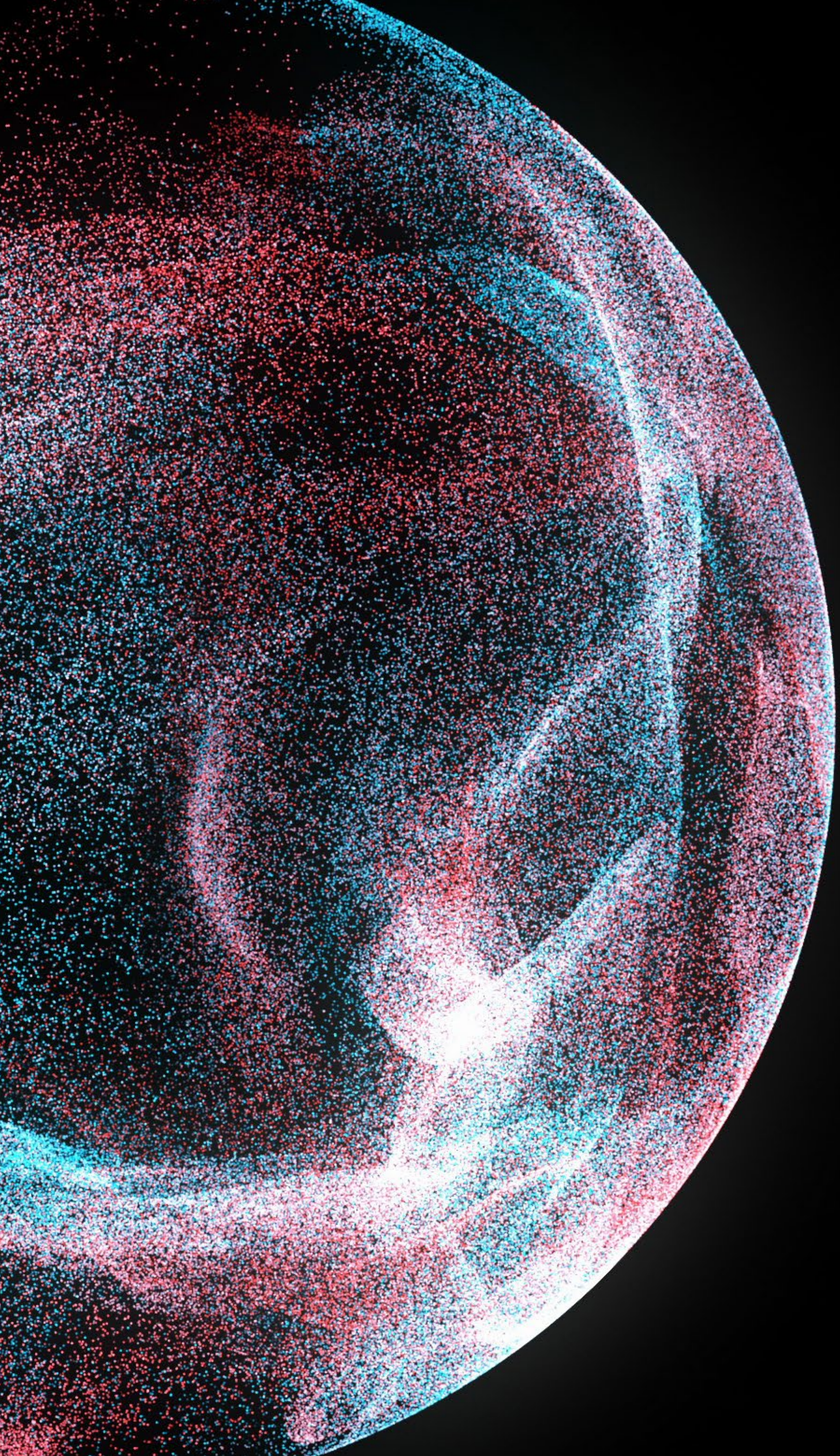


SSH.COM

ANNUAL REPORT 2018

SSH.COM

WHAT WE DO

SECURE ACCESS AT THE SPEED OF BUSINESSS.

We develop solutions that let enterprises access and utilize their most important digital assets with

- less risk
- faster deployment
- better usability
- total visibility and control

This gives our customers across the globe

- improved security
- better ROI
- full compliance and peace of mind

TABLE OF CONTENTS

SSH.COM:

20+ YEARS OF LEADERSHIP

First came the protocol, then the company. The rest is history.

The founder of SSH, Tatu Ylönen, designed the first version of the SSH protocol after a password-sniffing attack at his university network. Tatu released his implementation as freeware in July 1995, and the tool quickly gained in popularity.

Towards the end of 1995, the SSH user base had grown to 20,000 users in fifty countries. By 2000, there were an estimated 2,000,000 users of the protocol. Today, more than 95% of the servers used to power the Internet have SSH installed in them.

The SSH protocol is truly one of the cornerstones of a safe Internet.

Over the 20+ year history of the company, SSH has created many industry firsts:

- The gold-standard of commercial SSH client/server solution – Tectia® Client/Server. Tectia powers and protects many of the leading companies in the world and still forms a major part of SSH's business.

- The leading SSH Key Management solution – Universal SSH Key Manager® (UKM for short). UKM is the least intrusive and fastest-to-deploy comprehensive SSH key management solution on the market, used by several of the largest retailers and financial institutions in the world.

