



SEAL SQ
semiconductors + quantum

INVESTORS REPORT

H1 2023



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1. Introduction



SEALSQ management is pleased to present SEALSQ's H1 2023 Financial Report, reflecting not only our company's commitment to consistent growth and value generation but also marking significant milestones we have achieved in the recent months.

One of the standout achievements that we are particularly proud to spotlight is SEALSQ's successful listing on the NASDAQ in May 2023. This pivotal event not only underscores our competitive position in the global market but also signals our relentless dedication to our shareholders.

This report encapsulates our financial standing, which, in tandem with our progressive milestones, is a testament to the hard work, vision, and determination of the entire SEALSQ team. Our listing on the NASDAQ has not only elevated our global presence but has also provided us with further opportunities to expand our horizons and solidify our footing in the market.

In addition to our NASDAQ listing, you will find detailed insights on other significant achievements and strategic decisions that have steered our company forward, pushing boundaries and setting new industry standards.

1.1 CEO Letter to Shareholders



To our valued shareholders,

We are honored to present our reviewed consolidated Income/Loss statements for the first half (H1) of 2023.

H1 2023 Operational Highlights:

For the period ending June 30, 2023, SEALSQ is proud to disclose an unaudited revenue of \$14.8 million, showcasing a commendable 38% increase in comparison to H1 2022 and a 63% increase in gross profit. Notwithstanding the revenue spike, we reported an operating loss of \$279k and a net loss of \$875k, which, though greater than the \$183 loss recorded in H1 2022, can be primarily attributed to the surge in G&A expenses. This increase was a consequence of SEALSQ's prestigious listing on NASDAQ, accompanied by the inevitable legal, marketing, and operational expenses associated with such a significant undertaking. Achieving EBITDA breakeven in H1 2023, the company remains on track to achieve strong growth in 2023 full year revenue expected to increase in excess of 20% over that of 2022.

Our progress was shaped by:

1. Scalability: A decisive enhancement in production capacity paired with the refining of our supply chain processes.
2. Innovation: The success of our avant-garde MS600X secure platform paved the way for burgeoning business opportunities.

3. Consistency: The Trust Services business trajectory, which has evolved from a promising venture to a reliable source of recurring revenues.
4. Expansion: Amplifying our footprint in the US, complemented by the strategic augmentation of our sales brigade and forging new distribution partnerships.
5. Futurism: Monumental investments in the next-gen Post-Quantum semiconductors and an esteemed nod of approval by the Connectivity Standards Alliance (CSA) for our Matter device attestation.

Our revenue trajectory epitomizes a transformative phase for SEALSQ. As the world witnesses an unprecedented boom in the IoT sectors, SEALSQ's specialization in secure semiconductors is now a sought-after commodity. With every device connecting to the Internet, our expertise stands as a beacon in the global IoT marketplace. With an eye on the horizon, SEALSQ is well-poised to tap into the burgeoning demand in the semiconductor realm. This claim is substantiated by our engineering team who conceptualized and developed the Quantum-Resistant USB Token demonstrator, solidifying our vision to lead in the domains of Post-Quantum Hardware Security and Root-of-Trust.

Our portfolio's richness is accentuated by the GSMA Root-of-Trust CI provisioning services, which elevate the adoption rate of eSIM standards. This not only ensures that consumers enjoy an uninterrupted, secure experience but also underscores our role in the foundational technologies like AI, Post-Quantum, IoT, cloud computing, and 5G.

The unwavering support from international bodies, including the EU and US, further strengthens our conviction. With significant initiatives like the e-Chip Act in place, the macro environment is ripe for sustainable growth, drawing an influx of investor interest.

At SEALSQ, we see ourselves as torchbearers in the space of Semiconductors, PKI, and Provisioning services, while incessantly innovating in the Post-Quantum technology hardware and software realms. From Multi-Factor Authentication tokens to Automotive solutions, our portfolio's vastness is a testament to our adaptability and vision.

In the age of quantum advancements, Post-Quantum Cryptography (PQC) remains our emblem of innovation, fortifying data against quantum-powered threats. In closing, we extend our profound gratitude for your unwavering faith in SEALSQ. Our journey, strewn with challenges, has been rendered meaningful with your trust. With renewed vigor, we set our sights on the future, promising growth, innovation, and unmatched success.

Warm regards,

Carlos Moreira

CEO, SEALSQ Corp



1.2 Overview of 2023 H1

In H1 2023, SEALSQ has laid the groundwork for long-term growth, achieving several significant milestones.

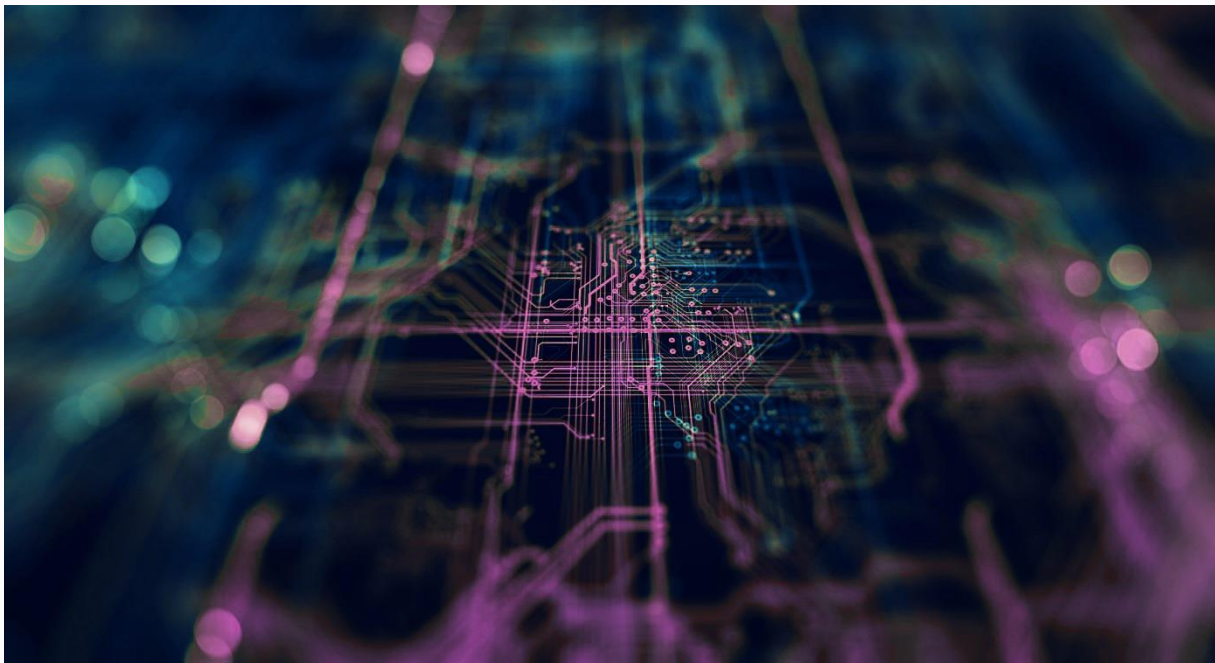
Financially, the most notable achievement was the successful launch on the NASDAQ stock exchange on May 26th, <https://www.nasdaq.com/market-activity/stocks/laes>

On the operational front, the company solidified its partnerships with longstanding strategic partners like CISCO, concurrently pursuing new business opportunities and entering untapped market sectors. SEALSQ also inked multiple distribution agreements with prominent players in the market, including the likes of SYMMETRY in the US. These agreements are set to extend our compelling security value proposition to a wide array of potential customers.

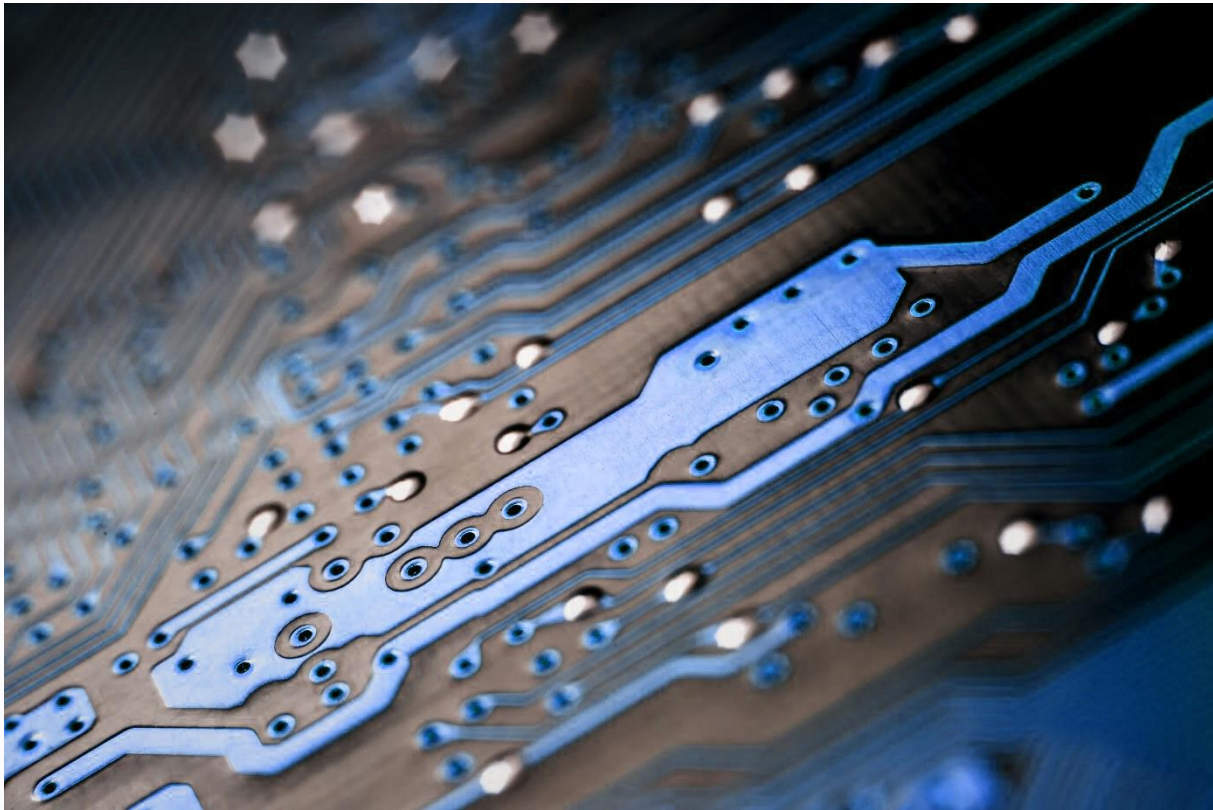
On the product front, SEALSQ introduced its PKI-as-a-Service offering, compliant with the CSA Matter Standard for Smart Home devices. This solution has already gained substantial traction in the market, especially in combination with the new VAULTIC292 Secure Element.

