordinary shares	Number of F shares	Share Capital	Additional paid-in capital	Accumulated deficit	Accumulated other comprehensive income / (loss)	Total equity (deficit)	Note ref.
As at December 31, 2022	7,501,400	1,499,700	150	16,731	(17,444)	775 (a)	212	
Reverse recapitalization under common control	100	-	-	(188)	-	-	(188)	
L1 Facility	3,940,630	-	39	3,854	-	-	3,893	
Anson Facility	4,004,677	-	40	4,124	-	-	4,164	
Indebtedness to related parties	-	-	-	209	-	-	209	
Comprehensive income / (loss)	-	-	-	-	(3,268)	9	(3,259)	
As at December 31, 2023	15,446,807	1,499,700	229	24,730	(20,712)	784	5,031	
Stock-based compensation	-	-	-	148	-	-	148	27
Anson SPA	19,260,369	-	193	10,199	-	-	10,392	19
L1 SPA	21,494,586	-	215	10,295	-	-	10,510	19
Second, Third and Fourth Anson SPAs	17,004,050	-	170	27,530	-	-	27,700	23
Second, Third and Fourth L1 SPAs	17,004,050	-	170	27,530	-	-	27,700	23
Anson warrants	5,336,419	-	53	8,752	-	-	8,805	23
L1 warrants	4,493,238	-	45	8,760	-	-	8,805	23
Comprehensive income / (loss)	-	-	-	-	(21,201)	(27)	(21,228)	
As at December 31, 2024	100,039,519	1,499,700	1,075	117,944	(41,913)	758 (a)	77,864	

(a) Adjusted for rounding

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

6. Consolidated Statements of Cash Flows

USD'000	12 months ended December 31,		
	2024	2023	2022
Cash Flows from operating activities:			
Net income / (loss)	(21,201)	(3,268)	5,770
Adjustments to reconcile net income to net cash provided by / (used in) operating activities:			
Depreciation of property, plant & equipment	630	569	404
Amortization of intangible assets	-	1	4
Write-off gain	-	(2,240)	-
Interest and amortization of debt discount	1,003	689	355
Loss on debt extinguishment	100	-	-
Stock-based compensation	148	-	-
Inventory valuation allowance	(524)	594	554
Deferred tax asset write-off	3,077	-	-
Income tax expense / (recovery) net of cash paid	4	225	(3,250)
Other non cash expenses /(income)			
Expenses settled in equity	441	153	-
Expenses accrued under noncurrent liabilities	-	-	882
Unrealized and non cash foreign currency transactions	(478)	112	-
Reclassification to financial activities	255	-	-
Changes in operating assets and liabilities, net of effects of businesses acquired / divested			
Decrease (increase) in accounts receivables	1,451	(2,834)	387
Decrease (increase) in inventories	4,337	2,319	(5,354)
Decrease (increase) in other current assets and prepaids, net	423	275	(778)
Decrease (increase) in deferred research & development tax credits, net	(528)	(1,026)	154
Decrease (increase) in other noncurrent assets, net	(189)	(6)	5
Increase (decrease) in accounts payable	2,100	39	(521)
Increase (decrease) in deferred revenue, current	5	-	-
Increase (decrease) in income tax payable	-	(45)	44
Increase (decrease) in other current liabilities	145	(10)	(31)
Increase (decrease) in defined benefit pension liability	37	31	(179)
Increase (decrease) in interest on debt owed to related parties	167	35	164
Increase (decrease) in net balance owed to related parties, excluding debt and interest on debt	(2,608)	1,347	1,836
Net cash provided by / (used in) operating activities	(11,205)	(3,040)	446
Cash Flows from investing activities:			
Sale / (acquisition) of property, plant and equipment	(571)	(3,021)	(299)
Net cash provided by / (used in) investing activities	(571)	(3,021)	(299)
Cash Flows from financing activities:			
Proceeds from options and warrants exercises	17,610	-	-
Proceeds from issuance of Common Stock	60,000	-	-
Common Stock issuance costs	(4,855)	-	-
Proceeds from debt	-	-	1,750
Repayment of indebtedness to related parties	(1,407)	-	-
Payments of debt issue costs	(1,867)	(680)	-
Proceeds from convertible loan issuance	20,000	9,600	-
Net cash provided by / (used in) financing activities	89,481	8,920	1,750

USD'000	12 months ended December 31,		
	2024	2023	2022
Effect of exchange rate changes on cash and cash equivalents	24	(21)	96
Cash and cash equivalents			
Net increase / (decrease) during the period	77,729	2,838	1,993
Balance, beginning of period	6,895	4,057	2,064
Cash and cash equivalents balance, end of period	84,624	6,895	4,057
Supplemental cash flow information for financing and investing activities			
Cash paid for income tax	4	-	4
Noncash conversion of convertible loans into common stock	21,825	8,175	-
Recapitalization by WISeKey International Holding Ltd	-	-	7,348
ROU assets obtained from operating lease	62	65	56

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

7. Notes to the Consolidated Financial Statements

Note 1. The SEALSQ Group

SEALSQ Corp, together with its consolidated subsidiaries (“SEALSQ” or the “Group” or the “SEALSQ Group”), has its headquarters in Tortola, British Virgin Islands (BVI). SEALSQ Corp, the parent of the SEALSQ Group, was incorporated in April 2022 and is listed on the NASDAQ Capital Market exchange with the valor symbol “LAES” since May 23, 2023.

On January 1, 2023, SEALSQ Corp acquired SEALSQ France SAS (formerly WISeKey Semiconductors SAS), a private joint stock company (French Simplified Joint Stock Company), and its subsidiaries. Prior to that acquisition, SEALSQ did not have any operations.

SEALSQ is a semiconductor company specializing in the design of secure microcontrollers and advanced cybersecurity solutions that integrate Post-Quantum Cryptography (PQC) for the Internet of Things (IoT) ecosystem. As an OEM supplier, we cater to a diverse range of clients, including IoT device manufacturers, branded appliances, and high-value objects, ensuring digital trust and security in an increasingly interconnected world. SEALSQ uniquely combines semiconductor and cybersecurity technologies, embedding countermeasures capable of resisting state-of-the-art tampering attacks, including those anticipated from future Quantum Computing threats. SEALSQ has been granted the highest security resistance level (CC EAL5+), positioning us as a leader in the industry. SEALSQ operates as a Public Key Infrastructure (PKI) Root Certification Authority, certified by global organizations such as WEBTRUST, GSMA, CSA-MATTER, and WI-SUN, covering essential sectors like SSL/TLS, telecommunications, utilities, and home automation. By integrating cybersecurity, semiconductors, and post-quantum IoT, SEALSQ is pioneering the future of digital trust, ensuring that connected devices have a secure, verifiable identity and can communicate safely in an increasingly digital landscape.

The Group anticipates being able to generate profits in the future thanks to the increased focus on the security and authentication of IT components and networks on the market, and its search for new revenue streams which may include investments in, and acquisitions of, companies in the industry.

Note 2. Future operations and going concern

The Group recorded a loss from operations in this reporting period and the accompanying consolidated financial statements have been prepared assuming that the Group will continue as a going concern.

The Group incurred a net operating loss of USD 17.2 million in the year 2024 and had positive working capital of USD 77.5 million as at December 31, 2024, calculated as the difference between current assets and current liabilities. Based on the Group’s cash projections up to March 31, 2026, SEALSQ has sufficient liquidity to fund operations.

We note that, historically, the Group has been dependent on financing from its parent, WISeKey International Holding Ltd or other investors, to augment the operating cash flow to cover its cash requirements.

Based on the foregoing, Management believe it is correct to present these figures on a going concern basis.

Note 3. Basis of presentation

The consolidated financial statements are prepared in accordance with the Generally Accepted Accounting Principles in the United States of America (“US GAAP”) as set forth in the Financial Accounting Standards Board’s (FASB) Accounting Standards Codification (ASC). All amounts are in United States dollars (“USD”) unless otherwise stated.

Note 4. Summary of significant accounting policies

Fiscal Year

The Group’s fiscal year ends on December 31.

Principles of Consolidation

The consolidated financial statements include the accounts of SEALSQ Corp and its wholly owned subsidiaries over which the Group has control.

Intercompany income and expenses, including unrealized gross profits from internal group transactions and intercompany receivables, payables and loans, have been eliminated.

Use of Estimates

The preparation of consolidated financial statements in conformity with US GAAP requires management to make certain estimates, judgments and assumptions. We believe these estimates, judgments and assumptions are reasonable, based upon information available at the time they were made. These estimates, judgments and assumptions can affect the reported amounts of assets and liabilities as of the date of the financial statements as well as the reported amounts of revenues and expenses during the periods presented. To the extent there are differences between these estimates, judgments or assumptions and the actual results, our consolidated financial statements will be affected. In many cases, the accounting treatment of a particular transaction is specifically dictated by US GAAP and does not require

management's judgment in its application. There are also areas in which management's judgment in selecting from available alternatives would not produce a materially different result.

Our most critical accounting estimates include:

- Inventory Valuation (see Note 9)
- Recoverability of deferred tax assets (see Note 30)
- Revenue recognition (see Note 25)
- Bonds, mortgages and other long-term debt (see Note 19)
- Convertible note payable, noncurrent (see Note 19)
- Indebtedness to related parties (see Note 20)

Fair Value of Financial Instruments

The Group's financial instruments are primarily composed of cash and cash equivalents, accounts receivable, accounts payable and other current liabilities, other liabilities, and debt obligations.

Fair value is the price that would be received to sell an asset or the amount paid to transfer a liability, also referred to as the "exit price," in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. In instances in which the inputs used to measure fair value fall into different levels of the fair value hierarchy, as described in Note 6, the fair value measurement classification is determined based on the lowest level input that is significant to the fair value measurement in its entirety. Management's assessment of the significance of a particular item to the fair value measurement in its entirety requires judgment, including the consideration of inputs specific to the asset or liability.

Fair values of financial instruments are estimated using public market prices, quotes from financial institutions and other available information. Due to their short-term maturity, the carrying amounts of cash and cash equivalents, accounts receivable and contract assets, accounts payable and other current liabilities approximate their fair values, and management also believes that the carrying values of notes and other receivables and outstanding balances on the Group's credit and term loan facilities approximate their fair values, based on their specific asset and/or liability characteristics, including having terms consistent with current market conditions. The fair value of convertible note payable is calculated based on the present value of the future cash flows as of the reporting date.

Foreign Currency

The functional currency of SEALSQ Corp is USD.

In general, the functional currency of a foreign operation is the local currency. Assets and liabilities recorded in foreign currencies are translated at the exchange rate on the balance sheet date. Revenue and expenses are translated at average rates of exchange prevailing during the year. The effects of foreign currency translation adjustments are included in stockholders' equity as a component of accumulated other comprehensive income / (loss). The Group's reporting currency is USD.

Cash and Cash Equivalents

Cash consists of deposits held at major banks that are readily available. Cash equivalents consist of highly liquid investments that are readily convertible to cash and with original maturity dates of three months or less from the date of purchase. The carrying amounts approximate fair value due to the short maturities of these instruments.

Accounts Receivable

Receivables represent rights to consideration that are unconditional and consist of amounts billed and currently due from customers, and revenues that have been recognized for accounting purposes but not yet billed to customers. The Group extends credit to customers in the normal course of business and in line with industry practices.

Allowance for Credit losses

We recognize an allowance for credit losses to present the net amount of receivables expected to be collected as of the balance sheet date. The allowance is based on the credit losses expected to arise over the asset's contractual term taking into account historical loss experience, customer-specific data as well as forward-looking estimates. Expected credit losses are estimated individually.

Accounts receivables are written off when deemed uncollectible and are recognized as a deduction from the allowance for credit losses. Expected recoveries, which are not to exceed the amount previously written off, are considered in determining the allowance balance at the balance sheet date.

Inventories

Inventories are stated at the lower of cost or net realizable value. Costs are calculated using standard costs, approximating average costs. Finished goods and work-in-progress inventories include material, labor and manufacturing overhead costs. The Group records an inventory valuation allowance based on an analysis of physical deterioration, obsolescence or a comparison to the anticipated demand or market value based on a consideration of marketability and product maturity, demand forecasts, historical trends and assumptions about future demand and market conditions.

Property, Plant and Equipment

Property, plant and equipment are stated at cost, net of accumulated depreciation. Depreciation is computed using the straight-line method based on estimated useful lives which range from 1 to 10 years. Leasehold improvements are amortized over the lesser of the estimated useful lives of the improvements or the lease terms, as appropriate. Property, plant and equipment are periodically reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable.

Intangible Assets

Those intangible assets that are considered to have a finite useful life are amortized over their useful lives, which generally range from 1 to 10 years.

Leases

In line with ASC 842, the Group, as a lessee, recognizes right-of-use assets and related lease liabilities on its balance sheet for all arrangements with terms longer than twelve months, and reviews its leases for classification between operating and finance leases. Obligations recorded under operating and finance leases are identified separately on the balance sheet. Lease assets and lease liabilities are measured initially at an amount equal to the present value of minimum lease payments during the lease term, as at the beginning of the lease term.

The Group has elected the short-term lease practical expedient whereby we do not present short-term leases on the consolidated balance sheet as these leases have a lease term of 12 months or less at lease inception and do not contain purchase options or renewal terms that we are reasonably certain to exercise.

We have also elected the practical expedients related to lease classification of leases that commenced before the effective date of ASC 842.

Revenue Recognition

The Group's policy is to recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. To achieve that core principle, the group applies the following steps:

- Step 1: Identify the contract(s) with a customer.
- Step 2: Identify the performance obligations in the contract.
- Step 3: Determine the transaction price.
- Step 4: Allocate the transaction price to the performance obligations in the contract.
- Step 5: Recognize revenue when (or as) the entity satisfies a performance obligation

Revenue is measured based on the consideration specified in a contract with a customer and excludes amounts collected on behalf of third parties. We typically allocate the transaction price to each performance obligation on the basis of the relative standalone selling prices of each distinct good or service promised in the contract. If a standalone price is not observable, we use estimates.