- The next-generation Privileged Access Management solution – PrivX®. PrivX rearchitects access management for the Cloud and DevOps, enabling enterprises to instantly reap the business benefits of faster time-to-market, increased agility, and lower costs.

Today, we have over 3,000 customers around the world, including 40% of Fortune 500 companies, the world's largest financial institutions, and major organizations in all verticals. Our solutions guard against the rapidly changing threat landscape that includes both internal and external actors.

We have a global footprint with offices in Europe, North America, and Asia and a global network of certified partners. Our research and development and headquarters are located in Finland and our shares (SSH1V) are quoted on NASDAQ Helsinki.

We are proud to carry on the SSH.COM legacy and develop new innovative technologies and products that help make the future of Internet and the digital transformation safe for businesses and their customers alike.

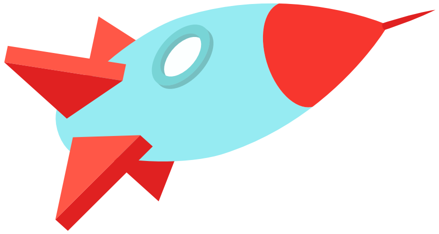
SSH.COM – Secure Access at the Speed of Business

KEY FIGURES

We reached our main financial objective in 2018: Profitable growth

DOUBLE DIGIT GROWTH

FIRST PROFITABLE YEAR SINCE 2014



We produced double-digit revenue growth while keeping our expenses on the same level as in the previous year, resulting in clearly improved and positive profitability.

KEY FIGURES		2018	2017
Net sales	kEUR	18,340	16,233
Operating profit/loss	kEUR	544	-1,709
% of net sales	%	3.0	-10.5
Profit/loss before taxes	kEUR	559	-2,220
Earnings per share	EUR	-0.01	-0.09
Equity ratio	%	81.6	82.9
Gearing	%	-93.5	-104.5
Number of personnel 31 Dec		85	80

2018 HIGHLIGHTS

The year 2018 was a transformative period for SSH – we continued with our renewal process, launched new sales models, new product versions and a whole new product, and made the organization even more customer-centric.

We also reached our two main financial objectives: we accelerated our growth and returned the company to profitability, both for the fourth quarter and for the full year.

2018 Key Event Timeline

Q1

- Settlement and cross-license deal with Sony
- Two large UKM deals
- Strengthening of the board with US members

Q2

- NQX certification
- Certificate mgmt partnership with AppViewX
- Inside & online sales start
- First PrivX deals

Q3

- NQX joint venture with State Security Networks
- First NQX sales
- Largest ever maintenance renewal deal (Tectia)

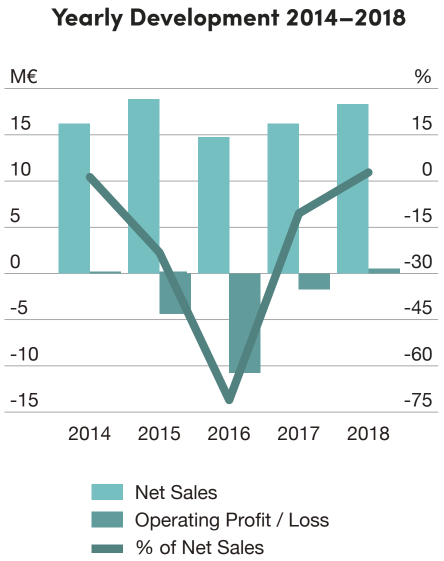
Q4

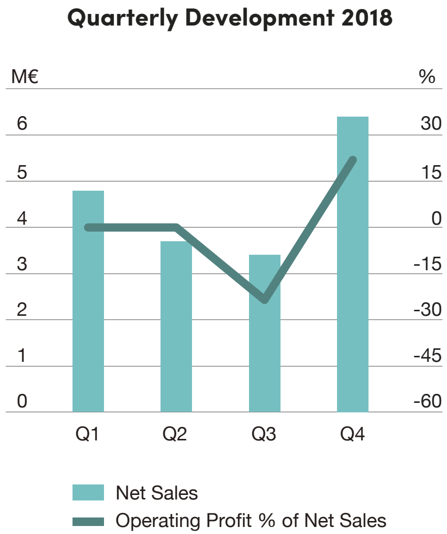
- Major UKM deal with a global retailer
- First PrivX enterprise deals
- Several UKM and PrivX partnerships announced
- Organization renewal
- Second patent licensing deal

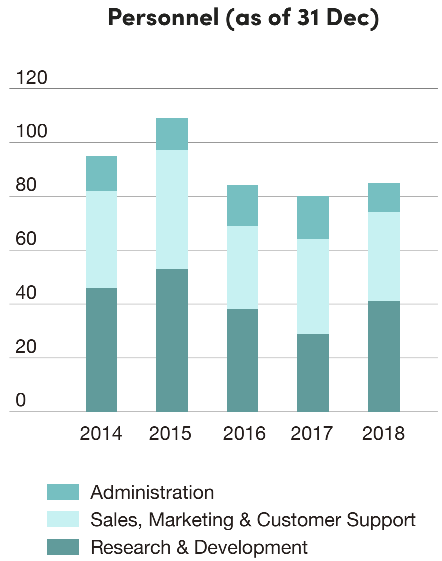
2018 HIGHLIGHTS

FINANCIAL PERFORMANCE

- Double digit growth, first profitable year since 2014.
- Net sales totaled EUR 18.3 million (2017: EUR 16.2 million), up by 13.0 % year on year (growth with comparable exchange rates 16.3%).
- Operating profit was EUR 0.5 million (EUR -1.7 million).
- Profit for the period was EUR 0.5 million (EUR -2.2 million).
- Earnings per share was EUR -0.01 (EUR -0.09).
- Total operating expenses were EUR 16.5 million (EUR 16.5 million). We achieved a double-digit revenue growth while keeping our expenses on the same level as in the previous year.
- In 2018, sales were geographically divided into: Americas 49.1 % (50.9 %), EMEA 22.9 % (21.8 %), APAC 13.0 % (14.3 %), and global royalty license income 15.0 % (12.9 %). Our software business sales grew in all regions.
- Further information on the key financial figures is presented in the Financial Statements section of this Annual Report.