Furthermore, SEALSQ's research teams achieved a significant milestone in Q1 by unveiling the first USB demonstrator featuring two NIST-selected "Cristal" Post-Quantum algorithms operational on a proprietary CCEAL5+ certified hardware platform.

Finally, this dynamic period culminated in a revenue growth rate 38% increase in comparison to H1 2022 underscoring both the robustness of the market and the company's inherent potential.



1.3 SEALSQ's Vision and Mission



SEALSQ's vision paints a bold picture for the future: "Leading the world towards a resilient and invulnerable digital future, where semiconductors remain the cornerstone of secure communications in the post-quantum era." This statement encapsulates the company's aspiration to be at the forefront, ensuring that as we enter the era of quantum computing, our digital underpinnings, represented by semiconductors, remain secure and robust.

The mission supporting this grand vision has been broken down into five pillars:

Research and Innovation: SEALSQ commits to spearheading state-of-the-art research to fortify semiconductors against the looming quantum-based threats. Their efforts aim to stay one step ahead, identifying, and mitigating vulnerabilities before they can be exploited.

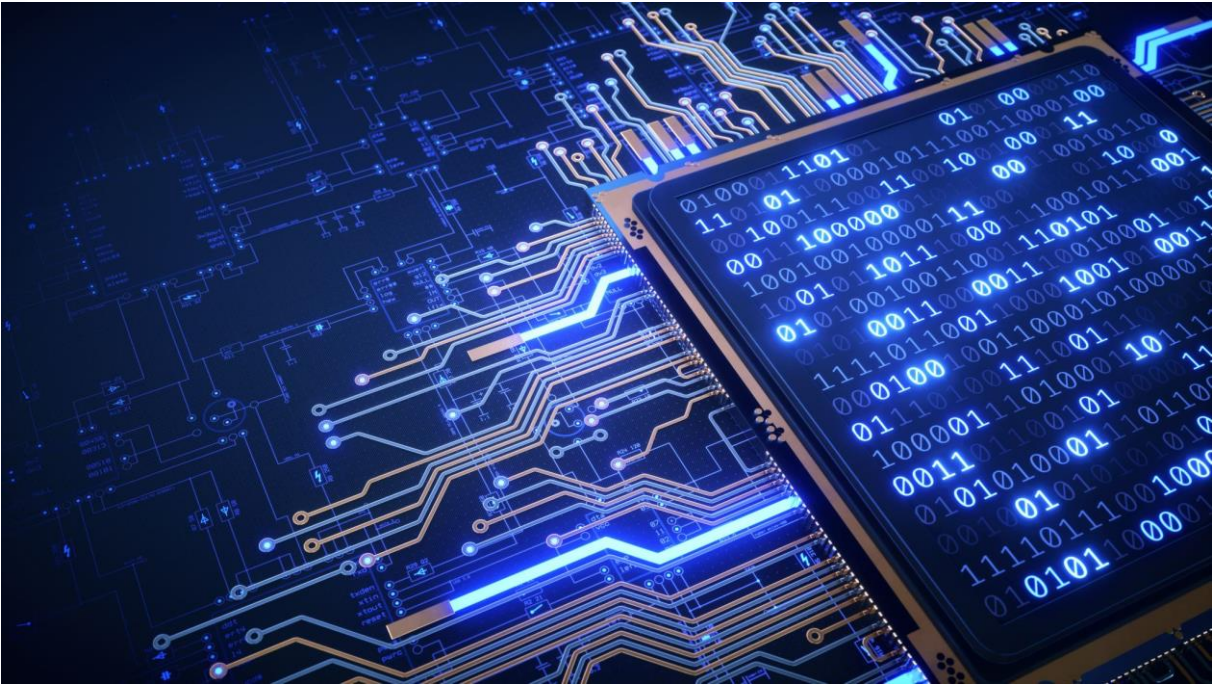
Global Collaboration: Recognizing the need for a united front, SEALSQ emphasizes the importance of global collaboration. By partnering with industry giants, academia, and government agencies, the organization aims to set universal standards for semiconductor security in a post-quantum world.

Education: SEALSQ acknowledges the evolving quantum landscape's intricacies and commits to educating stakeholders about its repercussions on semiconductor technology. This pillar emphasizes the importance of informed decision-making in navigating the challenges of the future.

Driving Transition: As the world braces itself for the quantum era, SEALSQ is poised to lead the charge towards quantum-secure semiconductor solutions. Their focus remains clear: ensure data integrity, confidentiality, and availability across every sector.

Continuous Learning and Adaptability: SEALSQ's mission isn't just about immediate solutions. They promote a culture rooted in continuous learning, adaptability, and foresight, enabling them to stay ahead of quantum advancements and any lurking vulnerabilities.

As SEALSQ embarks on this ambitious journey, their vision and mission serve as a beacon, illuminating the path towards a quantum-secure digital realm. Stakeholders, industry leaders, and tech enthusiasts alike wait with bated breath to witness the transformative changes that SEALSQ promises to bring. Post-quantum chips are designed to improve AI performance in semiconductors, bringing unprecedented capabilities to the technology world. SEALSQ's wide range of solutions include secure elements, root of trust, cryptographic keys, and hardware security modules, underscore SEALSQ's commitment to spearheading technological advancements while fortifying semiconductors against potential vulnerabilities.



2. SEALSQ Post-Quantum Initiative

Context

Quantum Processors progress are faster than expected.

Quantum computers are machines that use the properties of quantum physics to store data and perform computations. This can be extremely advantageous for certain tasks where they could vastly outperform even our best supercomputers (the Quantum Supremacy).



Classical computers, which include smartphones and laptops, encode information in binary “bits” that can either be 0s or 1s. In a quantum computer, the basic unit of memory is a quantum bit or qbit.

For instance, eight bits is enough for a classical computer to represent any number between 0 and 255. But eight qubits are enough for a quantum computer to represent every number between 0 and 255 at the same time. A few hundred entangled qubits would be enough to represent more numbers than there are atoms in the universe...

The progress of Quantum players is spectacular. What was still recently considered as pure science fiction has become reality. As an example, Google announced in July of this year that a 70qubits version of Sycamore -Google Quantum processor- has been able to execute in a fraction of a second a calculation that the most powerful supercomputer would have done in 47 years.

Why is Cybersecurity impacted?

While Google's advancement is undeniably impressive, it is not without consequences. One of the most significant implications concerns cybersecurity. Indeed, the computational power of quantum computers could render many current encryption and authentication systems obsolete: payment networks, ID and passports, Internet protocols to name a few of our daily life.

Modern encryption systems rely on the complexity of mathematical calculations. The RSA encryption, widely used to secure online transactions, is based on the difficulty of factoring large numbers into their prime factors. For a classical computer, this task is extremely challenging and would take a considerable amount of time, thus making encryption secure. However, with a quantum computer like Sycamore, these calculations could be performed much more quickly. As a result, current encryption systems could be decrypted in a much shorter time.

In 1994, Peter Shor published an algorithm able to factorize a big integer into two prime numbers in polynomial time making the assumption of the existence of a quantum computer. This algorithm, not denied until now, is just waiting for the machine able to execute it.

Fully error-corrected quantum computers will become available and the threat level for current protocols will vary. Yet some widely used asymmetric security protocols are potentially vulnerable to quantum computing: In 2019, researchers published an article in which they explained how a powerful quantum computer could break RSA algorithm in 8 hours.

This is why SEALSQ started since 2018 to work on new generation of encryption systems capable to resist to the power of Quantum processors.

1. How Cyber Security players are preparing Post Quantum era

A NIST (the US National Institute of Standards and Technologies) published report from April 2016 cites experts that acknowledge the possibility of quantum technology to render the commonly used RSA algorithm insecure by 2030.

In December 2016 NIST initiated a standardization process by announcing a call for proposals of Post Quantum Cryptography (PQC): families of cryptographic algorithms including key establishment and digital signatures that ensures a conjectured security even against an attacker equipped with quantum computers.

The competition is now in its third round (out of four) and many algorithms have been discarded. NIST hopes to publish the standardization documents by 2024 or earlier.

For ANSSI (National Security Agency of France), PQC represents the most promising avenue to thwart the quantum threat.

To support a gradual transition to PQC, ANSSI encourages the following 3-phase roadmap:

- Phase 1 (today): hybridation to provide some additional post-quantum defense-in-depth to the pre-quantum security assurance.
- Phase 2 (not earlier than 2025): hybridation to provide post-quantum security assurance while avoiding any pre-quantum security regression.
- Phase 3 (probably not earlier than 2030): optional standalone post-quantum cryptography.