The Group recognizes revenue when it satisfies a performance obligation by transferring control over goods or services to a customer. The transfer may be done at a point in time (typically for goods) or over time (typically for services). The amount of revenue recognized is the amount allocated to the satisfied performance obligation. For performance obligations satisfied over time, the revenue is recognized over time, most frequently on a *prorata temporis* basis as most of the services provided by the Group relate to a set performance period.

If the Group determines that the performance obligation is not satisfied, it will defer recognition of revenue until it is satisfied.

We present revenue net of sales taxes and any similar assessments.

The Group delivers products and records revenue pursuant to commercial agreements with its customers, generally in the form of an approved purchase order or sales contract.

Where products are sold under warranty, the customer is granted a right of return which, when exercised, may result in either a full or partial refund of any consideration received, or a credit that can be applied against amounts owed, or that will be owed, to the Group. For any amount received or receivable for which we do not expect to be entitled to because the customer has exercised its right of return, we recognize those amounts as a refund liability.

Contract Assets

Contract assets consist of accrued revenue where the Group has fulfilled its performance obligation towards the customer but the corresponding invoice has not yet been issued. Upon invoicing, the asset is reclassified to trade accounts receivable until payment.

Deferred Revenue

Deferred revenue consists of amounts that have been invoiced and paid but have not been recognized as revenue. Deferred revenue that will be realized during the succeeding 12-month period is recorded as current and the remaining deferred revenue recorded as non current. This would relate to multi-year certificates or licenses.

Contract Liability

Contract liability consists of either:

- amounts that have been invoiced and not yet paid, nor recognized as revenue. Upon payment, the liability is reclassified to deferred revenue if the amounts still have not been recognized as revenue. Contract liability that will be realized during the succeeding 12-month period is recorded as current and the remaining contract liability recorded as non-current. This would relate to multi-year certificates or licenses.
- advances from customers not supported by invoices.

Sales Commissions

Sales commission expenses where revenue is recognized are recorded in the period of revenue recognition.

Cost of Sales and Depreciation of Production Assets

Our cost of sales consists primarily of expenses associated with the delivery and distribution of products. These include expenses related to the preparation of our secure elements and the technical support provided on the Group's ongoing production and on ramp-up phases, including materials, labor, test and assembly suppliers and subcontractors, freights costs, as well as the amortization of probes, wafers and other items that are used in the production process. This amortization is disclosed separately under depreciation of production assets on the face of the income statement.

Research and Development and Software Development Costs

All research and development costs and software development costs are expensed as incurred.

Advertising Costs

All advertising costs are expensed as incurred.

Pension Plan

In the year 2024, the Group maintained one defined benefit post-retirement plans covering the French employees of SEALSQ France SAS. In accordance with ASC 715-30, *Defined Benefit Plans – Pension*, the Group recognizes the funded status of the plan in the balance sheet. Actuarial gains and losses are recorded in accumulated other comprehensive income / (loss).

Stock-Based Compensation

Stock-based compensation costs are recognized in earnings using the fair-value based method for all awards granted. Fair values of options and awards granted are estimated using a Black-Scholes option pricing model. The model's input assumptions are determined based on available internal and external data sources. The risk-free rate used in the model is based on the Swiss treasury rate for the expected contractual term. Expected volatility is based on historical volatility of SEALSQ Shares.

Compensation costs for unvested stock options and awards are recognized in earnings over the requisite service period based on the fair value of those options and awards at the grant date.

Nonemployee share-based payment transactions are measured by estimating the fair value of the equity instruments that an entity is obligated to issue and the measurement date will be consistent with the measurement date for employee share-based payment awards (i.e., grant date for equity-classified awards).

Litigation and Contingencies

Should legal proceedings and tax matters arise, due to their nature, such legal proceedings and tax matters involve inherent uncertainties including, but not limited to, court rulings, negotiations between affected parties and governmental actions. Management assesses the probability of loss for such contingencies and accrues liability and/or discloses the relevant circumstances, as appropriate.

Income Taxes

Taxes on income are accrued in the same period as the income and expenses to which they relate.

Deferred taxes are calculated on the temporary differences that arise between the tax base of an asset or liability and its carrying value in the balance sheet of our companies prepared for consolidation purposes, with the exception of temporary differences arising on investments in foreign subsidiaries where the Group has plans to permanently reinvest profits into the foreign subsidiaries.

Deferred tax assets on tax loss carry-forwards are only recognized to the extent that it is "more likely than not" that future profits will be available and the tax loss carry-forward can be utilized.

Changes to tax laws or tax rates enacted at the balance sheet date are taken into account in the determination of the applicable tax rate provided that they are likely to be applicable in the period when the deferred tax assets or tax liabilities are realized.

The Group is required to pay income taxes in a number of countries. The Group recognizes the benefit of uncertain tax positions in the financial statements when it is more likely than not that the position will be sustained on examination by the tax authorities. The benefit recognized is the largest amount of tax benefit that is greater than fifty percent likely of being realized on settlement with the tax authority, assuming full knowledge of the position and all relevant facts. The Group adjusts its recognition of these uncertain tax benefits in the period in which new information is available impacting either the recognition or measurement of its uncertain tax positions.

Government Assistance - Research Tax Credits

Research tax credits are provided by the French government to give incentives for companies to perform technical and scientific research. SEALSQ France SAS is eligible to receive such tax credits.

These research tax credits are presented as a reduction of research & development expenses in the income statement when companies that have qualifying expenses can receive such grants in the form of a tax credit irrespective of taxes ever paid or ever to be paid, the corresponding research and development efforts have been completed and the supporting documentation is available. The credit is deductible from the entity's income tax charge for the year or payable in cash the following year, whichever event occurs first. The tax credit is therefore considered to be a refundable R&D tax credit which is not within the scope of the income tax standard (ASC 740). It is included in current assets under government assistance in the balance sheet in line with ASC 832.

Earnings per Share

Basic earnings per share are calculated using the two-class method required for companies with multiple classes of common stock. The two-class method determines net earnings per common share for each class of common stock according to dividends declared or accumulated and participation rights in distributed and undistributed earnings or losses. The two-class method requires income available to common

stockholders for the period to be allocated between each class of common stock based upon their respective rights to receive dividends as if all income for the period had been distributed.

For SEALSQ, the dividend rights of the holders of ordinary shares and F shares (collectively, the “**common stock**”) differ. The dividend rights of an F share are five times greater than the dividend rights of an ordinary share. Undistributed earnings are allocated to the classes of common stock proportionately to their dividend rights and the resulting net results per share will, therefore, vary for each class of common stock. In line with ASC 260-10-45, the Group has presented the net earnings attributed to its common stock for each class of common stock. The earnings per share calculation is based on the weighted average number of shares in issue of each class.

When the effects are not antidilutive, diluted earnings per share is calculated using the weighted-average outstanding common shares and the dilutive effect of stock options as determined under the treasury stock method.

Segment Reporting

In 2024, after one full year of operations of the SEALSQ Group, our chief operating decision maker, who is also our Chief Executive Officer, requested changes in the information that he regularly reviews for purposes of allocating resources and assessing budgets and performance. As a result, beginning in fiscal year 2024, we report our financial performance based on a new segment structure described in Note 31. All prior periods were restated as a result of the change in reported segments.

Comprehensive Income / (Loss)

Comprehensive income includes net income and other comprehensive income (“OCI”). Other comprehensive income consists of revenues, expenses, gains, and losses to be included in comprehensive income but excluded from net income as listed in ASC 220-10-45-10A.

In line with ASC 220 (Income Statement - Reporting Comprehensive Income), we have elected to report comprehensive income in a single continuous financial statement with two sections: net income and other comprehensive income.

We present each of the components of other comprehensive income separately, based on their nature, in the statement of comprehensive income.

Recent Accounting Pronouncements

Adoption of new FASB Accounting Standard in the current year – Prior-Year Financial Statements not restated:

As of January 1, 2024, the Group adopted Accounting Standards Update (ASU) 2023-01 Leases (Topic 842): Common Control Arrangements, which requires all companies to amortize leasehold improvements associated with common control leases over the asset’s useful life to the common control group regardless of the lease term. ASU 2023-01 requires leasehold improvements associated with leases between entities under common control to be amortized over the useful life of the improvements until the lessee ceases to control the use of the underlying asset through a lease, at which time the remaining value of the leasehold improvement would be accounted for as a transfer between entities under common control.

There was no impact on the Group’s results upon adoption of the standard.

The group also adopted Accounting Standards Update (ASU) 2023-07 Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures, which enhances current segment disclosures and requires additional disclosures of significant segment expenses.

ASU 2023-07 amendments improve reportable segment disclosure requirements, primarily through enhanced disclosures about significant segment expenses. In addition, the amendments enhance interim disclosure requirements, clarify circumstances in which an entity can disclose multiple segment measures of profit or loss, provide new segment disclosure requirements for entities with a single reportable segment, and contain other disclosure requirements.

There was no impact on the Group’s results upon adoption of the standard.

New FASB Accounting Standard to be adopted in the future:

In December 2023, the FASB issued ASU 2023-09, Income Taxes (Topic 740): Improvements to Income Tax Disclosures, which establishes new income tax disclosure requirements in addition to modifying and eliminating certain existing requirements.

Summary: The intent of this standard is to enhance the decision usefulness of income tax disclosures. The standard applies to all entities subject to ASC Topic 740, Income Taxes. In addition, entities will be required to disclose the amount of income taxes paid (net of refunds received) disaggregated by federal, state, and foreign taxes. They will also disclose the amount of income taxes paid (net of refunds) disaggregated by individual jurisdictions in which income taxes paid is equal to or greater than five percent of total income taxes paid. The standard also outlines additional disclosure requirements for all entities and specific updates for public business entities.

Effective Date: ASU 2023-09 is effective for public business entities for fiscal years beginning after December 15, 2024. Early adoption is permitted.

The Group expects to adopt all the aforementioned guidance when effective. Management is assessing the impact of the aforementioned guidance on its consolidated financial statements but does not expect it to have a material impact.

In November 2024, the FASB issued ASU 2024-03, Income Statement - Reporting Comprehensive Income - Expense Disaggregation Disclosures (Subtopic 220-40): Disaggregation of Income Statement Expenses, which updates mandates that public business entities provide more detailed disclosures about specific expense categories in their financial statement notes, enhancing transparency for investors.

Summary: Entities are required to disaggregate certain expense captions presented on the income statement into the following natural expense categories, such as purchases of Inventory, Employee compensation, Depreciation and Intangible Asset Amortization. These disaggregated expenses must be presented in a tabular format within the notes to the financial statements for both annual and interim reporting periods. Additionally, entities are required to disclose the total amount of selling expenses and provide their definition.

Effective Date: ASU 2024-03 is effective for annual reporting periods for public business entities for fiscal years beginning after December 15, 2026, and for interim reporting periods within fiscal years beginning after December 15, 2027. Early adoption is permitted. The Group expects to adopt all the aforementioned guidance when effective. Management is assessing the impact of the aforementioned guidance on its consolidated financial statements but does not expect it to have a material impact.

In November 2024, the FASB issued ASU 2024-04, Debt - Debt with Conversion and Other Options (Subtopic 470-20): Induced Conversions of Convertible Debt Instruments. This update clarifies the accounting treatment for certain settlements of convertible debt instruments that do not occur under the instruments' preexisting terms.

Summary: The update introduces a "preexisting contract approach" to determine whether an inducement offer should be accounted for as an induced conversion. Under this approach, an inducement offer is considered to preserve the form and amount of consideration if it provides the debt holder with at least the same consideration as the original conversion terms of the instrument. The assessment is based on the terms as they existed one year before the offer acceptance date, especially if the instrument was modified within that period. Additionally, the ASU clarifies that induced conversion accounting applies to convertible debt instruments within the scope of Subtopic 470-20 that are not currently convertible, provided the instrument contained a substantive conversion feature at both its issuance date and the inducement offer acceptance date.

Effective Date: ASU 2024-04 is effective for public business entities for fiscal years beginning after December 15, 2025. Early adoption is permitted.

The Group expects to adopt all the aforementioned guidance when effective. Management is assessing the impact of the aforementioned guidance on its consolidated financial statements but does not expect it to have a material impact.

Note 5. Concentration of credit risks

Financial instruments that are potentially subject to credit risk consist primarily of cash and cash equivalents and trade accounts receivable. Our cash and cash equivalents is mostly held with one large financial institution. Management believes that the financial institution that holds most of our cash and cash equivalents is financially sound and, accordingly, is subject to minimal credit risk. However, to the extent that such deposits exceed the maximum insurance levels, they are uninsured.

The Group sells to large, international customers and, as a result, may maintain individually significant trade accounts receivable balances with such customers during the year. We generally do not require collateral on trade accounts receivable. Summarized below are the clients whose revenue was 10% or higher than the respective total consolidated net sales for the 12 months to December 31, 2024, 2023 or 2022, and the clients whose trade accounts receivable balances were 10% or higher than the respective total consolidated trade accounts receivable balance as at December 31, 2024 and December 31, 2023. In addition, we note that some of our clients are contract manufacturers for the same companies; should these companies reduce their operations or change contract manufacturers, this would cause a decrease in our customer orders which would adversely affect our operating results.

Revenue concentration (% of total net sales)	12 months ended December 31,		
	2024	2023	2022
Multinational electronics contract manufacturing company	4%	15%	16%
Multinational telecom & hardware manufacturing company	0%	4%	5%
International digital security company	0%	12%	10%
International software services provider	2%	8%	6%
International computer and hardware manufacturer	36%	5%	3%
International equipment and software manufacturer	0%	6%	6%
International electronic security systems manufacturer	4%	0%	0%

Receivables concentration (% of total accounts receivable and maximum amount of loss due to credit risk)	As at December 31, 2024		As at December 31, 2023	
	%	USD'000	%	USD'000
Multinational electronics contract manufacturing company	7%	253	15%	739
Multinational telecom & hardware manufacturing company	0%	-	12%	590
International digital security company	0%	-	0%	-
International software services provider	4%	137	14%	686
International computer and hardware manufacturer	47%	1,804	12%	628
International equipment and software manufacturer	0%	-	19%	944
International electronic security systems manufacturer	10%	400	0%	-

Note 6. Fair value measurements

ASC 820 establishes a three-tier fair value hierarchy for measuring financial instruments, which prioritizes the inputs used in measuring fair value. These tiers include:

- Level 1, defined as observable inputs such as quoted prices in active markets;
- Level 2, defined as inputs other than quoted prices in active markets that are either directly or indirectly observable; and
- Level 3, defined as unobservable inputs in which little or no market data exists, therefore requiring an entity to develop its own assumptions.