"BOTH SOFTWARE FEES AND RECURRING REVENUE GREW"

SALES AND MARKETS

Both software fees and recurring revenue grew during the year, to EUR 5.6 million and EUR 8.5 million, respectively.

We saw a nearly 40% growth in software fees which validates the decision to reorganize all sales under a global leadership and forms a good base for future growth.

Growth in recurring revenue underlined the continued strength of our support and maintenance business that creates long-term revenue and bottom line stability to our business.

Professional services & other sales also grew slightly to EUR 4.3 million. This category includes the royalty income we received from the two patent licensing agreements we announced during the year. The sale of consulting services to customers decreased by approximately 10% reflecting the cyclic nature of SSH key remediation and solution deployment projects.

The company operates globally with regional headquarters in Helsinki (for EMEA) and Boston (for Americas). In EMEA, we have sales and support offices in the UK and Germany. In the APAC region, the company has an office in Hong Kong.

Sales performance improved in all of our geographic markets. Americas net sales in 2018 was up 8.9 %, APAC net sales was up 2.6 %, and EMEA net sales increased by 18.7 % in 2018. The patent licensing revenue was accounted for as Global royalty revenue which was up 30.8 %.

The regional sales split remained roughly similar to last year: Americas 49.1 % (50.9 %), EMEA 22.9 % (21.8 %), APAC 13.0 % (14.3 %), and global royalty license income 15.0 % (12.9 %). Our software business sales grew in all regions.

We launched several new partnerships during the year, covering both PrivX and UKM. These partners, including Fujitsu, ForgeRock, and Ubisecure for PrivX and Thales and Wipro for UKM, significantly increase our ability to reach new customer groups and offer these products to even wider audiences.

We introduced new inside and online sales functions in 2018. Inside sales proved effective and supported the sales of UKM, CryptoAuditor, and PrivX products.

Q4 saw the first material sales of PrivX® into enterprises. PrivX online sales did not perform as expected and we are fine-tuning the pricing and licensing models to attract more buyers and shifting more resources to selling to enterprises and to sales through our emerging partnerships with leading players, still also fully utilizing the digital sales model created by the business program.

TECHNOLOGIES AND PRODUCTS

After several year of development, we certified and launched in Q2 the SSH NQX® Firewall and VPN Appliance, the first product of our NQX product line.

PrivX®, launched in 2017, was developed rapidly and version 5 of the product was launched at the end of the year. The fast development cycle enabled us to work closely with customers and partners and constantly bring new enterprise-grade features to the product, evidenced by the start of PrivX enterprise sales in Q4. PrivX also caught the eye of partners, resulting in several new partnerships with major IDaaS (Identity-as-a-Service) and IAM (Identity and Access Management) players such as ForgeRock, Fujitsu, and Ubisecure.

New versions of our other products, Universal SSH Key Manager, CryptoAuditor, and Tectia Client/server were also launched during the year.

One of the key achievements in research and development was the new, considerably faster development and release cycle first adopted in PrivX development and now gradually being introduced across the entire product range.

"THE CYBERSECURITY MARKET IS PROJECTED TO KEEP GROWING"

FIREWALL BUSINESS

The firewall business made a major move forward from development to commercialization.

The initial NQX® Firewall and VPN appliance was certified by Finnish Communications Regulatory Authority in Q2 and the product was launched shortly thereafter.

We announced in Q2 and closed in Q3 a joint venture with the government-owned State Security Networks Group Finland (Suomen Erillisverkot Oy) to commercialize the firewall technology. The joint venture provides both additional resources to the commercialization effort and strengthens SSH's position as a supplier of cybersecurity solutions that are critical for national security.

We also closed the first sales to the Finnish public sector and signed sales partnerships for NQX during Q3 and Q4.

Mr. Jussi Löppönen who successfully formed and ran the PrivX business program from 2017 to 2018, was appointed as the head of the NQX business in late 2018 and he will lead the commercialization effort.

While the revenue was still very small in 2018, we expect that the firewall business will start generating moderate revenue in 2019, mainly during the latter part of the year when key features for large deployments are in production and certified. We are confident that the long-term investments and capability ramp-up required by the firewall business since 2014 will start bearing fruit this year.

IPR PROTECTION AND LICENSING

We entered in a settlement and patent cross-licensing agreement with Sony in February 2018. We entered into a patent licensing agreement with one of the leading global providers of patent risk management solutions in December. The results of these licensing agreements were fully recognized as revenue during 2018.

Our appeal against the revocation of one of our patents in the UK was dismissed by the UK Court of Appeals in Q4.