Accordingly, SEALSQ is preparing new generation of semiconductors chips capable to comply with PQC in the timeframe that government regulators and industry players have fixed.

2. SEALSQ Global Approach

SEALSQ partners with academic research and industry on several candidates for cryptography systems that will both withstand quantum computer capabilities, while still working with existing protocols.

We started our first experiments in 2018, when first PQC candidates of the NIST contest were released, and we contributed to the academic research with publications.

In 2023, in line with our DNA and with the vision of our company, we have launched a global program, for addressing all the aspects of a PQC offer, with the objective of a complete commercial launch in 2025.



- i) A new PQC compliant generation of a secure element, which will run a new RISC-V SEALSQ core.
- ii) A new embedded firmware stack compliant with the TCG (Trusted Computing Group)-TPM standard
- iii) A PQC compliant Root CA and Certificate Management System “as a Service” offer

Achievements

SEALSQ R&D team has already taken steps to run two of the Crystals Algorithms (Kyber and Dilithium) appointed by the NIST on the existing MS 6003 secure hardware platform. It is a major milestone to prove the feasibility of our roadmap, to benchmark our performances and to develop our attack bench that shall prove the resistance of our PQC platform against the state-of-the art corpus of cyber-attacks.

Challenges

PQC technology still needs to solve a few key challenges to become scalable and efficient from an economic standpoint. In particular, the integration of post-quantum cryptosystems on microcontrollers raises some questions and uncertainties such as:

- Lack of security proofs for some existing schemes
- Lack of side-channel attacks studies and countermeasures (especially with deep learning approach)
- Sizes of manipulated data much bigger than those on the cryptosystems in current use

The mission of SEAL SQ's Quantum Innovation team is to develop robust solutions, integrating specific countermeasures against side channel and deep learning attacks.

For that regards, SEALSQ is developing a partnership with a major Artificial Intelligence & Machine Learning industry player, that should create a breakthrough in secure semiconductor industry.

3 About SEALSQ

3.1 Company History

For the last 25 years, SEALSQ has been developing secure semiconductor chips, secure embedded firmware, and trusted hardware provisioning services to serve the vision of a safer connected world. SEALSQ is one of the very few Semiconductors companies in the world capable of developing certified secure microcontrollers and implementing post-quantum cryptography. From Motorola, to Atmel Secure Microcontroller, Inside Secure and now within the WISeKey group, SEALSQ teams have a long history of developing secure hardware, firmware and trust services for a wide variety of customers across multiple industries.



3.2 Core Domains: Semiconductors, PKI, and Post-Quantum Technology



Semiconductors: Thanks to our robust supply-chain, we have produced, provisioned, tested and delivered secure chips that have been installed into more than 1.6 Bn devices of all kind across the world. We serve customers in more than 40 countries across all industries from large Electronic equipment manufacturers to Luxury consumer brands, and we partner with the largest Integrators or cloud providers.

PKI & Trust Services: SEALSQ is one of the very few semiconductor companies that can not only provide the secure chips, but also provision them from factory, over the air, or on-premises with a secure and universally trusted digital identity. This identity can be created and managed throughout the device’s lifecycle using INeS, our PKI-as-a-Service. Very few players can offer today such a vertical value proposition covering security from root-of-trust to cloud and from birth to end for any connected device.

Innovation & Post Quantum: Throughout a quarter-century of operation, our company has filed over 130 patent applications. Our commitment to innovation, however, doesn't end there. Our dedicated research engineers are now designing and implementing post-quantum algorithms for our secure chips, to face the latest threats brought by Quantum Technology and Deep Learning together.



3.3 Range of Semiconductors, PKI and Provisioning Services

Semiconductors

SEALSQ develops and offers a comprehensive range of secure elements, smart card reader chips and secure open ARM platforms offering the most advanced standards of security, including Quantum-Proof cryptography.

VaultIC Secure Elements are a family of FIPS and CC certified tamper resistant secure microcontrollers with an embedded firmware that provide configurable cryptographic services

for authentication, data confidentiality and integrity check. VaultIC offers a wide bundle of standard NIST-recommended algorithms, a certified hardware-based true RNG and on-chip data storage. Its rich complementary software environment and development tool-kit makes it the perfect choice to implement security in an efficient and easy design process for any kind of device.

The MicroXSafe secure ARM platforms family features a powerful tamper resistant CCEAL5+ certified secure microcontroller platform built on a renowned ARM core. It offers high flexibility and fast time-to-market and is ideal to power secure data storage devices, FIDO USB-tokens or Crypto Wallets. This is the first platform that SEALSQ is using to run the NIST Post Quantum algorithms and develop the next generation of Quantum-ready secure elements.

SEALSQ Smart Card Reader chips product family features hardware platforms alone or with integrated third-party applications, enabling a quick design for smart card readers without custom development. Our Smart Card Reader chips are EMV-CO compliant and equipped with DC/DC for a wide compatibility. They have been long adopted by the Smart Card Reader industry's leading OEMs like HID (Assa Abloy), or IDENTIV who leverage these chips' unique capabilities to combine outstanding product performance with fast time to market.

PKI

SEALSQ PKI-as-a-Service allows IoT device manufacturers to generate, in virtually no time, certificates that will identify their devices as part of a trusted ecosystem, enabling security, interoperability and simple onboarding for end-users. Setting up a Certificate Authority is costly and time consuming. SEALSQ manages that complexity for the customers so they can focus on product innovation and sales, and improve cost efficiency and scalability for their business.

SEALSQ supports multiple types of use-cases and certificate types, allowing customers to provision unique identities to encrypt communications and authenticate devices with IoT platforms, applications, and other devices. Our platform provides the right tools to adjust the certificate characteristics to customer's needs, for instance X509 certificate, Matter certificate, Wi-SUN certificate, GSMA certificate.



INeS, our managed PKI service is able to offer both factory provisioning and cloud-based field provisioning, and can be accessed via a secure web interface or API to better integrate the certificate management in any business process. In the cases a Managed PKI is not a suitable option, SEALSQ also supports on-premises or hybrid deployments, ensuring that the platform is fully in-line with customer's security and operational requirements.

4. Management Discussion & Analysis

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.

On January 1, 2023, SEALSQ acquired WISeKey Semiconductors SAS and its affiliates to form a listed group specialized in semiconductors. SEALSQ listed on the Nasdaq Global Market on May 23, 2023 under the ticker LAES.

The acquisition on January 1, 2023, was accounted for as a reverse acquisition in line with ASC 805-40 "Reverse Acquisitions", whereby the consolidated financial statements are issued by the legal parent, SEALSQ, but are considered to be the continuation of the financial statements of the legal subsidiary, WISeKey Semiconductors SAS.

Therefore, the following discussion and analysis refer to the consolidated financial statements of SEALSQ for the six months ended June 30, 2023 ("H1 2023") and to the consolidated financial statements of WISeKey Semiconductors SAS, SEALSQ Corp. predecessor, for the six months ended June 30, 2022 ("H1 2022").

4.1 H1 2023 Key Financial Milestones

The key highlights of the six months ended June 30, 2023 are:

- **38% Revenue growth:** increase in revenue to \$14.8 million in H1 2023, compared to \$10.7 million in H1 2022.
- **63% Increase in Gross Profit margin:** reaching 52.8% in H1 2023 compared to 44.7% in H1 2022.
- **Increase in profitability-** the Group's operating loss decreased from 0.4 million in H1 2022 down to \$0.3 million and breakeven EBITDA in H1 2023, despite higher G&A expenses in relation to the spin-off and Nasdaq listing.
- **Investments in R&D for the development of our post-quantum chip and next generations:** we continue to support our R&D work with \$1.5 million invested in R&D during H1 2023.

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

US GAAP (Million US\$)	H1 2023	H1 2022
Net sales	14.8	10.7
Gross profit	7.8	4.8
Operating income / (loss) as reported	(0.3)	(0.4)
Net income / (loss) as reported	(0.9)	(0.2)
Non-GAAP (Million US\$)		
EBITDA	-	(0.2)
Adjusted net income / (loss)	(0.2)	(0.2)

4.2 Discussion & Analysis

Revenue

SEALSQ revenue for H1 2023 was \$14.8 million, compared to \$10.7 million in H1 2022, which represents a staggering 38% increase year on year. This 38% increase in revenue is due to the higher demand for semiconductors following the shortages in the industry triggered by the Covid pandemic over the last few years.

Now that the supply chain is back to normal, we expect competitiveness to increase in the semiconductors industry as customers are no longer limited by supply shortages and can diversify their product sources.

We anticipate that the revenue increase rate over the full year 2023 will remain strong, over 20%, albeit not reaching the level of H1 2023 due to customers initiating their transition towards our new product generation.

Revenue by region

Our operations are global in scope, and we generate revenue from selling our products and services across various regions. Our operations in North America now contribute the largest part of our revenues (57%), whilst our European market remains a strong contributor with EMEA accounting for 30% of our revenue. Our focus remains on these two regions, and we continue building our sales and marketing team in these areas.

Our revenue by geographic region for the six months ended June 30, 2023 and 2022 is set forth in the following table:

Net sales by region USD'000	6 months ended June 30,			
	2023 (unaudited)		2022 (unaudited)	
North America	8,374	57%	6,937	65%
Europe, Middle East and Africa	4,421	30%	2,053	19%
Asia Pacific	1,956	13%	1,616	15%
Latin America	-	0%	50	1%
Total net sales	14,751		10,656	

Strong demand for our IoT products in 2023

In 2022, the Group started the implementation of a significant investment plan to increase its production capacity in response to customers' expectations. We anticipate that this will bear fruits in 2023 with a year-on-year increase in net sales by over 20%.