	As at December 31, 2024		As at December 31, 2023		Fair value level	Note ref.
USD'000	Carrying amount	Fair value	Carrying amount	Fair value		
Nonrecurring fair value measurements						
Accounts receivable	3,825	3,825	5,053	5,053	3	8
Accounts payable	10,073	10,073	6,963	6,963	3	16
Notes payable	4,828	4,828	1,278	1,278	3	17-20
Bonds, mortgages and other long-term debt	-	-	1,654	1,654	3	19
Convertible note payable, noncurrent	-	-	1,519	1,846	3	19
Indebtedness to related parties, noncurrent	3,105	3,105	9,695	9,695	3	20

In addition to the methods and assumptions we use to record the fair value of financial instruments as discussed in the Fair Value Measurements section above, we used the following methods and assumptions to estimate the fair value of our financial instruments:

- Accounts receivable – carrying amount approximated fair value due to their short-term nature.
- Accounts payable – carrying amount approximated fair value due to their short-term nature.
- Notes payable – carrying amount approximated fair value due to their short-term nature.
- Bonds, mortgages and other long-term debt - carrying amount approximated fair value.
- Convertible note payable, noncurrent – fair value is calculated based on the present value of the future cash flows as of the reporting date.
- Indebtedness to related parties, noncurrent - carrying amount approximated fair value.

Note 7. Cash and cash equivalents

Cash consists of deposits held at major banks.

Note 8. Accounts receivable

The breakdown of the accounts receivable balance is detailed below:

USD'000	As at December 31, 2024	As at December 31, 2023
Trade accounts receivable	3,645	5,103
Allowance for credit losses	(50)	(50)
Accounts receivable from other related parties	223	-
Other accounts receivable	7	-
Total accounts receivable, net of allowance for credit losses	3,825	5,053

As at December 31, 2024, accounts receivable from other related parties consisted of a receivable from SEALCOIN AG in relation to services provided by SEALSQ (see Note 34).

Note 9. Inventories

Inventories consisted of the following:

USD'000	As at December 31, 2024	As at December 31, 2023
Raw materials	764	1,025
Work in progress	482	4,206
Finished goods	172	-
Total inventories	1,418	5,231

In the years ended December 31, 2024, 2023 and 2022, the Group recorded an inventory valuation allowance in the income statement in an amount of, respectively, USD 92,284, USD 220,289 and USD 204,211 on raw materials, and a credit of USD 615,608, and debits of USD 373,469 and USD 349,623 on work in progress. The credit on work in progress in 2024 results from the release of a provision.

Note 10. Government assistance

SEALSQ France SAS is eligible for research tax credits provided by the French government (see Note 4 Summary of significant accounting policies). As at December 31, 2024 and December 31, 2023, the receivable balances in respect of these research tax credits owed to the Group were respectively USD 2,246,680 and USD 1,718,248. The credit is deductible from the entity's income tax charge for the year or payable in cash the following year, whichever event occurs first.

The balance as at December 31, 2024 is the aggregate of USD 1,217,490 (at closing rate) tax credit earned in relation to the year 2024 and USD 1,029,190 (at closing rate) in relation to the year 2023. Refundable R&D tax credits are considered to be government assistance in line with ASC 832.

Note 11. Other current assets

Other current assets consisted of the following:

USD'000	As at December 31, 2024	As at December 31, 2023
Value-Added Tax receivable	501	415
Advanced payment to suppliers	61	346
Deposits, current	5	4
Other current assets	26	-
Total other current assets	593	765

Note 12. Property, plant and equipment

Property, plant and equipment, net consisted of the following.

USD'000	As at December 31, 2024	As at December 31, 2023
Machinery & equipment	13,769	13,275
Office equipment and furniture	2,321	2,321
Computer equipment and licences	817	710
Total property, plant and equipment, gross	16,907	16,306
<i>Accumulated depreciation for:</i>		
Machinery & equipment	(10,733)	(10,241)
Office equipment and furniture	(2,320)	(2,279)
Computer equipment and licences	(653)	(556)
Total accumulated depreciation	(13,706)	(13,076)
Total property, plant and equipment, net	3,201	3,230
Depreciation charge for the year	630	569

In the years ended December 31, 2024 and 2023, SEALSQ Corp did not identify any events or changes in circumstances indicating that the carrying amount of any asset may not be recoverable. As a result, the Group did not record any impairment charge on property, plant and equipment in the years ended December 31, 2024 and 2023.

The useful economic life of property plant and equipment is as follows:

- Production tools 8 to 10 years
- Office equipment and furniture: 2 to 5 years
- Production masks 5 years
- Probe cards 5 years
- Licenses 3 years
- Software 1 year

Note 13. Intangible assets

Intangible assets consisted of the following:

USD'000	As at December 31, 2024	As at December 31, 2023
<i>Intangible assets subject to amortization:</i>		
Patents	2,281	2,281
License agreements	1,699	1,699
Other intangibles	923	923
Total intangible assets, gross	4,903	4,903
<i>Accumulated amortization for:</i>		
Patents	(2,281)	(2,281)
License agreements	(1,699)	(1,699)
Other intangibles	(923)	(923)
Total accumulated amortization	(4,903)	(4,903)
Total intangible assets subject to amortization, net	-	-
Total intangible assets, net	-	-
Amortization charge for the year	-	1

The useful economic life of intangible assets is as follows:

- Patents 5 to 10 years
- License agreements 1 to 3 years
- Other intangibles 5 years

Note 14. Leases

The Group has historically entered into a number of lease arrangements under which it is the lessee. As at December 31, 2024, the SEALSQ Group holds four operating leases. The operating leases relate to premises. We do not sublease. All of our operating leases include multiple optional renewal periods which are not reasonably certain to be exercised.

During the years 2024, 2023 and 2022 we recognized rent expenses associated with our leases as follows:

USD'000	12 months ended December 31, 2024	12 months ended December 31, 2023	12 months ended December 31, 2022
<i>Operating lease cost:</i>			
Fixed rent expense	356	329	332
Short-term lease cost	-	-	-
Net lease cost	356	329	332
Lease cost - Cost of sales	-	-	-
Lease cost - General & administrative expenses	356	329	332
Net lease cost	356	329	332

In the years 2024 and 2023, we had the following cash and non-cash activities associated with our leases:

USD'000	As at December 31, 2024	As at December 31, 2023
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	351	314
Non-cash investing and financing activities:		
Net lease cost	356	329
<i>Additions to ROU assets obtained from:</i>		
New operating lease liabilities	62	66

The following table provides the details of right-of-use assets and lease liabilities as of December 31, 2024:

USD'000	As at December 31, 2024
Right-of-use assets:	
Operating leases	1,031
Total right-of-use assets	1,031
Lease liabilities:	
Operating leases	943
Total lease liabilities	943

As at December 31, 2024, future minimum annual lease payments were as follows, which corresponds to the future minimum lease payments under legacy ASC 840 in line with ASU 2018-11.

Year (USD'000)	Operating	Short-term	Finance	Total
2025	323	-	-	323
2026	293	-	-	293
2027	288	-	-	288
2028	157	-	-	157
Total future minimum operating and short-term lease payments	1,061	-	-	1,061
Less effects of discounting	(118)	-	-	(118)
Lease liabilities recognized	943	-	-	943

As of December 31, 2024 the weighted-average remaining lease term was 3.49 years for operating leases.

For our operating leases, we calculated an estimate rate based upon the estimated incremental borrowing rate of the entity holding the lease. The weighted average discount rate associated with operating leases as of December 31, 2024, was 3.04%.

Note 15. Other noncurrent assets

Other noncurrent assets consisted of noncurrent deposits. Deposits are primarily made up of rental deposits on the premises rented by the Group.

Note 16. Accounts payable

The accounts payable balance consisted of the following:

USD'000	As at December 31, 2024	As at December 31, 2023
Trade creditors	3,443	3,299
Accounts payable to shareholders	1,716	1,378
Accounts payable to Board Members	1,387	-
Accounts payable to other related parties	673	-
Accounts payable to underwriters, promoters, and employees	901	1,150
Other accounts payable	1,953	1,136
Total accounts payable	10,073	6,963

As at December 31, 2024, accounts payable to Board Members are made up of:

- a balance of USD 953,397 payable to Carlos Moreira in relation to accrued bonus and social charges thereon (see Note 34 for detail),
- a balance of USD 381,359 payable to John O'Hara in relation to accrued bonus and social charges thereon (see Note 34 for detail), and
- a balance of USD 51,852 payable to other Board Members in relation to their board fee (see Note 34 for detail).

Accounts payable to other related parties are made up of:

- a balance of USD 435,757 payable to WISeCoin AG in relation to interest on an outstanding loan (see Notes 20 and 34 for detail), and
- a balance of USD 236,877 payable to WISeKey SA in relation to recharge of employee costs (see Note 34 for detail).

Accounts payable to shareholders consist of short-term payables due to WISEKey International Holding Ltd in relation to interest on outstanding loans and the recharge of management services (see Notes 20 and 34).

Accounts payable to underwriters, promoters and employees consist primarily of payable balances to employees in relation to holidays, bonus and 13th month accruals across the Group.

Other accounts payable are mostly accruals of social charges in relation to the accrued liability to employees as well as accruals in relation to non-trade creditors such as various professional fees.

Note 17. Notes payable

Notes payable consisted of the following:

USD'000	As at December 31, 2024	As at December 31, 2023
Short-term loan	1,819	-
Short-term loan from shareholders	-	1,278
Short-term loan from other related parties	3,009	-
Total notes payable	4,828	1,278

As at December 31, 2024, the current notes payable balance was made up of:

- a USD 1,818,943 short-term production capacity investment loan with a third-party client (see detail below), and
- a USD 3,008,775 short-term loan with WISECoin AG (see detail in Note 20).

Production Capacity Investment Loan Agreement

In November 2022, SEALSQ entered into a loan agreement with a third-party client to borrow funds for the purpose of increasing their production capacity. Under the terms of the Agreement, the client has lent to SEALSQ a total of USD 2 million. The loan will be reimbursed by way of a volume rebate against future sales volumes of certain products from the SEALSQ Group to the client during the period from July 1, 2023, through to December 31, 2025. The volume rebate is based upon quarterly sales volumes in excess of a base limit on a yearly projected basis. Any amount still outstanding as at December 31, 2025 shall fall due for repayment on that date. The loan does not bear any interest and there were no fees or costs attributed to the loan.

At inception in November 2022, a debt discount totaling USD 511,128 was booked to additional paid-in capital.

As at December 31, 2024, SEALSQ has not repaid any amount due to a change in the product mix of the client. The loan balance remains USD 2 million with an unamortized debt discount balance of USD 181,057, thus leaving a carrying value of USD 1,818,943.

The Group recorded a debt discount amortization expense of USD 165,147 in the year 2024.

Note 18. Other current liabilities

Other current liabilities consisted of the following:

USD'000	As at December 31, 2024	As at December 31, 2023
Other tax payable	200	13
Customer contract liability, current	83	125
Total other current liabilities	283	138

Note 19. Bonds, mortgages and other long-term debt

Share Purchase Agreement with L1 Capital Global Opportunities Master Fund dated July 11, 2023

On July 11, 2023, the Group entered into a Securities Purchase Agreement (the "**L1 SPA**") with L1 Capital Global Opportunities Master Fund Ltd ("**L1**") pursuant to which L1 may enter into a private placement of up to a maximum amount of USD 10 million, divided into two equal tranches, in the form of Senior Unsecured Original Issue 4% Discount Convertible Promissory Notes. The Notes shall have a 24-month maturity and bear interest at a rate of 4% per annum, subject to adjustment. The Notes will be convertible into Ordinary Shares of SEALSQ, partially or in full, at an initial conversion price equal to the lesser of (i) a fixed conversion price of USD 30 per Ordinary Share, which, on the six-month anniversary of the tranche closing date, may reset at 130% of the daily volume weighted average price ("**VWAP**") of the Ordinary Shares for the trading day immediately prior to the reset date and (ii) 92% of the lowest daily VWAP of the Ordinary Shares during the ten trading days immediately preceding the conversion notice of the Note, with a floor price of USD 2.50. The covenants include the requirement for the Group to maintain a minimum cash balance of USD 4 million and to ensure that indebtedness of the Group does not exceed 15% of the average market capitalization.

Due to L1's option to convert the loan in part or in full at any time before maturity, the L1 SPA was assessed as a share-settled debt instrument with an embedded put option. In line with ASC 480-10-55-43 and ASC 480-10-55-44, because the value that L1 will predominantly receive at settlement does not vary with the value of the shares, the settlement provision is not considered a conversion option. We assessed the put option under ASC 815 and concluded that it is clearly and closely related to its debt host and therefore did not require bifurcation. Per ASC 480-10-25, the L1 SPA was accounted for as a liability measured at fair value using the discounted cash flow method at inception.

Additionally, per the terms of the L1 SPA, upon each tranche closing under the L1 SPA, SEALSQ will grant L1 the option to acquire Ordinary Shares of SEALSQ at an initial exercise price of USD 30, which may reset at 120% of the closing VWAP on the six-month anniversary of the tranche closing date. The number of warrants granted at each tranche subscription is calculated as 30% of the principal amount of each tranche divided by the VWAP of the Ordinary Shares of SEALSQ on the trading day immediately preceding the tranche closing date. Each warrant agreement has a 5-year exercise period starting on the relevant tranche closing date. In line with ASC 470-20-25-2, for each tranche closing, the proceeds from the convertible notes with a detachable warrant were allocated to the two elements based on the relative fair values of the debt instrument without the warrant and of the warrant at time of issuance. When assessed as an equity instrument, the warrant agreement is fair valued at grant using the Black-Scholes model and the market price of the Ordinary Shares on the tranche closing date. The fair value of the debt is calculated using the discounted cash flow method.