SSH has over 120 granted patents and patent applications and will actively keep protecting its intellectual property. However, the settlement agreement with Sony concluded our patent litigation processes and we are entering a new stage in our IPR protection program and shifting focus from litigation to alternative means of value generation. As a result of this shift, we do not expect patent license revenue in 2019. This shift will also mean lower and more predictable cost base related to our IPR protection activities.

One of the key rationales for the convertible capital securities emission in 2015 was to provide sufficient liquidity for potential litigation actions related to the patent licensing program. The shift towards protective focus translates into a reduced need for the large cash reserve provided by the convertible capital securities.

BUSINESS OUTLOOK

The cybersecurity market is projected to keep growing for the foreseeable future, fueled by the growing and shifting threat landscape, accelerating cloud transformation, and the adoption of new technologies, such as containers and serverless technologies.

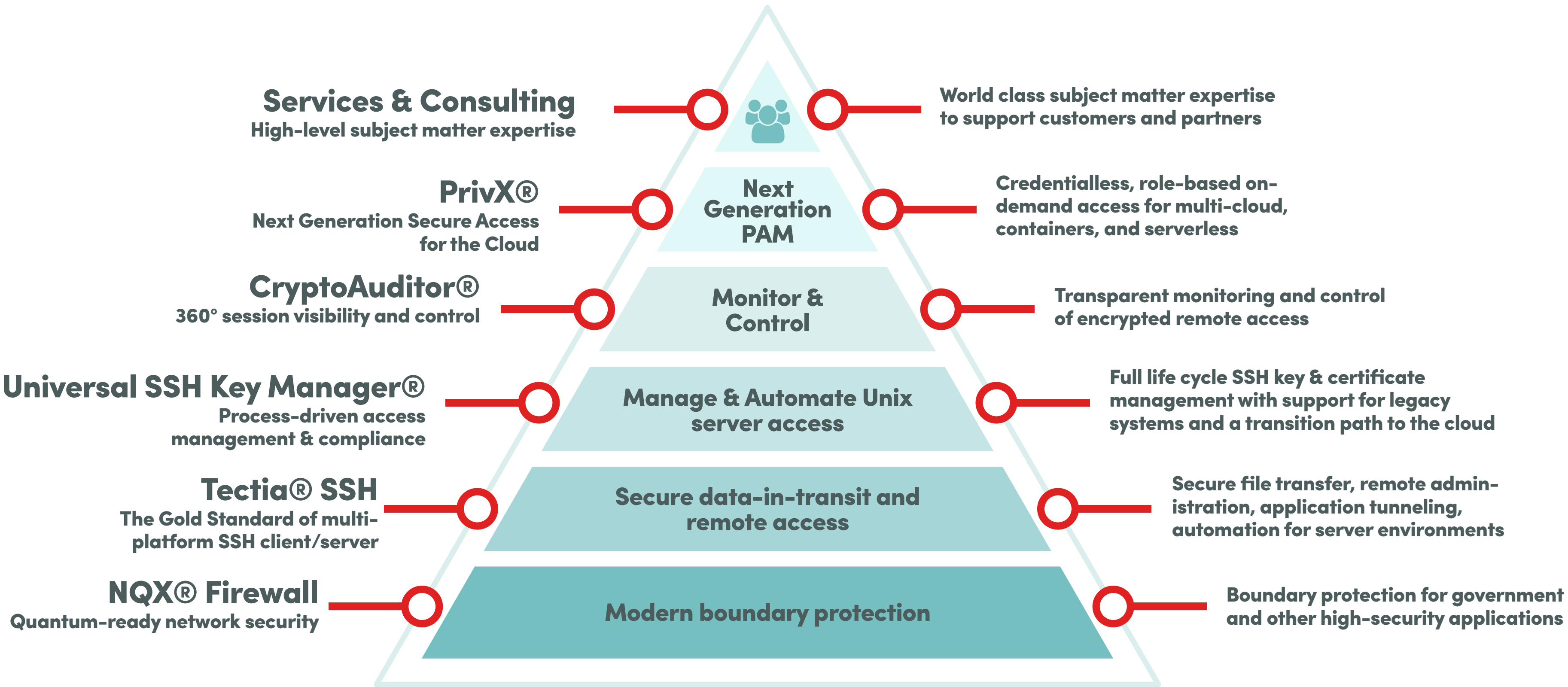
For the year 2019, we expect double digit percentage growth from our software business (software fees, professional services, and recurring revenue) at comparable exchange rates, exceeding the projected annual cyber security market growth of approximately 10 %.

In the medium term, we expect similar or faster growth and will also explore avenues for accelerated growth through inorganic growth opportunities. Possible significant quarterly variation in revenue growth is still to be expected due to timing of larger deals over the financial year.

OUR OFFERING

We develop and sell several synergistic product lines that are all aimed at securing our customers' most critical data and digital assets.

All of our products are built to provide high performance, fast deployment, excellent usability, and strong ROI for our customers. We also believe in ecosystems and the customers' need for combining several best-of-breed solutions and build open APIs into our products.



OUR PATH TO THE FUTURE

SSH strongly believes that the future of Privileged Access Management market will be dominated by innovative, unified Next-Generation Secure Access platforms such as PrivX.

We are positioning ourselves to be a leader in this development rather than to follow the lead of others. This will be a key driver in creating significant shareholder value in the long term.

Identity and Access Management (IAM) and Privileged Access Management (PAM) have existed as separate islands in the identity and access landscape and different vendors have been active in the two segments.