Beyond 2023

The Groups' parent, WISeKey has started the launch of the WISeSat picosatellites constellation which will enable the direct connection of satellites to IoT devices for authentication, completing the connection cycle from space to device through secure

telecommunication means. Management expects that this will lead to a new revenue stream for SEALSQ. This technology allows for identification in remote, low connectivity areas, and will rely on our semiconductors' technology.

SEALSQ's R&D investment in post-quantum resistant technology is also expected to generate new revenue from next generation semiconductors starting in 2025/2026.

However, management expects 2024 to be a transition year where the focus of customer demand will shift to the next generation of products, which is likely to impair SEALSQ's growth temporarily in 2024 before full production of the next generation products starts in 2025/2026.

Gross Profit

Our gross profit margin increased by 8 percentage points from 45% in H1 2022 to 53% in H1 2023, whilst growth profit increased by 63% to \$7.8 million in H1 2023, in comparison with a gross profit of \$4.8 million in H1 2022. These good results are closely linked to the 38% year-on-year increase in revenue between H1 2022 and H1 2023, and our ability to update our pricing strategy to absorb the higher purchase costs caused by the shortage in semiconductor that impacted our inventory in 2022.

However, with the semiconductor supply chain back to full capacity, we expect that competitiveness will increase and our gross margin will stabilize to pre-Covid levels as customers will no longer be willing to pay a premium to secure their order and circumvent any shortages.

Operating Results and EBITDA

SEALSQ's operating loss decreased from \$0.4 million in H1 2022 to \$0.3 million in H1 2023 despite one-off listing-related expenses of \$0.4 million incurred in H1 2023 and expenses in relation to the newly created Board and management services following the listing of the Group on the Nasdaq.

SEALSQ was EBITDA breakeven in H1 2023 compared with a negative EBITDA of \$0.2 million in H1 2022.

We expect that our operating expenses will increase in future periods as our strategy includes:

- the strengthening of our sales and marketing team to expand our customer base both through new industries and geographically;
- a capital expenditure investment plan over five years started in 2022, aiming to increase our production capacity; and
- our R&D investment in relation to the QUASARS project for the next generation, post-quantum semiconductors.

Net Results

The net loss of \$0.9 million for H1 2023 is largely related to non-cash and/or one-off factors including listing-related expenses of \$0.4 million, deferred tax utilization of \$0.3 million and a depreciation expense of \$0.3 million.

When these factors are excluded, the Group shows an adjusted net loss of \$0.2 million for the half years to June 30, 2023 and 2022, close to breakeven.

Liquidity and Capital Resources

Cash and cash equivalents at June 30, 2023 was \$1.9 million, compared to \$4.1 million at December 31, 2022. The most significant sources of funding of the Group are customer sales, research tax credits provided by the French government and loans extended by WISeKey. We anticipate that the listing of SEALSQ on the Nasdaq will allow to Group to finance its growth strategy.

4.3 Consolidated Income Statement of SEALSQ Corp.

USD'000	Unaudited 6 months ended June 30,		Year-on-Year Variance
	2023	2022	
Net sales	14,751	10,656	4,095
Cost of sales	(6,760)	(6,130)	(630)
Depreciation of production assets	(201)	240	(441)
Gross profit	7,790	4,766	3,024
Other operating income	9	4	5
Research & development expenses	(1,492)	(1,161)	(331)
Selling & marketing expenses	(2,441)	(1,970)	(471)
General & administrative expenses	(4,145)	(2,022)	(2,123)
Total operating expenses	(8,069)	(5,149)	(2,920)
Operating loss	(279)	(383)	104
Non-operating income	180	469	(289)
Interest and amortization of debt discount	(143)	(155)	12
Non-operating expenses	(313)	(113)	(200)
Loss before income tax expense	(555)	(182)	(373)
Income tax income (expense)	(320)	(1)	(319)
Net loss	(875)	(183)	(692)

4.4 Outlook for the Full Year 2023 and Beyond

In the second half of 2023, management expects revenue to remain at a similar level as H1 2023, with a full year 2023 revenue increase of over 20% compared to full year 2022.

The Group has taken several initiatives to continue growing revenue and strengthen net results.

These initiatives include:

- Enabling companies to quickly and easily get access to **Device Attestation Certificates (DACs)**. The service is provided by INeS, our managed “PKI as a Service” platform without the necessity to invest and to deploy any hardware infrastructure. Each manufacturer using the platform can manage the security lifecycle of certificates and devices in their own dedicated, cloud-based application. We will also be offering our complete range of FIPS Certified Secure Elements with pre-provisioning of keys and DACs ready for authentication **under Matter Protocol**. This strong value proposition will enable smart home device manufacturers to achieve faster time to market through cost effective and simplified design processes when designing **Matter compliant smart home products**.
- The development of the **QUASARS project**.
- Planned investment in new equipment to **increase the production volume of semiconductors**.
- The use of our technology with the **WISESaT PocketQube Satellite constellation** to be deployed.
- **The strengthening of our Sales and Marketing team** through new distribution partnerships.

However, management expects 2024 to be a transition year where the focus of customer demand will shift to the next generation of products, which is likely to impair SEALSQ’s growth temporarily in 2024 before full production of the next generation products starts in 2025/2026.

4.5 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 - SEALSQ Corp.

Financial Reconciliation of GAAP to non-GAAP Results (unaudited) (Million US\$)	6 months to June 30, 2023	6 months to June 30, 2022
Operating income/(loss) as reported	(0.3)	(0.4)
Non-GAAP adjustments		
Depreciation expense	0.3	0.2
EBITDA	-	(0.2)
Net income/(loss) attributable to SEALSQ as reported	(0.9)	(0.2)
Non-GAAP adjustments:		
Depreciation expense	0.3	-
Listing-related professional fees	0.4	-
Adjusted net income/(loss) attributable to SEALSQ	(0.2)	(0.2)

5 Operational Updates

5.1 Product Releases and Updates

Matter Protocol, defined by the Connectivity Standard Alliance (CSA) has quickly become the leading standard adopted by most IoT device manufacturers and platforms. SEALSQ announced in Q1 that INeS, its PKI as-a-Service tool, is now Delivering Matter compliant certificates: The managed PKI platform allows any device maker to generate and manage Matter DAC throughout the device's lifecycle using a convenient and powerful interface.

The company also releases this year a brand-new chip for IoT: VaultIC292. It is a cost effective ready-to-use secure microcontroller designed to bring a robust identity to a device, essential for applications such as creating a secure connection to a cloud or a local network using TLS protocol, or authenticating a USB-C device. As part of SEALSQ's unique value proposition, this secure element can be pre-provisioned from factory or over-the-air with private keys and X509 certificates compliant with protocols such as MATTER, Wi-SUN or OPC for seamless authentication as well as commissioning with Microsoft AZURE or AWS Clouds.

The combination of VAULTIC292 and Matter pre-provisioned certificates has been received with a very high interest on the market, and the company is already discussing the first contracts with lead customers in Asia and the US.

5.2 Market Penetration and Expansion



H1 involved successful initiatives to both expand into new verticals with lead customers in Markets like Electric Vehicle charging, and developing its distribution network on key Geographies.

SEALSQ has indeed implemented an innovative solution for secure and seamless Electric Vehicle (EV) charging. This state-of-the-art solution showcases WISeKey and SEALSQ's unique capability to seamlessly integrate PKI, Certified Semiconductors and Provisioning Services in a single security offering, which is already being evaluated and implemented in the field by major players in the EV Charging segment in Europe. The solution involves a VAULTIC secure element, provisioned with a trusted identity that is managed through the INeS Managed PKI as-a-Service portal and offers end-users the ability to perform secure authentication and trusted, encrypted data exchange between EV, Station, Network and Service providers.

From a Geographic point of view, In the USA the company has signed-off no less than 4 new agreements with leading and specialized Sales Representative or Distribution companies, among which a global distribution agreement with SYMMETRY, a renowned player in semiconductor distribution. SEALSQ has thus created a very strong backbone to support its growth and promote its new products and brand name across all the US market. In addition, SEALSQ has also signed agreements in H1 with specialized companies to cover South Africa, Israël and India Markets, enhancing its global reach.

In our unwavering pursuit of global reach and excellence, this year marked a significant step for SEALSQ as we expanded our operations into the USA and Asia. After meticulous market analysis, we established regional offices in strategic locations across these regions. Our focus on fostering local connections was further emphasized by our targeted recruitment drives in Taiwan and the USA, drawing from the regions' rich talent pools. We've onboarded and trained new hires to align with SEALSQ's standards, ensuring consistency in our offerings worldwide. Additionally, we've nurtured key local partnerships with businesses and academic institutions to solidify our presence and tap into regional expertise. With continuous feedback mechanisms, we are maintaining our agility and commitment to excellence, setting the stage for further growth in the upcoming years.

5.3 Partnerships and Collaborations



APSIDE

SEALSQ was selected by Apside, an IT consulting and engineering company, to supply IoT PKI solutions to Apside's clients in EMEA. Apside is committed to leverage its strong expertise in cybersecurity solutions to bring SEALSQ's unique PKI Certificate Management Solutions to a large existing customer database. SEALSQ's PKI IoT solutions will be integrated into the IT security systems of Apside's customers. Apside will address all use cases in IoT market including standards and protocols requiring a certified root Certificate Authority such as Matter and Wi-Sun. Apside will resell SEALSQ INeS Certificate Management System (CMS)

dedicated to PKI IoT and provide first level of support to its customers. The unique combination of SEALSQ INeS CMS and Apside expertise in cybersecurity will speed up the adoption by OEMs of best practices in managing device identity lifecycle.