The first tranche of USD 5 million was funded on July 12, 2023, by L1. SEALSQ issued to L1 (i) a Senior Original Issue 4% Discount Convertible Promissory Note of USD 5 million (the **"First L1 Note"**), convertible into SEALSQ's Ordinary Shares, and (ii) 122,908 warrants on the Ordinary Shares of SEALSQ with a 5-year maturity (the **"First L1 Warrant"**). SEALSQ also created a capital reserve of 8,000,000 Ordinary Shares from its duly authorized Ordinary Shares for issuance under the First L1 Note and the First L1 Warrant. Debt issue costs made up of legal expenses totaling USD 114,832 and a commission of USD 250,000 to the placement agent were due upon issuance of the First L1 Note, and a fee of USD 200,000 representing 4% of the principal value of the First L1 Note was paid to L1 at closing.

The First L1 Warrant was assessed as an equity instrument and was fair valued at grant at an amount of USD 632,976 using the Black-Scholes model and the market price of the Ordinary Shares of SEALSQ on the date of grant of USD 11.42. The fair value of the debt was calculated using the discounted cash flow method as USD 4,987,363. Applying the relative fair value method per ASC 470-20-25-2, the recognition of the warrant agreement created a debt discount on the debt host in the amount of USD 563,112, with the credit entry recorded in additional paid-in capital (**"APIC"**), and the debt issue costs created a debt discount on the debt host in the amount of USD 323,744 and a debit to APIC of USD 41,088. Including the fee paid to L1, a total debt discount of USD 1,086,856 was recorded against the First L1 Note's principal amount.

During the year ended December 31, 2023, L1 converted a total of USD 4 million of the First L1 Note, resulting in the delivery of a total of 3,940,630 Ordinary Shares of SEALSQ. A debt discount charge of USD 210,290 was amortized to the income statement and unamortized debt discounts totaling USD 705,572 were booked to APIC on conversions in line with ASC 470-02-40-4.

On January 9, 2024, SEALSQ and L1 entered into an Amendment to the Securities Purchase Agreement (the **"First L1 Amendment"**), to amend some of the original terms and conditions of the L1 SPA and pursuant to which L1 may enter into a private placement of up to a maximum amount of USD 10 million, divided into two equal tranches, in the form of Senior Unsecured Original Issue 4% Discount Convertible Promissory Notes. The Notes will be convertible into Ordinary Shares of SEALSQ, partially or in full, at an initial conversion price equal to the lesser of (i) a fixed conversion price of USD 4 per Ordinary Share, which, on the six-month anniversary of the tranche closing date, may reset at 130% of the daily VWAP of the Ordinary Shares for the trading day immediately prior to the reset date and (ii) 92% of the lowest daily volume VWAP of the Ordinary Shares during the ten trading days immediately preceding the conversion notice of the Note, with a floor price of USD 0.55. The warrants issued upon each tranche closing under the First L1 Amendment will have a fixed exercise price of USD 4 and the reset of the exercise price of the First L1 Warrant is deleted. All other significant terms of the L1 SPA remain unchanged.

The second tranche of USD 5 million was funded on January 11, 2024, by L1. SEALSQ issued to L1 (i) a Senior Original Issue 4% Discount Convertible Promissory Note of USD 5 million (the **"Second L1 Note"**), convertible into SEALSQ's Ordinary Shares, and (ii) 1,144,339 warrants on the Ordinary Shares of SEALSQ with a 5-year maturity (the **"Second L1 Warrant"**). SEALSQ also created a capital reserve of 45,000,000 Ordinary Shares from its duly authorized Ordinary Shares for issuance under the Second L1 Note and the Second L1 Warrant. Debt issue costs made up of legal expenses totaling USD 70,279 and a commission of USD 250,000 to the placement agent were due upon issuance of the Second L1 Note, and a fee of USD 200,000 representing 4% of the principal value of the Second L1 Note was paid to L1 at closing.

The Second L1 Warrant was assessed as an equity instrument and was fair valued at grant at an amount of USD 709,490 using the Black-Scholes model and the market price of the Ordinary Shares of SEALSQ on the date of grant of USD 1.60. The fair value of the debt was calculated using the discounted cash flow method as USD 4,594,061. Applying the relative fair value method per ASC 470-20-25-2, the recognition of the warrant agreement created a debt discount on the debt host in the amount of USD 668,882, with the credit entry recorded in APIC, and the debt issue costs created a debt discount on the debt host in the amount of USD 277,433 and a debit to APIC of USD 42,846. Including the fee paid to L1, a total debt discount of USD 1,146,315 was recorded against the Second L1 Note's principal amount.

On March 1, 2024, SEALSQ and L1 entered into the Second Amendment to the Securities Purchase Agreement (the **"Second L1 Amendment"**), to amend some of the terms and conditions of the L1 SPA and pursuant to which L1 may enter into a private placement of up to a maximum amount of USD 10 million, divided into two equal tranches, in the form of Senior Unsecured Original Issue 2.5% Discount Convertible Promissory Notes. The Notes will be convertible into Ordinary Shares of SEALSQ, partially or in full, at an initial conversion price equal to the lesser of (i) a fixed conversion price of USD 5.5 per Ordinary Share, which, on the six-month anniversary of the tranche closing date, may reset at 130% of the daily VWAP of the Ordinary Shares for the trading day immediately prior to the reset date and (ii) 93% of the lowest daily volume VWAP of the Ordinary Shares during the ten trading days immediately preceding the conversion notice of the Note, with a floor price of USD 0.55. The warrants issued upon each tranche closing under the Second L1 Amendment will have a fixed exercise price of USD 5.5. All other significant terms of the L1 SPA, as amended by the First L1 Amendment, remain unchanged.

The third tranche of USD 5 million was funded on March 1, 2024, by L1. SEALSQ issued to L1 (i) a Senior Original Issue 2.5% Discount Convertible Promissory Note of USD 5 million (the **"Third L1 Note"**), convertible into SEALSQ's Ordinary Shares, and (ii) 768,679 warrants on the Ordinary Shares of SEALSQ with a 5-year maturity (the **"Third L1 Warrant"**). Debt issue costs made up of legal expenses totaling USD 53,184 and a commission of USD 250,000 to the placement agent were due upon issuance of the Third L1 Note, and a fee of USD 125,000 representing 2.5% of the principal value of the Third L1 Note was paid to L1 at closing.

The Third L1 Warrant was assessed as an equity instrument and was fair valued at grant at an amount of USD 553,449 using the Black-Scholes model and the market price of the Ordinary Shares of SEALSQ on the date of grant of USD 1.98. The fair value of the debt was calculated using the discounted cash flow method as USD 4,549,701. Applying the relative fair value method per ASC 470-20-25-2, the recognition of the warrant agreement created a debt discount on the debt host in the amount of USD 542,262, with the credit entry recorded in APIC, and the debt issue costs created a debt discount on the debt host in the amount of USD 270,303 and a debit to APIC of USD 32,881. Including the fee paid to L1, a total debt discount of USD 937,565 was recorded against the First L1 Note's principal amount.

During the year ended December 31, 2024, L1 converted all notes in full for a total conversion amount of USD 11 million, resulting in the delivery of a total of 21,494,587 Ordinary Shares of SEALSQ. A total debt discount charge of USD 432,091 was amortized to the income statement and unamortized debt discounts totaling USD 1,822,783 were booked to APIC on conversion in line with ASC 470-02-40-4.

As at December 31, 2024, there was no unconverted balance in relation to the L1 SPA, as amended.

Share Purchase Agreement with Anson Investments Master Fund dated July 11, 2023

On July 11, 2023, the Group entered into a Securities Purchase Agreement (the **"Anson SPA"**) with Anson Investments Master Fund LP (**"Anson"**) pursuant to which Anson may enter into a private placement of up to a maximum amount of USD 10 million, divided into two equal tranches, in the form of Senior Unsecured Original Issue 4% Discount Convertible Promissory Notes. The Notes shall have a 24-month maturity and bear interest at a rate of 4% per annum, subject to adjustment. The Notes will be convertible into Ordinary Shares of SEALSQ, partially or in full, at an initial conversion price equal to the lesser of (i) USD 30 per Ordinary Share, which, on the six-month anniversary of the tranche closing date, may reset at 130% of the daily VWAP of the Ordinary Shares for the trading day immediately prior to the reset date and (ii) 92% of the lowest daily VWAP of the Ordinary Shares during the ten trading days immediately preceding the notice of partial or full conversion of the Note, with a floor price of USD 2.50. The covenants include the requirement for the Group to maintain a minimum cash balance of USD 4 million and to ensure that indebtedness of the Group does not exceed 15% of the average market capitalization.

Due to Anson's option to convert the loan in part or in full at any time before maturity, the Anson SPA was assessed as a share-settled debt instrument with an embedded put option. In line with ASC 480-10-55-43 and ASC 480-10-55-44, because the value that Anson will predominantly receive at settlement does not vary with the value of the shares, the settlement provision is not considered a conversion option. We assessed the put option under ASC 815 and concluded that it is clearly and closely related to its debt host and therefore did not require bifurcation. Per ASC 480-10-25, the Anson SPA was accounted for as a liability measured at fair value using the discounted cash flow method at inception.

Additionally, per the terms of the Anson SPA, upon each tranche closing under the Anson SPA, SEALSQ will grant Anson the option to acquire Ordinary Shares of SEALSQ at an initial exercise price of USD 30, which may reset at 120% of the closing VWAP on the six-month anniversary of the tranche closing date. The number of warrants granted at each tranche subscription is calculated as 30% of the principal amount of each tranche divided by the VWAP of the Ordinary Shares of SEALSQ on the trading day immediately preceding the tranche closing date. Each warrant agreement has a 5-year exercise period starting on the relevant tranche closing date. In line with ASC 470-20-25-2, for each tranche closing, the proceeds from the convertible notes with a detachable warrant were allocated to the two elements based on the relative fair values of the debt instrument without the warrant and of the warrant at time of issuance. When assessed as an equity instrument, the warrant agreement is fair valued at grant using the Black-Scholes model and the market price of the Ordinary Shares on the tranche closing date. The fair value of the debt is calculated using the discounted cash flow method.

The first tranche of USD 5 million was funded on July 12, 2023, by Anson. SEALSQ issued to Anson (i) a Senior Original Issue 4% Discount Convertible Promissory Note of USD 5 million (the **"First Anson Note"**), convertible into SEALSQ's Ordinary Shares, and (ii) 122,908 warrants on the Ordinary Shares of SEALSQ with a 5-year maturity (the **"First Anson Warrant"**). SEALSQ also created a capital reserve of 8,000,000 Ordinary Shares from its duly authorized Ordinary Shares for issuance under the First Anson Note and the First Anson Warrant. Debt issue costs made up of legal expenses totaling USD 64,832 and a commission of USD 250,000 to the placement agent were due upon issuance of the First Anson Note, and a fee of USD 200,000 representing 4% of the principal value of the First Anson Note was paid to Anson at closing.

The First Anson Warrant was assessed as an equity instrument and was fair valued at grant at an amount of USD 632,976 using the Black-Scholes model and the market price of the Ordinary Shares of SEALSQ on the date of grant of USD 11.42. The fair value of the debt was calculated using the discounted cash flow method as USD 4,987,363. Applying the relative fair value method per ASC 470-20-25-2, the recognition of the warrant agreement created a debt discount on the debt host in the amount of USD 563,112, with the credit entry recorded in APIC, and the debt issue costs created a debt discount on the debt host in the amount of USD 279,375 and a debit to APIC of USD 35,457. Including the fee paid to Anson, a total debt discount of USD 1,042,487 was recorded against the First Anson Note's principal amount.

During the year ended December 31, 2023, Anson converted a total of USD 4,175,000 of the First Anson Note, resulting in the delivery of a total of 3,996,493 Ordinary Shares of SEALSQ. A debt discount charge of USD 198,984 was amortized to the income statement and unamortized debt discounts totaling USD 708,062 were booked to APIC on conversions in line with ASC 470-02-40-4.

Additionally, on July 10, 2023, the Group issued 8,184 new Ordinary Shares to Anson as a result of a share ledger correction, thus a total delivery for the year of 4,004,677 Ordinary Shares.

On January 9, 2024, SEALSQ and Anson entered into an Amendment to the Securities Purchase Agreement (the **"First Anson Amendment"**), to amend some of the original terms and conditions of the Anson SPA and pursuant to which Anson may enter into a private placement of up to a maximum amount of USD 10 million, divided into two equal tranches, in the form of Senior Unsecured Original Issue 4% Discount Convertible Promissory Notes. The Notes will be convertible into Ordinary Shares of SEALSQ, partially or in full, at an initial conversion price equal to the lesser of (i) a fixed conversion price of USD 4 per Ordinary Share, which, on the six-month anniversary of the tranche closing date, may reset at 130% of the daily VWAP of the Ordinary Shares for the trading day immediately prior to the reset date and (ii) 92% of the lowest daily volume VWAP of the Ordinary Shares during the ten trading days immediately preceding the conversion notice of the Note, with a floor price of USD 0.55. The warrants issued upon each tranche closing under the First Anson Amendment will have a fixed exercise price of USD 4 and the reset of the exercise price of the First Anson Warrant is deleted. All other significant terms of the Anson SPA remain unchanged.

The second tranche of USD 5 million was funded on January 10, 2024, by Anson. SEALSQ issued to Anson (i) a Senior Original Issue 4% Discount Convertible Promissory Note of USD 5 million (the **"Second Anson Note"**), convertible into SEALSQ's Ordinary Shares, and (ii) 1,144,339 warrants on the Ordinary Shares of SEALSQ with a 5-year maturity (the **"Second Anson Warrant"**). SEALSQ also created a capital reserve of 45,000,000 Ordinary Shares from its duly authorized Ordinary Shares for issuance under the Second Anson Note and the Second Anson Warrant. Debt issue costs made up of legal expenses totaling USD 55,279 and a commission of USD 250,000 to the placement agent were due upon issuance of the Second Anson Note, and a fee of USD 200,000 representing 4% of the principal value of the Second Anson Note was paid to Anson at closing.