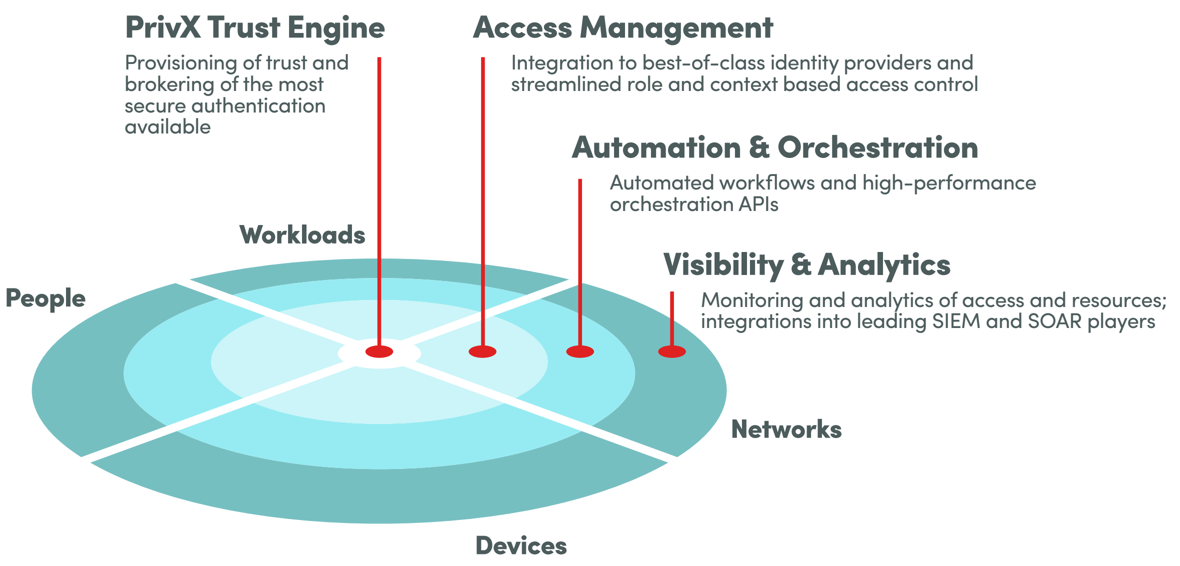
We believe – and our belief is supported by both customers and analysts – that the two will merge and a new category will arise: Secure Access Management.

While we talk of PrivX as a the next-generation Privileged Access Management solution, it is actually much more. The PrivX architecture can serve as the platform that brings together all aspects needed for building a comprehensive Secure Access Platform based on the Zero Trust “never trust, always verify, enforce least privilege” approach to privileged access, from inside or outside the network.

PrivX has an advanced technical architecture that allows fast development and flexible APIs (application programming interface) that allow seamless integration of best-of-breed solutions and technologies from different vendors and even the customers themselves.

We are moving towards this unified future by developing key technologies, partnering with other vendors, and looking for opportunities to acquire suitable complementary technologies. This hybrid approach lets us be agile and fast while requiring less capital investment than the traditional monolithic development approach.

PrivX as a base for a Next-Generation Secure Access Platform



Command and control over who accesses the network, devices, and workloads — and ultimately the data — is key to Zero Trust. The PrivX architecture provides all the key components and robust APIs required for a Next-Generation Secure Access Platform.

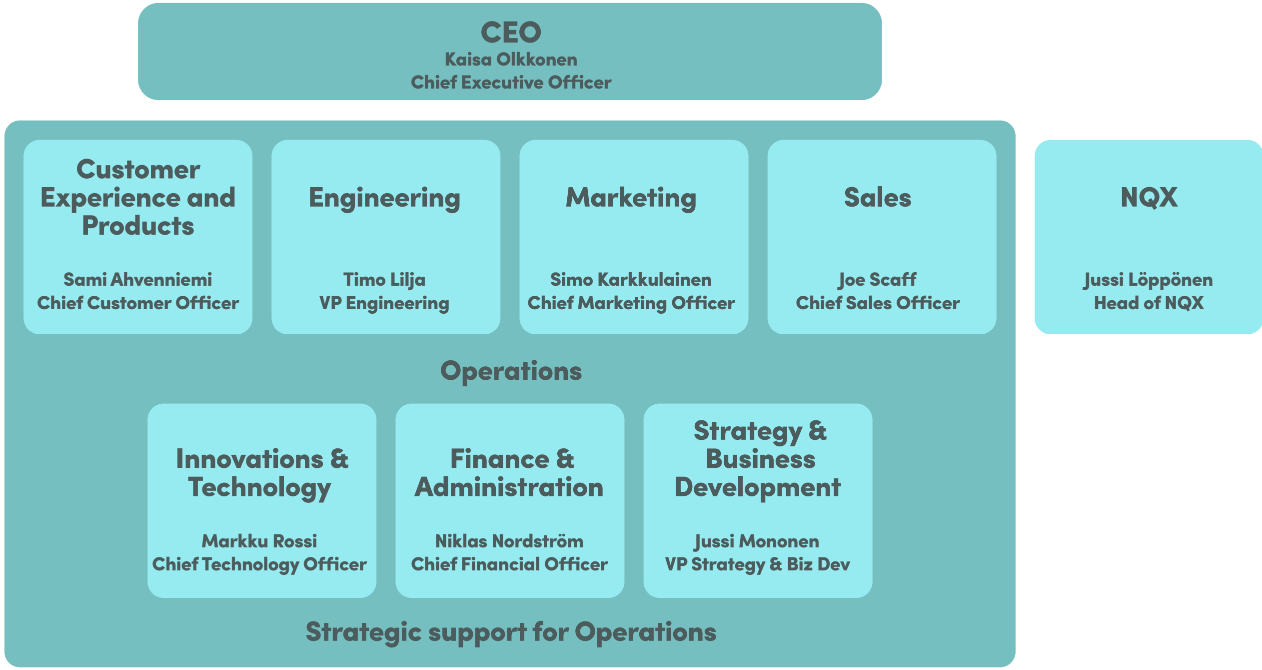
THE NEW SSH

In December of 2018, we announced a major organizational change to foster a more customer-centric mindset, accelerate innovation and development, and improve information flow within the company.