GSMA

SEALSQ will also start providing its Security Services to GSMA members, as a GSMA Root Certificate Issuer (GSMA Root CI) in the context of eSIM Technology. WISEKey's Root Certificate Authority (CA) has been approved by GSMA to deliver the new PKI version 3 Certificates described in SGP.22 v3.0 and SGP.14 v2.1.

SEALSQ Corp as WISEKey's subsidiary will enable companies to quickly and easily access Certificates compliant with the new version 3. The service is provided by INeS, the managed "PKI as a Service" platform without the necessity to invest and/or to deploy any hardware infrastructure.

This strong value proposition will enable not only eUICC manufacturers, but also SM-DP+/SM-DS Service Providers, to optimize time to market through cost effective and simplified design processes when requesting GSMA PKI Certificates to WISEKey's Root Certificate Authority.

5.4 Upcoming Launches and Roadmap

The H2 Roadmap is very rich: it features the release of another IoT chip the VAULTIC408. It is FIPS 140.3 and CCEAL5+ certified to respond to the needs of regulated IoT markets like Smart Energy, where SEALSQ has already an established footprint. It comes thus, to fulfill several existing and new customers' expectations and has a strong forecasted order pipeline.

On the Service side, SEALSQ PKI as a service will be launching a Zero-Touch Provisioning feature.

Zero Touch provisioning is an automatic and secure way to onboard devices in any IoT cloud platform that uses X.509 authentication technology.

Zero Touch Provisioning (ZTP) supports X. 509 standard as the format of public-key certificates and so any platform supporting it, is compatible with this service. Amazon Web Services (AWS), Microsoft Azure are some example platforms fully supported by ZTP.

The solution provides an out-of-the-box, simple and cost-effective way to provision over-the-air and **securely** digital certificates and private key in the device, thus significantly minimizing the operational burden and simplifying the supply chain and connection to the IoT platform.

6. Corporate Responsibility and Sustainability

6.1 Environmental Initiatives

SEALSQ implements an Environmental Management System based on sustainable development values that represents a strong commitment to environment protection. It means strict supplier selection, internal workplace policies that focus on recycling and saving raw materials, but also several projects implemented with partners to protect the environment and wildlife. The group has been awarded the 2021 Ecovadis bronze medal and is running for the ISO 14001 environmental certification this year.

6.2 Employee Well-being and Development



SEALSQ aims to foster a secure and motivating workplace that prioritizes employee well-being and work-life balance to help them reach their full potential. Our engineering offices are located in the heart of the French Silicon Valley, in “Provence” and many employees around the globe are working from their homes. Our culture is based on quick decision making facilitated by a flat, human-sized structure and mutual trust. Our HR policy strives to recognize individual contributions as well as team performances. Salaries are fair, competitive and based on objective criteria, adjusted to meet international market standards.

7. Conclusion and Outlook for H2 2023

SEALSQ continues to uphold its steadfast dedication to excellence, pushing the boundaries of innovation, and ensuring top-tier security in all its undertakings. As we navigate forward into the rapidly evolving future, our primary concentration revolves around providing unparalleled quantum solutions. These solutions are crafted not just to align with industry benchmarks but to transcend them, setting new standards and consistently surpassing the anticipations of our clients and partners. This dedication underscores our unwavering commitment to lead the sector and serve as a beacon of innovation and trust in the quantum realm.

8. SEALSQ Half Year Report - H1 2023

Condensed Consolidated Financial Statements

of SEALSQ Corp.

(unaudited)

As at June 30, 2023

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1. Condensed Consolidated Statements of Comprehensive Income/(Loss)

USD'000	Unaudited 6 months ended June 30,		Note ref.
	2023	2022	
Net sales	14,751	10,656	24
Cost of sales	(6,760)	(6,130)	
Depreciation of production assets	(201)	240	
Gross profit	7,790	4,766	
Other operating income	9	4	25
Research & development expenses	(1,492)	(1,161)	
Selling & marketing expenses	(2,441)	(1,970)	
General & administrative expenses	(4,145)	(2,022)	
Total operating expenses	(8,069)	(5,149)	
Operating loss	(279)	(383)	
Non-operating income	180	469	26
Interest and amortization of debt discount	(143)	(155)	19
Non-operating expenses	(313)	(113)	27
Loss before income tax expense	(555)	(182)	
Income tax income (expense)	(320)	(1)	
Net loss	(875)	(183)	
Earnings per ordinary share (USD)			
Basic	(0.06)	(0.01)	29
Diluted	(0.06)	(0.01)	29
Earnings per F share (USD)			
Basic	(0.29)	(0.06)	29
Diluted	(0.29)	(0.06)	29
Other comprehensive income / (loss), net of tax:			
Foreign currency translation adjustments	(4)	(9)	
Defined benefit pension plans:			20
Net gain (loss) arising during period	-	-	
Other comprehensive loss	(4)	(9)	
Comprehensive loss	(879)	(192)	

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

2. Condensed Consolidated Balance Sheets

USD'000, "except par value"	As at June 30, 2023 (unaudited)	As at December 31, 2022	Note ref.
ASSETS			
Current assets			
Cash and cash equivalents	1,860	4,057	8
Accounts receivable, net of allowance for doubtful accounts	3,471	2,219	9
Inventories	9,334	7,510	10
Prepaid expenses	925	394	
Other current assets	773	1,252	11
Total current assets	16,363	15,432	
Noncurrent assets			
Deferred income tax assets	2,977	3,296	
Deferred tax credits	1,180	692	12
Property, plant and equipment net of accumulated depreciation	2,181	782	13
Intangible assets, net of accumulated amortization	-	1	14
Operating lease right-of-use assets	1,294	1,379	15
Other noncurrent assets	82	77	16
Total noncurrent assets	7,714	6,227	
TOTAL ASSETS	24,077	21,659	
LIABILITIES			
Current Liabilities			
Accounts payable	9,018	6,735	17
Indebtedness to related parties, current	-	3,374	19
Current portion of obligations under operating lease liabilities	353	324	15
Income tax payable	45	47	
Other current liabilities	225	148	18
Total current liabilities	9,641	10,628	
Noncurrent liabilities			
Bonds, mortgages and other long-term debt	1,577	1,489	20
Operating lease liabilities, noncurrent	889	988	15
Indebtedness to related parties, noncurrent	12,186	7,946	19
Employee benefit plan obligation	429	396	21
Total noncurrent liabilities	15,081	10,819	
TOTAL LIABILITIES	24,722	21,447	
Commitments and contingent liabilities			22
SHAREHOLDERS' EQUITY			
Ordinary stock	75	75	23
Par value - USD 0.01			
Authorized - 200,000,000 and 200,000,000			
Issued and outstanding - 7,501,500 and 7,501,400 shares			
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	16,752	16,731	
Accumulated other comprehensive income / (loss)	771	775	
Accumulated deficit	(18,318)	(17,444)	
Total shareholders' equity	(645)	212	
TOTAL LIABILITIES AND EQUITY	24,077	21,659	

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

3. Condensed Consolidated Statements of Changes in Shareholders' Equity

Unaudited 6 months ended June 30,							
USD'000 (except for 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)
As at December 31, 2021	6,610,293	1,499,700	141	8,889	(23,214)	621	(13,563)
Indebtedness to related parties	-	-	-	149	-	-	149
Comprehensive income / (loss)	-	-	-	-	(183)	(9)	(192)
As at June 30, 2022	6,610,293	1,499,700	141	9,038	(23,397)	612	(13,606)
As at December 31, 2022	7,501,400	1,499,700	150	16,731	(17,444)	775 (a)	212
Reverse recapitalization	100	-	-	(188)	-	-	(188)
Indebtedness to related parties	-	-	-	209	-	-	209
Comprehensive income / (loss)	-	-	-	-	(874) (a)	(4)	(878)
As at June 30, 2023	7,501,500	1,499,700	150	16,752	(18,318)	771	(645)

(a) Adjusted for rounding

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

4. Condensed Consolidated Statements of Cash Flows

USD'000	Unaudited 6 months ended June 30,	
	2023	2022
Cash Flows from operating activities:		
Net Income (loss)	(875)	(183)
Adjustments to reconcile net income to net cash provided by (used in) operating activities:		
Depreciation of property, plant & equipment	273	198
Amortization of intangible assets	1	2
Interest and amortization of debt discount	143	155
Inventory obsolescence impairment	257	(240)
Income tax expense / (recovery) net of cash paid	320	1
Changes in operating assets and liabilities, net of effects of businesses acquired		
Decrease (increase) in accounts receivables	(1,252)	(766)
Decrease (increase) in inventories	(2,081)	(1,479)
Decrease (increase) in other current assets and prepaids, net	(52)	(539)
Decrease (increase) in deferred research & development tax credits, net	(488)	(224)
Decrease (increase) in other noncurrent assets, net	(5)	7
Increase (decrease) in accounts payable	2,095	531
Increase (decrease) in income taxes payable	(2)	(3)
Increase (decrease) in other current liabilities	77	(95)
Increase (decrease) in defined benefit pension liability	33	13
Net cash provided by (used in) operating activities	(1,556)	(2,622)
Cash Flows from investing activities:		
Sale / (acquisition) of property, plant and equipment	(1,677)	(132)
Net cash provided by (used in) investing activities	(1,677)	(132)
Cash Flows from financing activities:		
Proceeds from debt	209	2,562
Increase (decrease) in indebtedness to related parties, noncurrent, net of cash proceeds from debt	658	-
Net cash provided by (used in) financing activities	867	2,562
Effect of exchange rate changes on cash and cash equivalents	169	130
Cash and cash equivalents		
Net increase (decrease) during the period	(2,197)	(62)
Balance, beginning of period	4,057	2,064
Cash and cash equivalents balance, end of period	1,860	2,002
Supplemental cash flow information		
Cash paid for incomes taxes	-	-
ROU assets obtained from operating lease	65	29

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

5. Notes to the Condensed 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, 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 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. As further described in the notes below, the acquisition qualified as a reverse recapitalization.