The Second Anson Warrant was assessed as an equity instrument and was fair valued at grant at an amount of USD 709,490 using the Black-Scholes model and the market price of the Ordinary Shares of SEALSQ on the date of grant of USD 1.60. The fair value of the debt was calculated using the discounted cash flow method as USD 4,594,171. Applying the relative fair value method per ASC 470-20-25-2, the recognition of the warrant agreement created a debt discount on the debt host in the amount of USD 668,868, with the credit entry recorded in APIC, and the debt issue costs created a debt discount on the debt host in the amount of USD 264,441 and a debit to APIC of USD 40,838. Including the fee paid to Anson, a total debt discount of USD 1,133,309 was recorded against the Second Anson Note's principal amount.

On March 1, 2024, SEALSQ and Anson signed a second Amendment to Securities Purchase Agreement (the **"Second Anson Amendment"**), to amend some of the terms and conditions of the Anson SPA and pursuant to which Anson may enter into a private placement of up to a maximum amount of USD 10 million, divided into two equal tranches, in the form of Senior Unsecured Original Issue 2.5% Discount Convertible Promissory Notes. The Notes will be convertible into Ordinary Shares of SEALSQ, partially or in full, at an initial conversion price equal to the lesser of (i) a fixed conversion price of USD 5.5 per Ordinary Share, which, on the six-month anniversary of the tranche closing date, may reset at 130% of the daily VWAP of the Ordinary Shares for the trading day immediately prior to the reset date and (ii) 93% of the lowest daily volume VWAP of the Ordinary Shares during the ten trading days immediately preceding the conversion notice of the Note, with a floor price of USD 0.55. The warrants issued upon each tranche closing under the Second Anson Amendment will have a fixed exercise price of USD 5.5. All other significant terms of the Anson SPA, as amended by the First Anson Amendment, remain unchanged.

The third tranche of USD 5 million was funded on March 1, 2024, by Anson. SEALSQ issued to Anson (i) a Senior Original Issue 2.5% Discount Convertible Promissory Note of USD 5 million (the **"Third Anson Note"**), convertible into SEALSQ's Ordinary Shares, and (ii) 768,679 warrants on the Ordinary Shares of SEALSQ with a 5-year maturity (the **"Third Anson Warrant"**). Debt issue costs made up of legal expenses totaling USD 38,184 and a commission of USD 250,000 to the placement agent were due upon issuance of the Third Anson Note, and a fee of USD 125,000 representing 2.5% of the principal value of the Third Anson Note was paid to Anson at closing.

The Third Anson Warrant was assessed as an equity instrument and was fair valued at grant at an amount of USD 553,449 using the Black-Scholes model and the market price of the Ordinary Shares of SEALSQ on the date of grant of USD 1.98. The fair value of the debt was calculated using the discounted cash flow method as USD 4,549,701. Applying the relative fair value method per ASC 470-20-25-2, the recognition of the warrant agreement created a debt discount on the debt host in the amount of USD 542,262, with the credit entry recorded in APIC, and the debt issue costs created a debt discount on the debt host in the amount of USD 256,930 and a debit to APIC of USD 31,254. Including the fee paid to Anson, a total debt discount of USD 924,192 was recorded against the Third Anson Note's principal amount.

During the year ended December 31, 2024, Anson converted all notes in full for a total conversion amount of USD 10,825,000, resulting in the delivery of a total of 19,260,369 Ordinary Shares of SEALSQ. A total debt discount charge of USD 376,774 was amortized to the income statement and unamortized debt discounts totaling USD 1,816,168 were booked to APIC on conversion in line with ASC 470-02-40-4. As at December 31, 2024, there was no unconverted balance in relation to the Anson SPA, as amended.

Note 20. Indebtedness to related parties

On October 1, 2016, the SEALSQ Group entered into a Revolving Credit Agreement (the **"Revolving Credit"**) with its parent WISEKey International Holding Ltd to borrow funds within a credit period starting on October 1, 2016, and ending on December 31, 2017, when all outstanding funds would become immediately due and payable. Outstanding loan amounts under the Revolving Credit bore an interest rate of 3% per annum. Repayments before the end of the credit period were permitted. On November 1, 2017, the Group and WISEKey entered into the First Amendment to the Revolving Credit Agreement extending the credit period by 2 years to December 31, 2019. On March 16, 2021, the Group and WISEKey entered into the Second Amendment to the Revolving Credit Agreement extending the credit period by another 2 years to December 31, 2022. On November 1, 2022, the Group and WISEKey entered into the Third Amendment to the Revolving Credit Agreement pursuant to which the interest rate was amended to 2.5% per annum.

On April 1, 2019, the SEALSQ Group entered into a loan agreement with WISECoin AG, an affiliate of WISEKey, pursuant to which WISECoin AG commits to loan EUR 250,000 to the SEALSQ Group, at an interest rate of 3% per annum, amended to 2.5% on November 3, 2022. The loan has no maturity date.

On October 1, 2019, the SEALSQ Group entered into a loan agreement with WISECoin AG pursuant to which WISECoin AG commits to loan USD 2,750,000 to the SEALSQ Group, at an interest rate of 3% per annum, amended to 2.5% on November 3, 2022. The loan has no maturity date.

On November 12, 2020, WISEKey provided a Funding Commitment to extend shareholder loans (each the “**Shareholder Loan**”) to the Group for a maximum aggregate amount of USD 4 million to be drawn down over six months from the date of the commitment, in instalments of between USD 1 million and USD 1.5 million. The Shareholder Loans bore interest of 3% per annum. There were no set repayment dates for the Shareholder Loans.

On April 1, 2021, the Group entered into a Debt Remission Agreement (the “**Debt Remission**”) with WISEKey pursuant to which an outstanding amount of EUR 5 million (USD 5,871,714 at historical rate) owed to WISEKey was remitted without any compensation from the Group. Per the terms of the Debt Remission, WISEKey will have the right to reinstate the debt and ask for repayment in fiscal years when SEALSQ France SAS achieves a positive income before income tax expense, in an amount calculated based on the income before income tax expense and as agreed by the parties. As such, because of the repayment clause, the loan amount covered by the Debt Remission continues to be shown as noncurrent liabilities included in the line Indebtedness to related parties, noncurrent. The outstanding amount under the Debt Remission is revalued at each period end at the applicable closing rate. On December 20, 2023, the Group and WISEKey entered into an agreement to write off EUR 2 million (USD 2,191,282 at historical rate) of the outstanding Debt Remission amount. Therefore, as at December 31, 2024, an amount of EUR 3 million (USD 3,105,300) remained outstanding under the Debt Remission.

On June 28, 2021, the Group entered into a Debt Transfer Agreement with its parent, WISEKey, and an affiliate of WISEKey, WISEKey SA, pursuant to which WISEKey extended a loan of USD 1,463,664 to the Group to repay an overdue creditor balance in that same amount owed to WISEKey SA. The loan bore interest at the rate of 3% per annum and was repayable by December 31, 2022.

On December 31, 2021, the Group entered into a Debt Transfer Agreement with WISEKey pursuant to which WISEKey extended a loan of USD 1,910,754 to the Group with an interest rate of 3% per annum, repayable on December 31, 2023.

On June 30, 2022, the Group entered into a Debt Transfer Agreement with WISEKey pursuant to which WISEKey extended a loan of USD 444,542 to the Group with an interest rate of 3% per annum, repayable on December 31, 2024.

On August 31, 2022, the Group entered into a Debt Transfer Agreement with WISEKey and WISEKey SA pursuant to which WISEKey extended a loan of USD 381,879 to the Group with an interest rate of 3% per annum, repayable on December 31, 2024.

On December 15, 2022, and in view of the negative equity position of the Group, WISEKey as then sole shareholder of the SEALSQ Group resolved to recapitalize the Group by forfeiting EUR 7 million (USD 7,348,397 at historical rate) out of the loans outstanding in exchange for the issuance of 175,000 new shares in SEALSQ France SAS, par value EUR 1. Under French law, such a recapitalization is only possible if the loans to be forfeited are immediately repayable. Therefore, respectively on November 1, 2022 and November 3, 2022, the Group entered into a First Amendment to the Debt Transfer Agreements and into the Fourth Amendment to the Revolving Credit Agreement pursuant to which the loans owed under the Debt Transfer Agreements dated June 28, 2021, December 31, 2021, June 30, 2022 and August 31, 2022 as well as all amounts due under the Revolving Credit became due and payable on November 30, 2022.

Because of the requirement under French law, we analyzed the amendment of the maturity of the loans and Revolving Credit as being part of the substance of the recapitalization transaction. We assessed the recapitalization as a capital transaction between related parties in line with ASC 470-50 and, therefore, in the year ended December 31, 2022, recorded a credit entry of USD 183,710 in share capital corresponding to the new issue of 175,000 shares and a credit of USD 7,164,687 to additional paid-in capital, with a total debit entry of USD 7,348,397 to Indebtedness to related parties, noncurrent.

On December 31, 2022, the Group entered into a Debt Transfer Agreement with WISEKey pursuant to which WISEKey extended a loan of USD 283,754 to the Group with an interest rate of 3% per annum, repayable on December 31, 2024.

As at December 31, 2022, the Group owed WISEKey USD 1,198,746 in loans under the various agreements and the unamortized debt discount balance was USD 35,340, hence a carrying value of USD 1,163,406 as at December 31, 2022.

On January 1, 2023, the SEALSQ Group entered into a loan agreement with WISEKey (the “**New Loan**”) which replaced all outstanding loan agreements. Per the terms of the New Loan, WISEKey extended a loan to the SEALSQ Group of up to USD 5 million, with an interest rate of 2.5% per annum, repayable on or around December 31, 2024. A first tranche loan of USD 1,407,497 was drawn on January 1, 2023, which was made up of the balance of USD 1,198,746 outstanding from previous loan agreements as at December 31, 2022 and an additional loan amount of USD 208,751. We determined the New Loan to be a troubled debt restructuring under ASC 470-60, where the future undiscounted cash flows of the New Loan were more than the net carrying value of USD 1,163,406 of the original debt with WISEKey. Therefore, in line with ASC 470-60, we recorded the New Loan with a new effective interest rate of 12.3% established based on the carrying value of the original debt and the revised cash flows. A total interest rate accrual of USD 244,091 was recorded as a debit to Indebtedness to related parties, current at inception and the unamortized debt discount balance on the previously outstanding loans of USD 35,340 was extinguished, hence a net credit to APIC of USD 208,751. In line with ASC 470-60, no gain was recorded in the income statement.

All entities in the SEALSQ Group are subject to management fees from WISEKey and WISEKey's affiliates. Where the payment terms have been defined, the classification between current and noncurrent follows the payment terms, however, where there is no set payment date for these fees, they have been classified as noncurrent.

As at December 31, 2023, the Group owed WISEKey and WISEKey's affiliates noncurrent debts in an aggregate amount of USD 9,695,576, made up of loans and unpaid management fees, and current debts in an aggregate amount of USD 1,407,497. The unamortized effective interest balance of the current debts was USD 129,691, hence a carrying value of the current debts of USD 1,277,806 as at December 31, 2023. In the year 2023, an aggregate effective interest expense of USD 114,400 was recorded in the income statement.

As at December 31, 2023, the Group also held an accounts payable balance of USD 1,377,871 with WISEKey in relation to interest on outstanding loans and the recharge of management services, classified as accounts payable to shareholders.

In 2024, the group repaid the current debt owed to WISEKey in full for a total amount of USD 1,449,911, made up of a loan of USD 1,407,497, and related interests. The unamortized effective interest balance of the current debt of USD 129,691 was recognized in the income statement as interest and amortization of debt discount in an amount of USD 29,406 and as loss on debt extinguishment in an amount of USD 100,285. The Group also repaid some of the noncurrent debts owed to WISEKey and WISEKey's affiliates.

As at December 31, 2024, the Group owed WISEKey a noncurrent debt in an amount of USD 3,105,300 made up of the remaining loan under the Debt Remission, and a current loan of USD 3,008,775. In the year ended December 31, 2024, an aggregate effective interest expense of USD 82,493 was recorded in the income statement.

As at December 31, 2024, the Group also held an accounts payable balance of USD 2,388,441 with WISEKey and WISEKey's affiliates in relation to interest on outstanding loans and the recharge of management services.

Note 21. Employee benefit plans

Defined benefit post-retirement plan

As of December 31, 2024, the Group maintained one defined benefit post-retirement plan for the employees of SEALSQ France SAS. The plan is and was considered a defined benefit plan and accounted for in accordance with ASC 715 Compensation – Retirement Benefits. This model allocates pension costs over the service period of employees in the plan. The underlying principle is that employees render services ratably over this period, and therefore, the income statement effects of pensions should follow a similar pattern. ASC 715 requires recognition of the funded status or difference between the fair value of plan assets and the projected benefit obligations of the pension plan on the balance sheet, with a corresponding adjustment recorded in the net loss. If the projected benefit obligation exceeds the fair value of the plan assets, then that difference or unfunded status represents the pension liability.

The Group records net service cost as an operating expense and other components of defined benefit plans as a non-operating expense in the statement of comprehensive loss.

The liabilities and annual income or expense of the pension plan are determined using methodologies that involve several actuarial assumptions, the most significant of which is the discount rate.

Personnel Costs USD'000	As at December 31, 2024	As at December 31, 2023	As at December 31, 2022
Wages and Salaries	5,830	6,214	4,286
Social security contributions	2,612	2,319	1,940
Net service costs	33	38	42
Total	8,475	8,571	6,268

The defined benefit pension plan maintained by SEALSQ France SAS, and their obligations to employees in terms of retirement benefits, is limited to a lump sum payment based on remuneration and length of service, determined for each employee. The plan is not funded, which means that there are no plan assets.

The pension liability calculated as at December 31, 2024, is based on annual personnel costs and assumptions as of December 31, 2024.