As part of the renewal process, three new functions were introduced on the Executive Management Team level.

- Customer Experience and Products. This function's charter is to create strong customer engagements, ensure a consistently excellent customer experience with SSH, and guide product decisions based on customer and market insight. This function is headed by Mr. Sami Ahvenniemi who previously served as the VP of Global Sales.
- Engineering. The operative product development function was elevated to the Executive Management Team. This function is headed by Mr. Timo Lilja who previously served as the Head of Development for Security Products.
- Innovations and Technology. This function's charter is to work closely with the Customer Experience and Products and the Engineering functions to define the future technology and innovation strategy for SSH. This function is headed by SSH's Chief Technology Officer Mr. Markku Rossi.

The new organization is a key milestone in our transformation from an engineering-driven company to a customer need driven company, and will help us take better advantage of the opportunities we see ahead.



CELEBRATING OUR PARTNERS

"NO MAN IS AN ISLAND ENTIRE OF ITSELF"

Our partners help us reach new customers, complement our product offering, and provide services: they are a vital part of our business of delivering the best possible solutions to our over 3,000 customers.

We work with many different kinds of partners: consulting partners, deployment partners, resellers, technology partners, and managed service partners to mention a few. Likewise, we work with partners in different geographies somewhat differently. The APAC region, for instance, is heavily partner-driven, while in the US, partners are a crucial part of our federal business.

In addition to the dozens of existing partners we work with, we signed several exciting new partnerships in 2018. Some examples include:

PrivX partnerships with leading IDaaS (Identity-as-a-Service) and IAM (Identity and Access Management) players such as ForgeRock, Fujitsu, and Ubisecure. Working with these partners allow us to deliver the first part of our future vision: a tightly integrated combination of PAM (Privileged Access Management) and IAM.

UKM partnerships with global giants such as Thales eSecurity and Wipro Limited. These partnerships let us bring added layers of security to our customers and complement the industry-leading key management solution with the global presence and proven deployment capability of a major system integrator.

We don't have the space to present all of our partners here, but below you can find a sample of some of them across different regions. And whether or a not a partner is listed below, we celebrate and appreciate them all!

Americas reseller partners:

ASIAMERICA NEXT GENERATION CYBERSECURITY

SDS

SYNNEX CORPORATION

APAC distributor partners:

dit

QUANTIQ INTERNATIONAL

CYBERWORLD

EMEA reseller partners:

Computacenter

Telia

CYBER Cyberforce

sysspertec group

Global technology and deployment partners:

FUJITSU

wipro

UBISECURE™

FORGEROCK®

appviewX

THALES

CEO Letter

"WE ENTER THE NEW YEAR WITH QUIET CONFIDENCE"

Valued shareholders, customers, partners, and co-workers,

The year 2018 was a transformative period for SSH – we continued with our renewal process, launched new sales models, new product versions and a whole new product, and made the organization even more customer-centric.

We also reached two key financial objectives: we accelerated our growth and returned the company to profitability, both for the fourth quarter and for the full year.

These results are further proof that our transformation process that began in late 2016 is working as intended. We have created a predictable and controlled expenditure base as well as laid a solid foundation for future growth.

While our operations and financials developed positively, we are by no means satisfied yet. We aim much higher still and will continue our journey to be a serious global player in the cloud-era cybersecurity market.

The New SSH

In December, we announced a major organizational change to foster a more customer-centric mindset, accelerate innovation and development, and improve information flow within the company.

A key part of the renewal was the formation of a new Customer Experience and Products function with a charter to create strong

"WE CAN MAKE SSH AN EVEN BETTER COMPANY, CREATE GROWTH, AND DELIVER INCREASED SHAREHOLDER VALUE"

customer engagements, ensure a consistently excellent customer experience with SSH, and, very importantly, drive product decisions based on customer and market insight. The new organization is a key milestone in our transformation from an engineering-driven company to a customer need driven company.

This change lays the foundation for the next phase of our journey: establishing SSH first as a strong challenger and then a leader in Secure Digital Access.

Confidently towards the future

While the macro-economic picture is more unsettled than it was a year ago, the cybersecurity market is expected to keep growing for the next several years. Cybersecurity remains a key concern for companies in the age of digital transformation as security and risk management are critical parts of any digital business initiative.

Our ambition level is high and our aim of becoming a leader in Secure Digital Access is not an easy one. We have many capabilities needed for reaching the goal: impressive customer list, world-class cybersecurity competencies, operational agility, and a focused and motivated team. By challenging ourselves and striving for a lofty goal, we can continue making SSH an even better company, in order to create growth and deliver increased shareholder value.