SEALSQ designs, develops and markets secure semiconductors worldwide as a fabless manufacturer. It provides added security and authentication layers on its semiconductors which can be tailored to customers’ needs. As an advanced chip designer, the Group holds the intellectual property (IP) for the semiconductors it sells.

SEALSQ is also accredited as a Product Attestation Authority (PAA) and, as such, can issue MATTER Device Attestation Certificates (DAC).

The Group anticipates being able to generate profits in the near future thanks to the increased focus on the security and authentication of IT components and networks.

Note 2. Future operations and going concern

The Group recorded a loss from operations in this reporting period and the accompanying condensed 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 0.3 million in the six months ended June 30, 2023 and had positive working capital of USD 6.7 million as at June 30, 2023, calculated as the difference between current assets and current liabilities. Based on the Group’s cash projections up to September 30, 2024, 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, 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 condensed 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.

These unaudited condensed consolidated financial statements should be read in conjunction with the consolidated financial statements and notes thereto included in the Group’s annual financial statements for the year ended December 31, 2022, as filed in the 20-F on June 27, 2023.

The Group’s interim period results do not necessarily indicate the results that may be expected for any other interim period or for the full fiscal year. The significant accounting policies applied in the annual consolidated financial statements of the Group as of December 31, 2022, contained in the Group’s Annual Report have been applied consistently in these unaudited condensed consolidated financial statements.

Reverse Acquisition

On January 1, 2023, SEALSQ Corp., then a so-called empty shell private company with no operating activities that was not considered a business under US GAAP standards, acquired WISeKey Semiconductors SAS, a private operating company. Before this acquisition, both companies were wholly owned by WISeKey International Holding AG (“WISeKey”). This transaction being a capital transaction in substance, it qualifies as a reverse acquisition that is considered a recapitalization whereby SEALSQ Corp. is the legal acquirer and accounting acquiree, whereas WISeKey Semiconductors SAS is the legal acquiree and accounting acquirer. In accordance with ASC 805-40 (Reverse acquisition), the condensed consolidated financial statements are therefore issued by the legal parent, SEALSQ Corp., but are considered to be the continuation of the financial statements of the legal subsidiary, WISeKey Semiconductors SAS.

Comparative information in SEALSQ’s condensed consolidated financial statements relates to WISeKey Semiconductors SAS and not to the non-operating SEALSQ Corp. until the date of the transaction. The assets and liabilities of the accounting acquiree, SEALSQ Corp., have been consolidated from January 1, 2023. No goodwill arose as a result of the transaction. The consolidated statement of comprehensive losses includes the results of SEALSQ Corp. from January 1, 2023.

The newly formed company was then listed on the Nasdaq Global Market on May 23, 2023 through a spin-off by WISeKey of 20% of the ordinary share capital.

Note 4. Summary of significant accounting policies***Fiscal Year***

The Group's fiscal year ends on December 31.

Principles of Consolidation

The condensed 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 condensed 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 condensed 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.

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 Doubtful Accounts

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 write-downs on inventory based on an analysis of 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 5 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. Each period we evaluate the estimated remaining useful lives of intangible assets and whether events or changes in circumstances require a revision to the remaining periods of amortization or that an impairment review be carried out.

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. Assets under finance leases and their accumulated amortization are disclosed separately in the notes. Operating and finance lease assets and operating and finance 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 license to the Global Cryptographic ROOT Key, the global Certification authorities as well as the digital certificates for people, servers and objects, expenses related to the preparation of our secure elements and the technical support provided on the Group's ongoing production and on the ramp-up phase, 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 six months ended June 30, 2023, the Group maintained one defined benefit post retirement plans covering the French employees of WISeKey Semiconductors 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).

Income Taxes

Taxes on income are accrued in the same period as the revenues 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 50 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.

Research Tax Credits

Research tax credits are provided by the French government to give incentives for companies to perform technical and scientific research. WISeKey Semiconductors 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 credits are included in noncurrent deferred tax credits in the balance sheet in line with ASU 2015-17.

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 and Class F common stock (collectively, the “common stock”) differ. The dividend rights of a Class 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

Our chief operating decision maker, who is also our Chief Executive Officer, regularly reviews information related to one operating segment, secure microcontrollers, for purposes of allocating resources and assessing budgets and performance. We report our financial performance based on this segment structure described in Note 28.

Recent Accounting Pronouncements

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

As of January 1, 2023, the Group adopted Accounting Standards Update (ASU) 2021-08, Business Combinations (topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers.

ASU 2021-08 amends ASC 805 to “require acquiring entities to apply Topic 606 to recognize and measure contract assets and contract liabilities in a business combination.” Under current GAAP, an acquirer generally recognizes such items at fair value on the acquisition date. ASU 2021-08 requires contract assets and contract liabilities acquired in a business combination to be recognized and measured by the acquirer on the acquisition date in accordance with ASC 606 (meaning the acquirer should assume it has entered the original contract at the same date and using the same terms as the acquiree). This new ASU applies to contract assets and contract liabilities acquired in a business combination and to other contracts that directly/indirectly apply the requirements of ASC 606.

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 March 2023, The FASB issued ASU No. 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.

Summary: The amendments allow a private company to elect to account for a common control leasing arrangement using the written terms and conditions without having to determine if those terms and conditions are legally enforceable. If the terms of the arrangement are not in writing, then the entity would apply existing guidance to determine the legally enforceable terms and conditions of the arrangement. The amendments also require 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.

Effective Date: ASU 2023-01 is effective for public business entities for fiscal years beginning after December 15, 2023, including interim periods within those fiscal years. An entity should apply the amendments prospectively to business combinations occurring on or after the effective dates. 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 June 2023, The FASB issued ASU No. 2023-03, Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions,” which clarifies how the fair value of equity securities subject to contractual sale restrictions is determined.

Summary: The ASU clarifies that a contractual sale restriction should not be considered in measuring fair value. It also requires entities with investments in equity securities subject to contractual sale restrictions to disclose certain qualitative and quantitative information about such securities.

Effective Date: ASU 2023-03 is effective for public business entities for fiscal years beginning after December 15, 2023, including interim periods within those fiscal years. An entity should apply the amendments prospectively to business combinations occurring on or after the effective dates. 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 is held with large financial institutions. Management believes that the financial institutions that hold our investments are financially sound and accordingly, are subject to minimal credit risk. Deposits held with banks may exceed the amount of insurance provided on such deposits.

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 were 10% or higher than the respective total consolidated net sales for the 6 months to June 30, 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 June 30, 2023 and December 31, 2022. 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)		Receivables concentration (% of total accounts receivable)	
	6 months ended June 30,		As at June 30,	As at December 31,
	2023 (unaudited)	2022 (unaudited)	2023 (unaudited)	2022
Multinational electronics contract manufacturing company	22%	20%	39%	34%
International digital security company	12%	0%	8%	6%
Multinational technology company	4%	0%	16%	0%
International equipment and software manufacturer	3%	5%	1%	12%
International equipment and product manufacturer	2%	11%	0%	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.

USD'000	As at June 30, 2023 (unaudited)		As at December 31, 2022		Fair value level	Note ref.
	Carrying amount	Fair value	Carrying amount	Fair value		
<i>Nonrecurring fair value measurements</i>						
Accounts receivable	3,471	3,471	2,219	2,219	3	9
Accounts payable	9,018	9,018	6,735	6,735	3	17
Indebtedness to related parties, current	-	-	3,374	3,374	3	19
Bonds, mortgages and other long-term debt	1,577	1,577	1,489	1,489	3	20
Indebtedness to related parties, noncurrent	12,186	12,186	7,946	7,946	3	19

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.
- Indebtedness to related parties, current – carrying amount approximated fair value.
- Bonds, mortgages and other long-term debt - carrying amount approximated fair value.
- Indebtedness to related parties, noncurrent - carrying amount approximated fair value.

Note 7. Business combination

Reverse Acquisition

On January 1, 2023, SEALSQ Corp., then a so-called empty shell private company with no operating activities that was not considered a business under US GAAP standards, acquired WISEKey Semiconductors SAS, a private operating company. Before this acquisition, both companies were wholly owned by WISEKey. This transaction being a capital transaction in substance, it qualifies as a reverse acquisition that is considered a recapitalization whereby SEALSQ Corp. is the legal acquirer and accounting acquiree, whereas WISEKey Semiconductors SAS is the legal acquiree and accounting acquirer. In accordance with ASC 805-40 (Reverse acquisition), the condensed consolidated financial statements are therefore issued by the legal parent, SEALSQ Corp., but are considered to be the continuation of the financial statements of the legal subsidiary, WISEKey Semiconductors SAS.

In line with ASC 805-40, comparative information in SEALSQ's condensed consolidated financial statements relate to WISEKey Semiconductors SAS and not to the non-operating SEALSQ Corp. until the date of the transaction. The assets and liabilities of the accounting acquiree, SEALSQ Corp., have been consolidated from January 1, 2023. No goodwill arose as a result of the transaction. The consolidated statement of comprehensive losses includes the results of SEALSQ Corp. from January 1, 2023.

The major classes of assets and liabilities acquired by the accounting acquirer, WISEKey Semiconductors SAS, are as follows:

USD'000	As at December 31, 2022
ASSETS	
TOTAL ASSETS	-
LIABILITIES	
Indebtedness to related parties, current	188
Total current liabilities	188
TOTAL LIABILITIES	188
Commitments and contingent liabilities	
SHAREHOLDERS' EQUITY	
Common stock	-
USD 0.00 par value	
Authorized, issued and outstanding - 100 shares	
Additional paid-in capital	-
Accumulated deficit	(188)
Total shareholders' equity	(188)
TOTAL LIABILITIES AND EQUITY	-

The reverse acquisition resulted in a net debit adjustment to total stock equity of USD 188,027 corresponding to the net assets acquired.