Assumptions	As at December 31, 2024	As at December 31, 2023	As at December 31, 2022
	France	France	France
Discount rate	3.10%	3.05%	3.65%
Expected rate of return on plan assets	n/a	n/a	n/a
Salary increases	3%	3%	3%

As at December 31, 2024 and 2023, the Group's accumulated benefit obligation amounted to, respectively, USD 463,381 and USD 426,345.

Reconciliation to Balance Sheet start of year			
USD'000			
Fiscal year	2024	2023	2022
Projected benefit obligation	426	396	575
Surplus/deficit	426	396	575
Opening balance sheet asset/provision (funded status)	426	396	575
Reconciliation of benefit obligation during the year			
Projected benefit obligation at start of year	426	396	575
Net service cost	34	38	43
Interest expense	13	14	4
Net benefits paid to participants	(7)	(22)	(24)
Actuarial losses/(gains)	26	(11)	(170)
Curtailment & settlement	-	-	-
Currency translation adjustment	(29)	11	(32)
Projected benefit obligation at end of year	463	426	396
Reconciliation to balance sheet end of year			
Defined benefit obligation - funded plans	463	426	396
Surplus/deficit	463	426	396
Closing balance sheet asset/provision (funded status)	463	426	396
Amounts recognized in accumulated other comprehensive income / (loss)			
Net loss / (gain)	(335)	(385)	(364)
Deficit	(335)	(385)	(364)
Estimated amount to be amortized from accumulated other comprehensive income / (loss) into NPBC over next fiscal year			
Net loss / (gain)	52	47	52

Movement in Funded Status			
USD'000			
Fiscal year	2024	2023	2022
Opening balance sheet liability (funded status)	426	396	575
Net service cost	34	38	43
Interest cost / (credit)	13	14	4
Settlement / curtailment cost / (credit)	-	-	-
Currency translation adjustment	-	-	-
Total net periodic benefit cost / (credit)	47	52	47
Actuarial (gain) / loss on liabilities due to experience	26	(11)	(170)
Total (gain) / loss recognized via OCI	26	(11)	(170)
Employer contributions paid in the year & Cashflow required to pay benefit payments	(7)	(22)	(24)
Total cashflow	(7)	(22)	(24)
Currency translation adjustment	(29)	11	(32)
Closing balance sheet liability (funded status)	463	426	396
Reconciliation of Net gain / loss			
Amount at beginning of year	(385)	(364)	(205)
Liability (gain) / loss	26	(11)	(170)
Currency translation adjustment	24	(10)	11
Amount at December 31,	(335)	(385)	(364)

The table below shows the breakdown of expected future contributions payable to the Plan :

Period	France
USD'000	
2025	30
2026	50
2027	53
2028	39
2029	-
2030 to 2034	394

Note 22. Commitments and contingencies

Lease commitments

The future payments due under leases are shown in Note 14.

Guarantees

Our software and hardware product sales agreements generally include certain provisions for indemnifying customers against liabilities if our products infringe a third party's intellectual property rights. Certain of our product sales agreements also include provisions indemnifying customers against liabilities in the event we breach confidentiality or service level requirements. It is not possible to determine the maximum potential amount under these indemnification agreements due to our lack of history of prior indemnification claims and the unique facts and circumstances involved in each particular agreement. To date, we have not incurred any costs as a result of such indemnifications and have not accrued any liabilities related to such obligations in our consolidated financial statements.

Note 23. Stockholders' equity

Stockholders' equity consisted of the following:

	As at December 31, 2024		As at December 31, 2023	
	Ordinary shares	F shares	In equivalent ordinary shares	In equivalent F shares
Share Capital				
Par value per share	USD 0.01	USD 0.05	USD 0.01	USD 0.05
Share capital (in USD)	1,000,395	74,985	154,468	74,985
Total number of authorized shares	200,000,000	10,000,000	200,000,000	10,000,000
Total number of fully paid-in issued shares	100,039,519	1,499,700	15,446,807	1,499,700
Total number of fully paid-in outstanding shares	100,039,519	1,499,700	15,446,807	1,499,700
Total share capital (in USD)	1,075,380		229,453	

Share Purchase Agreements with L1 Capital Global Opportunities Master Fund signed in 2024

On December 12, 2024, the Group entered into a Securities Purchase Agreement (the "**Second L1 SPA**") with L1 to purchase 3,846,154 Ordinary Shares of SEALSQ for a subscription price of USD 5 million. The Second L1 SPA was assessed as a stock instrument and the proceeds, net of stock issuance costs of USD 411,194, were credited to the Common stock - Ordinary shares account in the amount of the aggregate par value with the excess credited to APIC.

Per the terms of the Second L1 SPA, the exercise price of all outstanding warrants over Ordinary Shares of SEALSQ owned by L1 was lowered to USD 2 per Ordinary Share and the number of warrants is increased so that the aggregate exercise price after the modification remains equals the aggregate exercise price on the initial issuance date of the warrants. As at December 12, 2024, L1 owned 122,908 warrants on SEALSQ Ordinary Shares at an exercise price of USD 30 per share, 1,144,339 warrants at an exercise price of USD 4 per share, and 768,679 warrants at an exercise price of USD 5.5 per share which were granted as part of the L1 SPA as mentioned earlier in this Note. As a result of the warrant modification, L1 owned an aggregate of 6,246,166 warrants at an exercise price of USD 2 per share. In line with ASC 815, we assessed that the warrant modifications qualified as the modification of the terms of a freestanding equity-classified written call option that remains equity classified after the modification, which is akin to an equity issuance. The effect of the modification was therefore recognized as an equity issuance cost.

On December 16, 2024, the Group entered into a Securities Purchase Agreement (the "**Third L1 SPA**") with L1 to purchase 6,578,948 Ordinary Shares of SEALSQ for a subscription price of USD 12.5 million. The Third L1 SPA was assessed as a stock instrument and the proceeds, net of stock issuance costs of USD 955,763, were credited to the Common stock - Ordinary shares account in the amount of the aggregate par value with the excess credited to APIC.

On December 17, 2024, the Group entered into a Securities Purchase Agreement (the "**Fourth L1 SPA**") with L1 to purchase 6,578,948 Ordinary Shares of SEALSQ for a subscription price of USD 12.5 million. The Fourth L1 SPA was assessed as a stock instrument and the proceeds, net of stock issuance costs of USD 932,956, were credited to the Common stock - Ordinary shares account in the amount of the aggregate par value with the excess credited to APIC.

Share Purchase Agreements with Anson Investments Master Fund signed in 2024

On December 12, 2024, the Group entered into a Securities Purchase Agreement (the "**Second Anson SPA**") with Anson to purchase 3,846,154 Ordinary Shares of SEALSQ for a subscription price of USD 5 million. The Second Anson SPA was assessed as a stock instrument and the proceeds, net of stock issuance costs of USD 411,194, were credited to the Common stock - Ordinary shares account in the amount of the aggregate par value with the excess credited to APIC.

Per the terms of the Second Anson SPA, the exercise price of all outstanding warrants over Ordinary Shares of SEALSQ owned by Anson was lowered to USD 2 per Ordinary Share and the number of warrants is increased so that the aggregate exercise price after the modification remains equals the aggregate exercise price on the initial issuance date of the warrants. As at December 12, 2024, Anson owned 122,908 warrants on SEALSQ Ordinary Shares at an exercise price of USD 30 per share, 1,144,339 warrants at an exercise price of USD 4 per share, and 768,679 warrants at an exercise price of USD 5.5 per share which were granted as part of the Anson SPA as mentioned earlier in this Note. As a result of the warrant modification, Anson owned an aggregate of 6,246,166 warrants at an exercise price of USD 2 per share. In line with ASC 815, we assessed that the warrant modifications qualified as the modification of the terms of a freestanding equity-classified written call option that remains equity classified after the modification, which is akin to an equity issuance. The effect of the modification was therefore recognized as an equity issuance cost.

On December 16, 2024, the Group entered into a Securities Purchase Agreement (the "**Third Anson SPA**") with Anson to purchase 6,578,948 Ordinary Shares of SEALSQ for a subscription price of USD 12.5 million. The Third Anson SPA was assessed as a stock

instrument and the proceeds, net of stock issuance costs of USD 955,763, were credited to the Common stock - Ordinary shares account in the amount of the aggregate par value with the excess credited to APIC.

On December 17, 2024, the Group entered into a Securities Purchase Agreement (the “**Fourth Anson SPA**”) with Anson to purchase 6,578,948 Ordinary Shares of SEALSQ for a subscription price of USD 12.5 million. The Fourth Anson SPA was assessed as a stock instrument and the proceeds, net of stock issuance costs of USD 932,956, were credited to the Common stock - Ordinary shares account in the amount of the aggregate par value with the excess credited to APIC.

Inducement Offer to Exercise Existing Ordinary Share Purchase Warrants

On 30 December 2024, L1 and Anson signed an Inducement Offer to Exercise Existing Ordinary Share Purchase Warrants (the “**Warrant Inducement Offer**”) with SEALSQ, pursuant to which all outstanding L1 and Anson warrants were immediately repriced to USD 1.65 per warrant on ordinary share, and the number of warrant was adjusted so that the aggregate exercise price of the new warrants equaled the aggregate exercise price of the warrants immediately prior to signature. As at December 30, 2024, L1 and Anson owned respectively an aggregate of 2,271,166 and 6,246,166 warrants on SEALSQ Ordinary Shares at an exercise price of USD 2 per share. As a result of the Warrant Inducement Offer, L1 and Anson owned respectively an aggregate of 2,752,929 and 7,571,110 warrants on SEALSQ Ordinary Shares at an exercise price of USD 1.65 per share. In line with ASC 815, we assessed that the warrant modifications qualified as the modification of the terms of a freestanding equity-classified written call option that remains equity classified after the modification, which is akin to an equity issuance. The effect of the modification was therefore recognized as an equity issuance cost.

Note 24. Accumulated other comprehensive income, net of tax

USD'000	
Accumulated other comprehensive income as at December 31, 2022	775
Total net foreign currency translation adjustments ⁽¹⁾	(2)
Total defined benefit pension adjustment	11
Total other comprehensive income / (loss), net	9
Accumulated other comprehensive income as at December 31, 2023	784
Total net foreign currency translation adjustments	-
Total defined benefit pension adjustment	(26)
Total other comprehensive income / (loss), net	(26)
Accumulated other comprehensive income as at December 31, 2024	758
(1) Adjusted for rounding	

There is no income tax expense or benefit allocated to other comprehensive income.

Note 25. Revenue

Nature of goods and services

The Group generates revenues from the sale of semiconductors secure chips and from Digital Certificates, Software as a Service, Software license and Post-Contract Customer Support (PCS) for cybersecurity applications. Products and services are sold principally separately but may also be sold in bundled packages.

For bundled packages, the Group accounts for individual products and services separately if they are distinct – i.e. if a product or service is separately identified from other items in the bundled package and if a customer can benefit from it. The consideration is allocated between separate products and services in a bundle based on their stand-alone selling prices. The stand-alone selling prices are determined based on the list prices when available or estimated based on the Adjusted Market Assessment approach (e.g. licenses), or the Expected Cost-Plus Margin approach (e.g., PCS).

The following is a description of the principal activities from which the Group generates its revenue across all reportable segments.

Product and services	Nature, timing of satisfaction of performance obligations and significant payment terms
Semiconductors secure chips	Although they may be sold in connection with other services of the Group, they always represent distinct performance obligations. The Group recognizes revenue when a customer takes possession of the chips, which usually occurs when the goods are delivered. Customers typically pay once goods are delivered.

Product and services	Nature, timing of satisfaction of performance obligations and significant payment terms
SaaS	The Group's SaaS arrangements cover the provision of cloud-based certificates for authentication purposes such as Device Attestation Certificates (DACs) for MATTER Protocol, IoT Device-to-Cloud Authentication, or Device-to-Device Authentication. The Group recognizes revenue on a straight-line basis over the service period which is usually yearly renewable. Where lifelong certificates are issued, the Group recognizes revenue when the certificate is delivered and usable by the customer. Customers usually pay ahead of the service period; the paid amounts which have not yet been recognized as revenue are shown as deferred revenue on the balance sheet.
Software and INeS Certificate Management Platform	The Group provides software for certificates life-cycle management and signing and authentication solutions through its INeS Certificate Management Platform. The Group recognizes revenue when the software has been delivered or the platform has been set up, and PCS revenue over the service period which is usually one-year renewable. Customers pay upon delivery of the software or over the PCS.
Implementation, integration and other services	The Group provides services to implement and integrate multi-element cybersecurity solutions. Most of the time the solution elements are off-the-shelf non-customized components which represent distinct performance obligations. Implementation and integration services are payable when rendered, while other revenue elements are payable and recognized as per their specific description in this section.

Disaggregation of revenue

The following table shows the Group's revenues disaggregated by product or service type:

Disaggregation of revenue USD'000	Typical payment	At one point in time			Over time			Total		
		2024	2023	2022	2024	2023	2022	2024	2023	2022
Semiconductors Segment										
Secure chips	Upon delivery	10'937	30'044	23'198	-	-	-	10'937	30'044	23'198
Certificates	Upon issuance	39	14	-	5	-	-	44	14	-
Total Semiconductors Segment		10'976	30'058	23'198	5	-	-	10'981	30'058	23'198
Total Corporate Segment		-	-	-	-	-	-	-	-	-
Total Revenue		10'976	30'058	23'198	5	-	-	10'981	30'058	23'198

For the years ended December 31, 2024 and 2023, the Group recorded no revenues related to performance obligations satisfied in prior periods.