With improved financials, new products, and a renewed and leaner organization, we enter the new year with quiet confidence and unwavering focus. There is a lot of work to do but we can undertake that work from a strengthening position and I am looking forward to an eventful and successful year.

Kaisa Olkkonen
CEO

BOARD OF DIRECTORS

The Annual General Meeting held on March 28, 2018 elected Mr. Sam Curry, Mr. Petri Kuivala, Mr. Mr. Timo Syrjälä, Mr. Tatu Ylönen, and Ms. Anne Marie Zettlemoyer to the Board of Directors.

Petri Kuivala was elected as the Chairman of the Board of Directors.

The majority of the Board members are considered independent of the company. Board members Sam Curry, Petri Kuivala, Timo Syrjälä, and Anne Marie Zettlemoyer are deemed to be independent Board members. Board member Tatu Ylönen is not independent of the company. He is the largest shareholder of the company and owns approximately 47.2 % of SSH Communications Security Corporation's shares.

PETRI KUIVALA

Chairman of the Board

Petri Kuivala is an experienced international leader who currently works as the Chief Information Security Officer of NXP Semiconductors, which is a world leading provider of security and automotive semiconductor solutions.
Prior to NXP, he was member of Microsoft's Global Security management team and prior to that worked almost 14 years in different security leadership positions at Nokia Corporation, including CISO and CSO.
Prior to joining Nokia, Petri worked for the Helsinki Police Department, and was a founding member of the Helsinki Criminal Police IT investigations department.
Petri owns 15,000 SSH shares. He has no option rights.

SAM CURRY

Board Member

Sam Curry is a cybersecurity visionary with over 20 years of IT security industry experience. He is the inventor of 24 identity/crypto patents, and a co-inventor of personal firewall. Sam's experience includes product strategy, product management, innovation management, and operational excellence.
Sam is currently the Chief Security Officer of Cybereason. His previous experience includes senior management positions at RSA, Microstrategy, Computer Associates, and McAfee.
He has also been an entrepreneur in two start-ups.
Sam holds a B.A. degree in English Language and a B.S. Degree in Physics.
Sam neither owns any SSH shares nor has any option rights.

TIMO SYRJÄLÄ

Board Member

Timo Syrjälä has more than 30 years of experience in capital markets and has spent the last 10 years as a private investor and a non-executive director in several firms. Prior to joining the Board of SSH Communications Security, he served on the Boards of several leading technology firms including Stonesoft (a security company specializing in firewalls, acquired by Intel/McAfee, now ForcePoint) and Efore.
Earlier in his career, Timo held executive and managerial positions in management consulting, asset management, and investment banking.
Timo holds a Master of Science degree from the Helsinki University of Technology (now Aalto University) in Finland.
Timo owns 3,559,131 SSH shares directly and through his holdings. He has no option rights.

TATU YLÖNEN

Board Member

Tatu Ylönen founded SSH Communications Security in 1995, grew the company to $20 million in sales and 190 employees in five years, and led the company to a public listing on NASDAQ OMX Nordic in 2000.
Tatu is an experienced entrepreneur and the original inventor of SSH (Secure Shell) and NAT Traversal technologies. He has also co-authored NIST IR 7966, guidelines for managing SSH keys.
Prior to his current role as Board Member, Tatu has held various roles in the company throughout the years, including CEO, CTO, and Chief Innovation Officer. He is also the largest shareholder of the company.
Tatu holds a degree of Licentiate of Technology from the Helsinki University of Technology (now Aalto University) in Finland.
Tatu owns 18,317,123 SSH shares. He has no option rights.

ANNE MARIE ZETTLEMOYER

Board Member

Anne Marie Zettlemoyer is a security thought leader with a business background, analytics expertise, and 19 years of experience across 8 industries. She is a highly skilled cyber strategist with expertise in cybersecurity risk and operations, decision science, metrics, and performance measurement.
Anne Marie serves currently as Vice President, Security Engineering at Mastercard. Her work experience includes senior management positions at large financial institutions such as Freddie Mac and Capital One, cybersecurity companies like FireEye, and service at the United States Secret Service.
She holds an MBA degree from the University of Michigan and she has CISSP (Certified Information Systems Security Professional) and CEH (Certified Ethical Hacker) certifications.
Anne Marie neither owns any SSH shares nor has any option rights.

EXECUTIVE MANAGEMENT TEAM December 31, 2018

The following people also served in the executive management team during 2018:

Jussi Löppönen, Head of PrivX Business Program and Product Management, 01-12/2018. He continues with SSH and currently manages the NQX firewall business.

Rami Raulas, Vice President Sales, EMEA and APAC, 01-04/2018. He continues with SSH as Vice President, Sales.

Helena Kukkonen, Chief Financial Officer, 01-03/2018. She left the company to pursue new challenges outside SSH.

Tatu Ylönen, SSH Fellow and Founder, 01-02/2018. He continues with SSH as a Strategic Advisor and Board Member.

KAISA OLKKONEN

Chief Executive Officer
born 1964
Master of Laws

Kaisa Olkkonen is an experienced leader and expert in international business, legal matters, intellectual property, and digitalization. She has previously been, e.g. VP, Legal and VP, Government Relations at Nokia Corporation.
Kaisa has led international and diverse expert teams through changes and transitions. Her international career has taken her on expatriate assignments in Sweden, Singapore, and Belgium.
She also holds Board of Directors positions in Cargotec Oyj, Enfo Oyj, and John Nurminen Foundation, and acts as an investor and advisor in several startup companies.
Kaisa has a Master of Laws degree from the University of Helsinki.
Kaisa owns 30,000 SSH shares and has 300,000 option rights.