Note 8. Cash and cash equivalents

Cash consists of deposits held at major banks.

Note 9. Accounts receivable

The breakdown of the accounts receivable balance is detailed below:

USD'000	As at June 30, 2023 (unaudited)	As at December 31, 2022
Trade accounts receivable	3,520	2,269
Allowance for doubtful accounts	(50)	(50)
Accounts receivable from underwriters, promoters, and employees	1	-
Total accounts receivable net of allowance for doubtful accounts	3,471	2,219

Note 10. Inventories

Inventories consisted of the following:

USD'000	As at June 30, 2023 (unaudited)	As at December 31, 2022
Raw materials	3,182	4,523
Work in progress	6,152	2,987
Total inventories	9,334	7,510

Note 11. Other current assets

Other current assets consisted of the following:

USD'000	As at June 30, 2023 (unaudited)	As at December 31, 2022
Value-Added Tax Receivable	315	224
Advanced payment to suppliers	454	1,025
Deposits, current	4	3
Total other current assets	773	1,252

Note 12. Deferred tax credits

WISeKey Semiconductors SAS is eligible for research tax credits provided by the French government (see Note 4 Summary of significant accounting policies). As at June 30, 2023 and December 31, 2022, the receivable balances in respect of these research tax credits owed to the Group were respectively USD 1,179,981 and USD 692,314. 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.

Note 13. Property, plant and equipment

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

USD'000	As at June 30, 2023 (unaudited)	As at December 31, 2022
Machinery & equipment	11,961	10,410
Office equipment and furniture	2,320	2,320
Computer equipment and licences	681	558
Total property, plant and equipment gross	14,962	13,288
<i>Accumulated depreciation for:</i>		
Machinery & equipment	(10,075)	(9,985)
Office equipment and furniture	(2,189)	(2,028)
Computer equipment and licences	(517)	(493)
Total accumulated depreciation	(12,781)	(12,506)
Total property, plant and equipment, net	2,181	782
Depreciation charge for the 6 months to June 30,	273	198

In the six months ended June 30, 2023 and in 2022, 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 six months ended June 30, 2023 and in the year ended December 31, 2022.

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

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

Note 14. Intangible assets

Intangible assets and future amortization expenses consisted of the following:

USD'000	As at June 30, 2023 (unaudited)	As at December 31, 2022
<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)	(1,698)
Other intangibles	(923)	(923)
Total accumulated amortization	(4,903)	(4,902)
Total intangible assets subject to amortization, net	-	1
Total intangible assets, net	-	1
Amortization charge for the 6 months to June 30,	1	2

The useful economic life of intangible assets is as follow:

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

Note 15. Leases

The Group has historically entered into a number of lease arrangements under which it is the lessee. As at June 30, 2023, 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 six months ended June 30, 2023 and 2022 we recognized rent expenses associated with our leases as follows:

USD'000	6 months ended June 30,	
	2023 (unaudited)	2022 (unaudited)
<i>Operating lease cost:</i>		
Fixed rent expense	172	166
Short-term lease cost	-	-
Net lease cost	172	166
Lease cost - Cost of sales	-	-
Lease cost - General & administrative expenses	172	166
Net lease cost	172	166

In the six months ended June 30, 2023 and the year ended December 31, 2022, we had the following cash and non-cash activities associated with our leases:

USD'000	As at June 30, 2023 (unaudited)	As at December 31, 2022
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	161	328
Non-cash investing and financing activities :		
Net lease cost	172	332
<i>Additions to ROU assets obtained from:</i>		
New operating lease liabilities	65	56

The following table provides the details of right-of-use assets and lease liabilities as of June 30, 2023:

USD'000	As at June 30, 2023
Right-of-use assets:	
Operating leases	1,294
Total right-of-use assets	1,294
Lease liabilities:	
Operating leases	1,242
Total lease liabilities	1,242

As at June 30, 2023, 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	USD'000 Short-term	USD'000 Finance	USD'000 Total
2023	164	-	-	164
2024	318	-	-	318
2025	293	-	-	293
2026	289	-	-	289
2027 and beyond	447	-	-	447
Total future minimum operating and short-term lease payments	1,511	-	-	1,511
Less effects of discounting	(269)	-	-	(269)
Lease liabilities recognized	1,242	-	-	1,242

As of June 30, 2023 the weighted-average remaining lease term was 4.93 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 June 30, 2023 was 3.06%.

Note 16. 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 17. Accounts payable

The accounts payable balance consisted of the following:

USD'000	As at June 30, 2023 (unaudited)	As at December 31, 2022
Trade creditors	4,916	5,001
Accounts payable to shareholders	2,145	-
Accounts payable to underwriters, promoters, and employees	826	1,071
Other accounts payable	1,131	663
Total accounts payable	9,018	6,735

Accounts payable to shareholders consist of short-term payables due to WISeKey International Holding AG in relation to interest on outstanding loans and the recharge of management services (see Notes 19 and 31).

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.

Note 18. Other current liabilities

Other current liabilities consisted of the following:

USD'000	As at June 30, 2023 (unaudited)	As at December 31, 2022
Other tax payable	30	28
Customer contract liability, current	157	84
Other current liabilities	37	36
Total other current liabilities	224	148

Note 19. 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 AG 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 WISeKey Semiconductors 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. As at June 30, 2023, the full amount of EUR 5 million (USD 5,459,000) remained outstanding.

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 WISeKey Semiconductors 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. No gain was recorded.

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 June 30, 2023, the Group owed WISEKey and WISEKey's affiliates noncurrent debts in an aggregate amount of USD 12,375,515 and the unamortized effective interest balance was USD 189,110, hence a carrying value of USD 12,186,405 as at June 30, 2023, made up of loans and unpaid management fees. In the six months ended June 30, 2023, an aggregate effective interest expense of USD 54,981 was recorded in the income statement.

As at June 30, 2023, the Group also held an accounts payable balance of USD 2,145,262 with WISEKey in relation to interest on outstanding loans and the recharge of management services, classified as accounts payable to shareholders.

Note 20. Bonds, mortgages and other long-term debt

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 of June 30, 2023, SEALSQ has not repaid any amount. The Group recorded a debt discount amortization expense of USD 87,653 in the six months ended June 30, 2023.

As at June 30, 2023, the loan balance remains USD 2 million with an unamortized debt discount balance of USD 423,475, thus leaving a carrying value of USD 1,576,525.

Note 21. Employee benefit plans

Defined benefit post-retirement plan

As of June 30, 2023, the Group maintained one defined benefit post retirement plan for the employees of WISEKey Semiconductors 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 are the discount rate and the long-term rate of asset return (based on the market-related value of assets). The fair value of plan assets is determined based on prevailing market prices.

The defined benefit pension plan maintained by WISeKey Semiconductors 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.

The pension liability calculated as at June 30, 2023 is based on annual personnel costs and assumptions as of December 31, 2022.

The expected future cash flows to be paid by the Group for employer contribution for the year ended December 31, 2023, are USD 26,000.

Movement in Funded Status USD'000	6 months ended June 30,	
	2023	2022
Net Service cost	19	23
Interest cost/(credit)	7	2
Settlement / curtailment cost / (credit)	-	-
Total Net Periodic Benefit Cost/(credit)	26	25
Employer contributions paid in the period	(13)	(12)
Total Cashflow	(13)	(12)

Note 22. Commitments and contingencies

Lease commitments

The future payments due under leases are shown in Note 15.

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 condensed consolidated financial statements.

Note 23. Stockholders' equity

Stockholders' equity consisted of the following:

	SEALSQ Corp.		WISeKey Semiconductors SAS	
	As at June 30, 2023		As at December 31, 2022	
	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)	75,015	74,985	75,014	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	7,501,500	1,499,700	7,501,400	1,499,700
Total number of fully paid-in outstanding shares	7,501,500	1,499,700	7,501,400	1,499,700
Total share capital (in USD)	150,000		149,999	

On May 23, 2023, the ordinary shares of the SEALSQ Group were listed on the Nasdaq Global Market.

Note 24. Revenue***Nature of goods and services***

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

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.

Disaggregation of revenue

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

Disaggregation of revenue (unaudited) USD'000	Revenue recognized	At one point in time 6 months ended June 30,		Total 6 months ended June 30,	
		2023	2022	2023	2022
Secure Microcontrollers Segment					
Secure chips	Upon delivery	10,156	9,671	10,156	9,671
Total Secure Microcontrollers segment revenue		10,156	9,671	10,156	9,671
All Other Segment					
Secure chips	Upon delivery	4,595	985	4,595	985
Total All Other segment revenue		4,595	985	4,595	985
Total Revenue		14,751	10,656	14,751	10,656

For the six months ended June 30, 2023 and 2022, 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 (unaudited) USD'000	6 months ended June 30,	
	2023	2022
Secure Microcontrollers Segment		
France	31	90
Rest of EMEA	1,357	1,280
North America	7,956	6,937
Asia Pacific	812	1,314
Latin America	-	50
Total Secure Microcontrollers segment revenue	10,156	9,671
All Other Segment		
France	109	4
Rest of EMEA	2,924	679
North America	418	-
Asia Pacific	1,144	302
Total All Other segment revenue	4,595	985
Total net sales	14,751	10,656

*EMEA means Europe, Middle East and Africa

Contract assets, deferred revenue and contract liability

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

USD'000	As at June 30, 2023 (unaudited)	As at December 31, 2022
Trade accounts receivables		
Trade accounts receivable - Secure Microcontrollers Segment	2,424	1,794
Trade accounts receivable - All Other Segment	1,096	475
Total trade accounts receivables	3,520	2,269
Contract liabilities - current	157	84
Total contract liabilities	157	84
Revenue recognized in the period from amounts included in the deferred revenue at the beginning of the year	-	-

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

Remaining performance obligations

As of June 30, 2023, approximately USD 157,392 is expected to be recognized from remaining performance obligations for contracts. We expect to recognize revenue for these remaining performance obligations in 2023.