The following table shows the Group's revenues disaggregated by geography, based on our customers' billing addresses:

Net sales by region USD'000	12 months ended December 31,		
	2024	2023	2022
Semiconductors Segment			
Europe, Middle East and Africa	1,839	9,985	6,777
North America	7,500	16,531	13,609
Asia Pacific	1,642	3,466	2,745
Latin America	-	76	67
Total Semiconductors Segment revenue	10,981	30,058	23,198
Total Corporate Segment revenue	-	-	-
Total net sales	10,981	30,058	23,198

Contract assets, deferred revenue and contract liability

Our contract assets, deferred revenue and contract liability consist of:

USD'000	As at December 31, 2024	As at December 31, 2023
Trade accounts receivable		
Trade accounts receivable – Semiconductors Segment	3,645	5,103
Total trade accounts receivable	3,645	5,103
Customer contract liabilities - current	83	125
Total customer contract liabilities	83	125
Deferred revenue		
Deferred revenue – Semiconductors Segment	5	-
Total deferred revenue	5	-

Increases or decreases in trade accounts receivable, contract assets, deferred revenue and contract liabilities are primarily due to normal timing differences between our performance and customer payments.

Remaining performance obligations

As of December 31, 2024, approximately USD 4,953 is expected to be recognized from remaining performance obligations for contracts. We expect to recognize revenue for these remaining performance obligations in 2025.

Note 26. Other operating income

The other operating income relates to:

- services provided to SEALCOIN AG in an amount of USD 226,809 (see Note 34 for detail) and
- the release of unused provisions in an aggregate amount of USD 132,191.

Note 27. Stock-based compensation**Employee stock option plans**

The F Share Option Plan ("FSOP") and the Ordinary Share Option Plan ("OSOP") were approved respectively on January 19, 2023, and September 15, 2023, by the Board of directors of SEALSQ.

Grants

In the 12 months to December 31, 2023, the Group granted a total of 77 options exercisable in F Shares to employees, with immediate vesting, all of which had been exercised as of December 31, 2024. The new shares resulting from the exercise were only created in 2025, therefore, the share capital increase from this exercise was not recorded in the year ended December 31, 2024. The options granted were valued at grant date using the Black-Scholes model.

There was no grant of options on Ordinary Shares under the ESOP in the year ended December 31, 2023.

In the 12 months to December 31, 2024, the Group granted a total of 23 options exercisable in F Shares to employees, with immediate vesting, all of which had been exercised as of December 31, 2024. The new shares resulting from the exercise were only created in 2025, therefore, the share capital increase from this exercise was not recorded in the year ended December 31, 2024.

The Group also granted a total of 245,165 options exercisable in Ordinary Shares to Board members, with immediate vesting granted, none of which had been exercised as of December 31, 2024.

The options granted were valued at grant date using the Black-Scholes model.

Stock option charge to the income statement

The Group calculates the fair value of options granted by applying the Black-Scholes option pricing model. Expected volatility was based on historical volatility of SEALSQ's Ordinary Shares in 2024 and on historical share price volatility of other companies in the same industry and of a similar size for prior periods.

In the year ended December 31, 2024, a total charge of USD 148,402 for options granted to Board members and employees was recognized in the consolidated income statement calculated by applying the Black-Scholes model at grant, in relation to options.

The following assumptions were used to calculate the compensation expense and the calculated fair value of stock options granted:

Assumption	December 31, 2024	December 31, 2023	December 31, 2022
Dividend yield	None	None	None
Risk-free interest rate used (average)	1.00%	1.00%	n/a
Expected market price volatility	65.31 - 140.47%	73.19%	n/a
Average remaining expected life of stock options on F Shares (years)	7	6.19	n/a
Average remaining expected life of stock options on ordinary Shares (years)	6.96	n/a	n/a

There were no unvested options as at December 31, 2024.

The following table illustrates the development of the Group's non-vested options for the years ended December 31, 2024 and 2023.

Options on Ordinary shares		
Non-vested options	Number of shares under options	Weighted-average grant date fair value (USD)
Non-vested options as at December 31, 2022	-	-
Granted	-	-
Vested	-	-
Non-vested forfeited or cancelled	-	-
Non-vested options as at December 31, 2023	-	-
Granted	245,165	0.61
Vested	245,165	0.61
Non-vested forfeited or cancelled	-	-
Non-vested options as at December 31, 2024	-	-

Options on F shares		
Non-vested options	Number of shares under options	Weighted-average grant date fair value (USD)
Non-vested options as at December 31, 2022	-	-
Granted	77	6.39
Vested	77	6.39
Non-vested forfeited or cancelled	-	-
Non-vested options as at December 31, 2023	-	-
Granted	23	2.35
Vested	23	2.35
Non-vested forfeited or cancelled	-	-
Non-vested options as at December 31, 2024	-	-

The following tables summarize the Group's stock option activity for the years ended December 31, 2024 and 2023.

	Ordinary Shares under options	Weighted-average exercise price (USD)	Weighted average remaining contractual term (in years)	Aggregate intrinsic value (USD)
Options on Ordinary shares				
Outstanding as at December 31, 2022	-	-	-	-
Of which vested	-	-	-	-
Granted	-	-	-	-
Outstanding as at December 31, 2023	-	-	-	-
Of which vested	-	-	-	-
Granted	245,165	0.01	-	-
Outstanding as at December 31, 2024	245,165	0.01	6.65	1,505,313
Of which vested	245,165	0.01	6.65	1,505,313

Options on F shares	F-Shares under options	Weighted-average exercise price (USD)	Weighted average remaining contractual term (in years)	Aggregate intrinsic value (USD)
Outstanding as at December 31, 2022	-	-	-	-
Of which vested	-	-	-	-
Granted	77	0.05	-	-
Outstanding as at December 31, 2023	77	0.05	6.19	19
Of which vested	77	0.05	6.19	19
Granted	23	0.05	-	-
Exercised or converted	(100)	0.05	-	118
Outstanding as at December 31, 2024	-	-	-	-
Of which vested	-	-	-	-

Summary of stock-based compensation expenses

Stock-based compensation expenses USD'000	12 months ended December 31,		
	2024	2023	2022
In relation to the Ordinary Share Option Plan	148	-	-
In relation to the F Share Option Plan	-	-	-
Total	148	-	-

Stock-based compensation expenses are recorded under the following expense categories in the income statement.

Stock-based compensation expenses USD'000	12 months ended December 31,		
	2024	2023	2022
Research & development expenses	-	-	-
Selling & marketing expenses	-	-	-
General & administrative expenses	148	-	-
Total	148	-	-

Note 28. Non-operating income

Non-operating income consisted of the following:

USD'000	12 months ended December 31,		
	2024	2023	2022
Foreign exchange gain	358	163	926
Financial income	-	-	9
Interest income	703	88	-
Write-off of indebtedness to related parties	-	2,191	-
Total non-operating income	1,061	2,442	935

Note 29. Non-operating expenses

Non-operating expenses consisted of the following:

USD'000	12 months ended December 31,		
	2024	2023	2022
Foreign exchange losses	44	339	383
Financial charges	273	4	1
Interest expense	553	298	250
Other	13	14	4
Total non-operating expenses	883	655	638

Note 30. Income taxes

SEALSQ Corp is incorporated in the British Virgin Islands but is a Swiss tax resident, filing taxes in the canton of Geneva.

The components of income before income taxes are as follows:

Income / (Loss) USD'000	12 months ended December 31,		2022
	2024	2023	
Switzerland	(10,907)	(6,524)	-
Foreign	(7,209)	3,481	2,525
Income / (loss) before income tax	(18,116)	(3,043)	2,525

The components of income taxes relating to the Group are as follows:

Income taxes USD'000	12 months ended December 31,		2022
	2024	2023	
Switzerland	-	-	-
Foreign	3,085	225	(3,245)
Income tax expense / (income)	3,085	225	(3,245)

The difference between the income tax recovery / (expense) at the local statutory rate compared to the Group's income tax recovery / (expense) as reported is reconciled below:

USD'000	12 months ended December 31,		2022
	2024	2023	
Net income / (loss) before income tax	(18,116)	(3,043)	2,525
Statutory tax rate	14%	14%	25%
Expected income tax (expense)/recovery	2,536	426	(631)
Change in tax loss carryforwards	3,912	869	(41)
Change in loss carryforwards in relation to the debt remission	(52)	(514)	1,342
Change in valuation allowance	(6,932)	(600)	2,185
Foreign tax effects	(1,047)	(75)	(95)
Nontaxable or nondeductible items	(1,491)	(22)	157
Other	(11)	(309)	328
Income tax (expense) / recovery	(3,085)	(225)	3,245

The Group assesses the recoverability of its deferred tax assets and, to the extent recoverability does not satisfy the "more likely than not" recognition criterion under ASC 740, records a valuation allowance against its deferred tax assets. The Group considered its recent operating results and anticipated future taxable income in assessing the need for its valuation allowance.

In the year ended December 31, 2022, the Group assessed that the recoverability of its deferred tax assets partially satisfied the "more likely than not" recognition criterion under ASC 740 as at December 31, 2022 and recorded a deferred tax asset of \$3,295,546 which was partially utilized in 2023. However, in view of the Group's loss before income tax in the year ended December 31, 2024, and of the anticipated future taxable income per management's forecast, the Group assessed that the recoverability of its deferred tax assets no longer satisfied the "more likely than not" recognition criterion under ASC 740 as at December 31, 2024 and, therefore, increased the valuation allowance previously recorded accordingly.

The Group's deferred tax assets and liabilities consist of the following:

Deferred income tax assets/(liabilities) USD'000	As at December 31,	As at December 31,
	2024	2023
Switzerland	-	-
Foreign	-	3,077
Deferred income tax assets / (liabilities)	-	3,077

Deferred tax assets and liabilities USD'000	As at December 31,	As at December 31,
	2024	2023
Defined benefit accrual	(9)	(3)
Tax loss carryforwards	8,380	4,468
Add back loss carryforwards used for the debt remission	776	828
Valuation allowance	(9,147)	(2,216)
Deferred tax assets / (liabilities)	-	3,077

As of December 31, 2024, the Group's operating cumulated loss carry-forwards of all jurisdictions are as follows:

Operating loss-carryforward as of December 31, 2024			
Total operating loss carry-forwards / Year of expiration if applicable to jurisdiction			
USD'000	Switzerland	France	Total
2025	-	-	-
2026	-	-	-
2027	-	-	-
2028	-	-	-
2029	188	-	188
2030	7,189	-	7,189
2031	10,062	-	10,062
No expiration	-	23,753	23,753
Totals	17,439	23,753	41,192

In France, operating losses may be carried forward indefinitely but may be offset against the taxable profits of a given fiscal year only up to an amount of €1 million, plus 50% of the taxable result in excess of that threshold.

The following tax years remain subject to examination:

Significant jurisdictions	Open years
Switzerland	2024
France	2021 – 2024
Japan	2024
Taiwan	2024

The Group has no unrecognized tax benefits.

Note 31. Segment reporting

The Group has two operating segments that meet the criteria set in ASC 280-10-50: Semiconductors and Corporate. The Semiconductors reportable segment is a strategic business unit that offers specific products and is managed separately because it requires dedicated resources and a targeted marketing strategy. The Semiconductors segment encompasses the design, manufacturing, sales and distribution of high-end, Common Criteria EAL5+ & FIPS 140-3-certified secure microprocessors. The Corporate reportable segment requires separate disclosure based on the asset test; it is a strategic business unit that integrates corporate services and the Group's financing strategy, and is managed separately because it requires dedicated resources. The Corporate reportable segment did not exist prior to January 1, 2023, when SEALSQ Corp acquired SEALSQ France SAS.

The accounting policies of the segments are the same as those described in the summary of significant accounting policies. The Group's chief operating decision maker, who is its Chief Executive Officer, evaluates performance for its reportable segments based on segment net sales and gross profit where applicable, and on operating income or loss for purposes of allocating resources (including employees, property, plant and equipment, and financial resources) and assessing budgets and performance. The chief operating decision maker considers budget-to-actual variances on a quarterly basis.

The Group accounts for intersegment sales and transfers as if the sales or transfers were to third parties, that is, at current market prices.

12 months ended December 31, USD'000	2024			2023		
	Semiconductors	Corporate	Total	Semiconductors	Corporate	Total
Revenues from external customers	10,981	-	10,981	30,058	-	30,058
Intersegment revenues	-	-	-	-	-	-
	10,981	-	10,981	30,058	-	30,058
<i>Reconciliation of revenue</i>						
Elimination of intersegment revenue			-			-
Total consolidated revenue			10,981			30,058
<i>Less:</i> ¹						
Cost of revenue	7,253	-	7,253	16,009	-	16,009
Segment gross profit	3,728	-	3,728	14,049	-	14,049
<i>Less:</i> ¹						
Total operating expenses	12,845	8,166	21,011	12,300	1,303	13,603
Other segment items	(109)	951	842	(1,706)	5,216	3,510
Segment profit / (loss) before income taxes	(9,008)	(9,117)	(18,125)	3,455	(6,519)	(3,064)
<i>Reconciliation of profit or loss (segment profit/(loss))</i>						
Other profit or loss ²			9			21
Elimination of intersegment profits			-			-
Income / (loss) before income taxes			(18,116)			(3,043)
Other segment disclosures						
Interest revenue	160	611	771	88	5	93
Interest expense	95	471	566	109	189	298
Depreciation and amortization	628	2	630	571	-	571
Profit / (loss) from intersegment sales	-	-	-	-	-	-
Income tax recovery / (expense)	(3,077)	-	(3,077)	(218)	-	(218)
Segment assets	13,564	110,338	123,902	23,736	23,958	47,694

(1) The significant expense categories and amounts align with the segment-level information that is regularly provided to the chief operating decision maker. Intersegment expenses are included within the amounts shown.

(2) Profit or loss from segments below the quantitative thresholds are attributable to two operating segments that include the sales and distribution of semiconductors. None of those segments has ever met any of the quantitative thresholds for determining reportable segments.

12 months ended December 31, USD'000	2022		
	Semiconductors	Corporate	Total
Revenues from external customers	23,198	n/a	23,198
Intersegment revenues	-	n/a	-
	23,198	n/a	23,198
<i>Reconciliation of revenue</i>			
Elimination of intersegment revenue			-
Total consolidated revenue			23,198
<i>Less:¹</i>			
Cost of revenue	13,399	n/a	13,399
Segment gross profit	9,799	n/a	9,799
<i>Less:¹</i>			
Total operating expenses	7,233	n/a	7,233
Other segment items	61	n/a	61
Segment profit/(loss) before income taxes	2,505	n/a	2,505
<i>Reconciliation of profit or loss (segment profit/(loss))</i>			
Other profit or loss ²			20
Elimination of intersegment profits			-
Income/(loss) before income taxes			2,525
Other segment disclosures			
Interest revenue	-	n/a	-
Interest expense	250	n/a	250
Depreciation and amortization	408	n/a	408
Profit/(loss) from intersegment sales	-	n/a	-
Income tax recovery/(expense)	3,251	n/a	3,251
Segment assets	21,587	n/a	21,587

(1) The significant expense categories and amounts align with the segment-level information that is regularly provided to the chief operating decision maker. Intersegment expenses are included within the amounts shown.