Note 25. Other operating income

The other operating income relates to a liability written off after expiry of the statute of limitation.

Note 26. Non-operating income

Non-operating income consisted of the following:

USD'000	Unaudited 6 months ended June 30,	
	2023	2022
Foreign exchange gain	125	469
Interest income	55	-
Total non-operating income	180	469

Note 27. Non-operating expenses

Non-operating expenses consisted of the following:

USD'000	Unaudited 6 months ended June 30,	
	2023	2022
Foreign exchange losses	253	111
Financial charges	2	1
Interest expense	52	-
Other	6	1

Total non-operating expenses	313	113
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Note 28. Segment reporting

The Group has one operating segment that meets the criteria set in ASC 280-10-50: Secure Microcontrollers. The Group's chief operating decision maker, who is its Chief Executive Officer, reviews financial performance of this operating segment for purposes of allocating resources and assessing budgets and performance.

The remaining non-reportable operating segments and other business activities that are not identified as operating segments are combined and disclosed in an "all other" standalone category.

The Secure Microcontrollers segment encompasses the design, manufacturing, sales and distribution of high-end, Common Criteria EAL5+ & FIPS 140-3-certified secure microprocessors.

6 months ended June 30,	2023 (unaudited)			2022 (unaudited)		
	Secure Microcontrollers	All Other	Total	Secure Microcontrollers	All Other	Total
Revenues from external customers	10,156	4,595	14,751	9,671	985	10,656
Intersegment revenues	-	231	231	-	180	180
Interest revenue	38	17	55	-	-	-
Interest expense	36	16	52	110	11	121
Depreciation and amortization	190	86	275	181	19	200
Segment income /(loss) before income taxes	718	(1,262)	(544)	687	(860)	(173)
Profit / (loss) from intersegment sales	-	11	11	-	9	9
Income tax recovery /(expense)	-	(320)	(320)	-	(1)	(1)
Segment assets	13,279	7,864	24,148	13,279	1,695	14,974

6 months ended June 30,	2023	2022
	USD'000	USD'000
Revenue reconciliation		
Total revenue for reportable segment	14,982	10,836
Elimination of intersegment revenue	(231)	(180)
Total consolidated revenue	14,751	10,656
Loss reconciliation		
Total profit / (loss) from reportable segments	(544)	(173)
Elimination of intersegment profits	(11)	(9)
Income /(Loss) before income taxes	(555)	(182)

As at June 30,	2023	2022
	USD'000	USD'000
Asset reconciliation		
Total assets from reportable segments	24,148	14,974
Elimination of intersegment receivables	(71)	(279)
Consolidated total assets	24,077	14,695

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	6 months ended June 30,	
	2023 (unaudited)	2022 (unaudited)
France	140	94
Rest of EMEA*	4,281	1,959
North America	8,374	6,937
Asia Pacific	1,956	1,616
Latin America	-	50
Total net sales	14,751	10,656

* EMEA means Europe, Middle East and Africa

Property, plant and equipment, net of depreciation, by region USD'000	As at June 30,	As at December 31,
	2023	2022
France	2,181	782
Total Property, plant and equipment, net of depreciation	2,181	782

Note 29. Earnings/(Loss) per share

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

Earnings / (loss) per share	6 months ended June 30,	
	2023 (unaudited)	2022 (unaudited)
Net income (USD'000)	(875)	(183)
Effect of potentially dilutive instruments on net gain (USD'000)	n/a	n/a
Net income / (loss) after effect of potentially dilutive instruments (USD'000)	(875)	(183)
Ordinary shares used in net earnings / (loss) per share computation:		
Weighted average shares outstanding - basic	7,501,500	6,610,293
Effect of potentially dilutive equivalent shares	n/a	n/a
Weighted average shares outstanding - diluted	7,501,500	6,610,293
Net earnings / (loss) per ordinary share		
Basic weighted average loss per share (USD)	(0.06)	(0.01)
Diluted weighted average loss per share (USD)	(0.06)	(0.01)
F shares used in net earnings / (loss) per share computation:		
Weighted average shares outstanding - basic	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
Net earnings / (loss) per F share		
Basic weighted average loss per share (USD)	(0.29)	(0.06)
Diluted weighted average loss per share (USD)	(0.29)	(0.06)

Note 30. Legal proceedings

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

Note 31. Related parties disclosure**Subsidiaries**

As at June 30, 2023, the condensed 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 June 30, 2023	% ownership as at December 31, 2022	Nature of business
WISeKey Semiconductors SAS	France	2010	EUR 1,473,162	100.0%	100.0%	Chip manufacturing, sales & distribution
WISeKey IoT Japan KK	Japan	2017	JPY 1,000,000	100.0%	100.0%	Sales & distribution
WISeKey IoT Taiwan	Taiwan	2017	TWD 100,000	100.0%	100.0%	Sales & distribution

Related party transactions and balances

Related Parties (in USD'000)	Receivables as at		Payables as at		Net expenses to		Net income from	
	June 30,	December 31,	June 30,	December 31,	in the 6 months ended June 30,		in the 6 months ended June 30,	
	2023 (unaudited)	2022	2023 (unaudited)	2022	2023 (unaudited)	2022 (unaudited)	2023 (unaudited)	2022 (unaudited)
1 WISeKey International Holding AG	-	-	9,656	7,122	1,898	359	-	-
2 WISeKey USA Inc	-	-	646	154	492	255	-	-
3 WISeKey Semiconductors GmbH	-	-	870	773	81	92	-	-
4 WISeCoin AG	-	-	3,349	3,306	37	44	-	-
Total	-	-	14,521	11,355	2,508	750	-	-

1. The SEALSQ Group is 90%-owned by WISeKey International Holding AG, which 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 for the six months ended June 30, 2023 and 2022 relate to interest on outstanding loans and the recharge of management services.

2. WISeKey USA Inc is part of the group headed by WISeKey International Holding AG (the "WISeKey Group") and employs sales staff who work for the SEALSQ Group. The expenses in relation to WISeKey USA Inc. in the six months ended June 30, 2023 and 2022 relate to the recharge of employee costs.

3. WISeKey Semiconductors GmbH is part of the WISeKey Group and employs sales staff who work for the SEALSQ Group. The expenses in relation to WISeKey Semiconductors GmbH in the six months ended June 30, 2023 and 2022 relate to the recharge of employee costs.

4. WISeCoin AG is part of the WISeKey Group. The expenses recorded in the six months ended June 30, 2023 and 2022 relate to interest on an outstanding loan.

Note 32. Subsequent events**Capital Increase**

On July 10, 2023, the Group issued 8,184 new ordinary shares to a shareholder as a result of a share ledger correction.

Securities Purchase Agreement

On July 11, 2023, the Group entered into a Securities Purchase Agreement with L1 Capital Global Opportunities Master Fund Ltd. and Anson Investments Master Fund LP (each the "Investor", together the "Investors") pursuant to which the Investors may enter into a private placement of up to a maximum amount of USD 20 million, divided into two equal tranches.

The first tranche for a total of USD 10 million was paid in July 2023 by the Investors. In connection with the closing of the First Tranche, the Company issued to the Investors (i) 4% Senior Original Issue Discount Convertible Notes due 2025 in an aggregate principal amount of USD 10 million, convertible into SEALSQ's ordinary shares, and (ii) warrants with a 5-year maturity. The Senior Original Issue Discount Convertible bears a 4% per annum interest rate. SEALSQ has also created a capital reserve of 8,000,000 ordinary shares from its duly authorized ordinary shares for issuance under the First Tranche.

The funding of the Second Tranche is, *inter alia*, subject to the mutual consent of the Group and each Investor.

Note 33. Business Update Related to COVID-19

In March 2020, the World Health Organization declared the Coronavirus (COVID-19) a pandemic. The outbreak spread quickly around the world, including in every geography in which the Group operates. The pandemic has created uncertainty around the impact of the global economy and has resulted in impacts to the financial markets and asset values. Governments implemented various restrictions around the world, including closure of non-essential businesses, travel, shelter-in-place requirements for citizens and other restrictions.

The Group took a number of precautionary steps to safeguard its businesses and colleagues from COVID-19, including implementing travel restrictions, working from home arrangements and flexible work policies. The Group has now returned to offices around the world. We continue to prioritize the safety and well-being of our colleagues.

The Group's major production centers, located in Taiwan and Vietnam, were quick to implement controls and safeguards around their processes that enabled us to continue delivering products with minimal interruption to our clients. In the six months to June 30, 2023, the impact upon the Group has been very limited and we remain confident that we are able to, and will be able to, fulfil all current and future client orders.

Currently the Group remains able to meet its commitments and does not foresee any significant challenges in the near future. The Group currently does not anticipate any material impact on its liquidity position in future periods nor on its outlook.

At this stage it remains impossible to predict the extent of the impact of the COVID-19 pandemic on future periods as this will depend on numerous evolving factors and future developments that the Group is not able to predict.

Note 34. 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 June 30, 2023, SEALSQ has assessed the consequences of the war for its financial disclosures and considered the impacts on key judgments and significant estimates, and has concluded that no changes were required. SEALSQ will continue to monitor these areas of increased risk for material changes.