(2) Profit or loss from segments below the quantitative thresholds are attributable to two operating segments that include the sales and distribution of semiconductors. None of those segments has ever met any of the quantitative thresholds for determining reportable segments.

Other segment items for each reportable segment are made up of non-operating expenses, including management expenses, foreign exchanges gains and losses, debt discount amortization and financing costs.

USD'000	As at December 31,	
	2024	2023
Asset reconciliation		
Total assets from reportable segments	123,902	47,694
Other assets ¹	164	188
Elimination of intersegment receivables	(7,168)	(615)
Elimination of intersegment investment and goodwill	(19,332)	(19,332)
Consolidated total assets	97,566	27,935

(1) Assets from segments below the quantitative thresholds are attributable to two operating segments that include the sales and distribution of semiconductors. None of those segments has ever met any of the quantitative thresholds for determining reportable segments.

Revenue and property, plant and equipment by geography

The following tables summarize geographic information for net sales based on the billing address of the customer, and for property, plant and equipment.

Net sales by region USD'000	12 months ended December 31,		
	2024	2023	2022
North America	7,500	16,531	13,609
Europe, Middle East & Africa	1,839	9,985	6,777
Asia Pacific	1,642	3,466	2,745
Latin America	-	76	67
Total net sales	10,981	30,058	23,198

Property, plant and equipment, net of depreciation, by region USD'000	As at December 31, 2024	As at December 31, 2023
Europe, Middle East & Africa	3,201	3,230
Total Property, plant and equipment, net of depreciation	3,201	3,230

Note 32. Earnings / (Loss) per share

The computation of basic and diluted net earnings / (loss) per share for the Group is as follows:

	12 months ended December 31,		
Earnings / (loss) per share	2024	2023	2022
Net income / (loss) (USD'000)	(21,201)	(3,268)	5,770
Effect of potentially dilutive instruments on net gain (USD'000)	n/a	n/a	n/a
Net income / (loss) after effect of potentially dilutive instruments (USD'000)	(21,201)	(3,268)	5,770
Ordinary Shares used in net earnings / (loss) per share computation:			
Weighted average shares outstanding - basic	27,749,590	7,799,766	6,610,293
Effect of potentially dilutive equivalent shares	n/a	n/a	-
Weighted average shares outstanding - diluted	27,749,590	7,799,766	6,610,293
Net earnings / (loss) per Ordinary Share			
Basic weighted average loss per share (USD)	(0.60)	(0.21)	0.41
Diluted weighted average loss per share (USD)	(0.60)	(0.21)	0.41
F shares used in net earnings / (loss) per share computation:			
Weighted average shares outstanding - basic	1,499,700	1,499,700	1,499,700
Effect of potentially dilutive equivalent shares	n/a	n/a	-
Weighted average shares outstanding - diluted	1,499,700	1,499,700	1,499,700
Net earnings / (loss) per F share			
Basic weighted average loss per share (USD)	(3.01)	(1.07)	2.04
Diluted weighted average loss per share (USD)	(3.01)	(1.07)	2.04

Shares	2024	2023	2022
Company posted	Net loss	Net loss	Net income
Basic weighted average ordinary shares outstanding	27,749,590	7,799,766	6,610,293
Basic weighted average F shares outstanding	1,499,700	1,499,700	1,499,700
Dilutive effect of common stock equivalents	n/a	n/a	-
Dilutive weighted average common stock outstanding	n/a	n/a	-

Dilutive vehicles with anti-dilutive effect	2024	2023	2022
Ordinary Shares			
Total stock options	245,165	-	-
Total convertible instruments	-	1,559,828	-
Total number of Ordinary Shares from dilutive vehicles with anti-dilutive effect	245,165	1,559,828	-

Dilutive vehicles with anti-dilutive effect	2024	2023	2022
F shares			
Total stock options	-	77	-
Total number of F Shares from dilutive vehicles with anti-dilutive effect	-	77	-

Note 33. Legal proceedings

We are currently not party to any legal proceedings and claims that are not provided for in our financial statements.

Note 34. Related parties disclosure**Subsidiaries**

As at December 31, 2024, the consolidated financial statements of the Group include the entities listed in the following table:

Group Company Name	Country of incorporation	Year of incorporation	Share Capital	% ownership as at December 31, 2024	% ownership as at December 31, 2023	Nature of business
SEALSQ France SAS	France	2010	EUR 1,473,162	100%	100%	Chip manufacturing, sales & distribution
WiSeKey IoT Japan KK	Japan	2017	JPY 1,000,000	100%	100%	Sales & distribution
SEALSQ France Taiwan Branch	Taiwan	2017	TWD 100,000	100%	100%	Sales & distribution
SEALSQ USA Ltd	U.S.A.	2024	Nil	100%	n/a	Sales & distribution

Related party transactions and balances

Related Parties (in USD'000)	Receivables as at		Payables as at		Net expenses to in the year ended			Net income from in the year ended		
	December 31, 2024	December 31, 2023	December 31, 2024	December 31, 2023	December 31, 2024	December 31, 2023	December 31, 2022	December 31, 2024	December 31, 2023	December 31, 2022
1 Carlos Moreira	-	-	953	-	-	-	-	-	-	-
2 John O'Hara	-	-	381	-	-	-	-	-	-	-
3 Ruma Bose	-	-	13	28	97	33	-	-	-	-
4 Cristina Dolan	-	-	13	-	74	-	-	-	-	-
5 David Fergusson	-	-	-	-	18	-	-	-	-	-
6 Danil Kerimi	-	-	13	8	105	8	-	-	-	-
7 Eric Pellaton	-	-	13	-	74	-	-	-	-	-
8 Peter Ward	-	-	-	-	6	-	-	-	-	-
WiSeKey International Holding AG	-	-	4,821	7,100	4,752	5,283	796	-	-	-
10 WiSeKey SA	-	-	237	-	978	-	-	-	-	-
11 WiSeKey USA Inc	-	-	-	981	-	827	558	-	-	-
WiSeKey Semiconductors GmbH	-	-	-	881	84	180	105	-	-	-
13 WiSeCoin AG	-	-	3,445	3,389	75	75	86	-	-	-
14 SEALCoin AG	223	-	-	-	-	-	-	227	-	-
Total	223	-	9,889	12,387	6,263	6,406	1,545	227	-	-

1. Carlos Moreira is a member of the Board and the CEO of SEALSQ Corp. A short-term payable to Carlos Moreira in an amount of USD 953,397 was outstanding as at December 31, 2024, made up of accrued bonuses and social charges thereon.

2. John O'Hara is a member of the Board and the CFO of SEALSQ Corp. A short-term payable to John O'Hara in an amount of USD 381,359 was outstanding as at December 31, 2024, made up of accrued bonuses and social charges thereon.

3. Ruma Bose is a member of the board of directors of SEALSQ Corp. The expenses recorded in the income statement in the year ended, and the payable balance as at, December 31, 2024 relate to her Board fee.

4. Cristina Dolan is a member of the board of directors of SEALSQ Corp. The expenses recorded in the income statement in the year ended, and the payable balance as at, December 31, 2024 relate to her Board fee.

5. David Fergusson is a member of the board of directors of SEALSQ Corp. The expenses recorded in the income statement in the year ended, December 31, 2024 relate to his Board fee.

6. Danil Kerimi is a member of the board of directors of SEALSQ Corp. The expenses recorded in the income statement in the year ended, and the payable balance as at, December 31, 2024 relate to his Board fee.

7. Eric Pellaton is a member of the board of directors of SEALSQ Corp. The expenses recorded in the income statement in the year ended, and the payable balance as at, December 31, 2024 relate to his Board fee.

8. Peter Ward is a member of the board of directors of SEALSQ Corp and was the CFO of the Group until January 2024. The expenses recorded in the income statement in the year to, December 31, 2024 relate to his Board fee.

9. WISEKey International Holding AG has a controlling interest in the SEALSQ Group. It provides financing and management services, including, but not limited to, sales and marketing, accounting, finance, legal, taxation, business and strategy consulting, public relations, marketing, risk management, information technology and general management. The expenses in relation to WISEKey International Holding AG recorded in the income statement in the year to, and the payable balance as at December 31, 2024, relate to the recharge of management services.

10. WISEKey SA is part of the group headed by WISEKey International Holding AG (the “**WISEKey Group**”) and employs supporting staff who work for the SEALSQ Group. The expenses in relation to WISEKey SA recorded in the income statement in the year to, and the payable balance as at December 31, 2024, relates to the recharge of employee costs.

11. WISEKey USA Inc is part of the WISEKey Group.

12. WISEKey Semiconductors GmbH is part of the WISEKey Group and employs sales staff who work for the SEALSQ Group. The expenses recorded in the income statement in relation to WISEKey Semiconductors GmbH in the year ended December 31, 2024 relate to the recharge of employee costs.

13. WISECoin AG is part of the WISEKey Group. The expenses in relation to WISECoin AG recorded in the income statement in the year ended, and the payable balance as at, December 31, 2024 relate to an outstanding loan and the interest thereon.

14. SEALCOIN AG is part of the WISEKey Group. The income in relation to SEALCOIN AG recorded in the income statement in the year ended, and the receivable balance as at, December 31, 2024, relate to services provided by SEALSQ.

Note 35. Subsequent events

Warrant exercise

On January 3, 2025, L1 and Anson exercised their last warrants for a total of 4,469,382 Ordinary Shares in exchange for a total exercise price of USD 7,374,480.

Repayment of loan from WISECoin AG

On February 14, 2025, the Group repaid USD 2.5 million of the loan with WISECoin AG (see detail in Note 20). The Group anticipates to repay the loans to WISECoin AG in full in 2025.

M&A negotiations with the shareholders of IC'ALPS SAS

On February 27, 2025, the Group announced that it has entered into exclusive negotiations with the shareholders of IC'ALPS SAS (“IC'ALPS”), an ASIC design and supply specialist based in Grenoble, France, to acquire 100% of the share capital and voting rights of IC'ALPS. These exclusive negotiations result from the execution of a Letter of Intent with IC'ALPS and its shareholders. The acquisition is subject to, amongst other items, the completion of the appropriate due diligence, execution of definitive agreements, and authorization by French regulatory authorities. This strategic acquisition would reinforce SEALSQ's commitment to advancing its Application-Specific Integrated Circuit (ASIC) development to meet the growing demand in the sector and add approximately 100 highly-skilled staff based out of IC'ALPS' current centers in Grenoble and Toulouse, France.

Note 36. Impacts of ongoing conflicts and regulatory changes

Impacts of the war in Ukraine

Following the outbreak of the war in Ukraine in late February 2022, several countries imposed sanctions on Russia, Belarus and certain regions in Ukraine. There has been an abrupt change in the geopolitical situation, with significant uncertainty about the duration of the conflict, changing scope of sanctions and retaliation actions including new laws.

The SEALSQ group does not have any operation or customer in Russia, Belarus or Ukraine, and, as such, does not foresee any direct impact of the war on its operations. However, the war has also contributed to an increase in volatility in currency markets, energy prices, raw material and other input costs, which may impact the Group's supply chain in the future.

As at December 31, 2024, SEALSQ assessed the consequences of the war for its financial disclosures and considered the impacts on key judgments and significant estimates, and concluded that no changes were required. SEALSQ will continue to monitor these areas of increased risk for material changes.

Impacts of the Israel–Hammas conflict

Israel's declaration of war on Hamas in October 2023 has degraded the geopolitical environment in the region and created uncertainty.

The SEALSQ group does not have any operation or customer in that region, and, as such, does not foresee any direct impact of the war on its operations. However, depending on its duration and intensity, the war may adversely affect the global economy, financial markets and the Group's supply chain in the future.

As at December 31, 2024, SEALSQ assessed the consequences of the war for its financial disclosures and considered the impacts on key judgments and significant estimates, and concluded that no changes were required. SEALSQ will continue to monitor these areas of increased risk for material changes.

Our business could suffer as a result of tariffs and trade sanctions or similar actions

The imposition by the United States of tariffs, sanctions or other restrictions on goods exported from the United States or imported into the United States, or countermeasures imposed in response to such government actions, could adversely affect our operations or our ability to sell our products globally, which could adversely affect our operating results and financial condition. Recently, U.S. government leaders have increased their frequency of discussion of the imposition of stronger tariffs, sanctions, and other restrictions on goods exported from the United States or imported into the United States, and non-U.S. government leaders have increased their discussion of countermeasures. For example, in February 2025, the United States announced a proposed 25% tariff on imports of all semiconductor chips into the United States. As of March 2025, the U.S. President has reserved for further increases in the scope and amount of tariffs in the event of retaliatory countermeasures, and the future of existing tariffs, and as a result, the possibility for new tariffs and countermeasures, remains very uncertain. Although a large amount of our supply chain does not currently directly import products to the United States as we supply to contract manufacturers outside the United States, there is a possibility that any future tariffs may still impact upon our ability to sell our product and to remain competitive in the market. Such escalations in these trade measures may directly impair our business by increasing trade-related costs or disrupting established supply chains and may indirectly impair our business by causing a negative effect on global economic conditions and financial markets. The ultimate impact of these trade measures is uncertain and may be affected by various factors, including whether and when such trade measures are implemented, the timing when such measures may become effective, and the amount, scope, or nature of such trade measures.

As at December 31, 2024, SEALSQ assessed the impact of these uncertainties for its financial disclosures and considered the impacts on key judgments and significant estimates, and concluded that no changes were required. SEALSQ will continue to monitor these areas of increased risk for material changes.