SAMI AHVENNIEMI

Chief Customer Officer
born 1972
M.Sc. (Engineering)

Sami is a software industry veteran with over 20 years of experience from global software sales. Sami knows SSH well, having worked at SSH in executive positions in 1998-2002 and 2012-2015 both in Finland and the US. Sami has also served as an executive, chairman, or board member in several successful technology companies such as Behaviosec, Bluegiga Technologies, Neo4j, Sensinode, and most recently as co-founder at Kontena.
Sami has also been a partner and board member in one of the most successful Finnish venture capital firms, Conor Venture Partners.
Sami holds a Master of Science (MSc) degree in Industrial Engineering from the Helsinki University of Technology (currently Aalto University).
Sami does not own any SSH shares but has 50,000 option rights.

SIMO KARKKULAINEN

Chief Marketing Officer
born 1981

Simo Karkkulainen brings to the SSH marketing function over 20 years of experience and a strong international point of view. He is responsible for global marketing, go-to-market strategies, and demand generation.
Prior to joining the company in December 2017, Simo held several senior marketing positions at Stonesoft, McAfee, Comptel and several other companies.
Simo does not own any SSH shares but has 40,000 option rights.

TIMO LILJA

Vice President, Engineering
born 1978
Licentiate of Technology

Timo is an experienced technologist and leader with an extensive background in software development, IT management, test automation, and software-related academic research.
He has served in various development and leadership functions at SSH and as a researcher and teacher at Aalto University, with an emphasis on cloud and mobile computing issues.
Timo holds a Licentiate of Technology degree from the Aalto University.
Timo does not own any SSH shares but has 15,000 option rights.

JUSSI MONONEN

Vice President, Strategy and Business Development
born 1964
M.Sc. (Engineering)

Jussi is a seasoned growth company executive who has been CEO and founder of several venture-backed companies. He has nearly 30 years of management and consulting experience from international technology-intensive businesses with a sound understanding of strategy, communications, operations, processes, and critical success factors. He also has a strong track record in fundraising and M&A transactions.
Jussi holds a Master of Science degree in Industrial Engineering and Management from the Helsinki University of Technology (currently Aalto University) in Finland.
Jussi does not own any SSH shares but has 115,000 option rights.

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NIKLAS NORDSTRÖM

Chief Financial Officer
born 1979
Master of Laws, Bachelor of Economics

Niklas brings with him over 10 years of cross-industry financial management experience gained from working in demanding senior financial roles in various NASDAQ companies. He is responsible for financial management, treasury, human resources, legal, corporate development, and corporate governance.

Prior to joining SSH, Niklas worked as CFO for Biohit Oyj, a Helsinki-based public biotechnology company.

Niklas holds a Master of Laws degree from the University of Kent in Canterbury, UK and a Bachelor of Economics, Accounting and Finance degree from the Inholland University of Applied Sciences in the Netherlands.

Niklas does not own any SSH shares but has 40,000 option rights.

MARKKU ROSSI

Chief Technology Officer
born 1970
M.Sc. (Technology)

Markku directs the company's global innovation and technology strategy and activities. Markku has extensive knowledge and experience with SSH Communications Security products, having previously served the company from 1998 through 2005 as the Chief Engineer, leading the contribution to the SSH software architecture.

Prior to re-joining the company in 2015, Markku founded several companies such as Codento and ShopAdvisor; and served as CTO at Navicore and Chief Architect at Nokia.

Markku holds a Master of Science degree in Computer Science from the Helsinki University of Technology (currently Aalto University) in Finland.

Markku owns 6,500 SSH shares and has 140,000 option rights.

JOE SCAFF

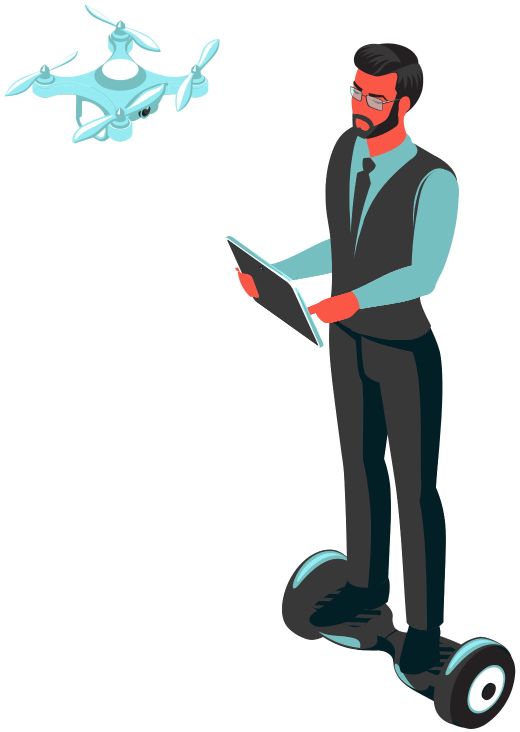
Chief Sales Officer
born 1981
B.Sc. (Computer Science)

Joe has over 15 years of experience in information security technology and network communications industry. Joe has held various management roles at SSH Communication Security including Technical Sales, Technical Support, and Professional Services.

He has a strong technical and managerial background that allows him to deliver strategic solutions to Fortune 500 customers. He is responsible for global sales at SSH and continues as the head of US business operations.

Joe holds a Bachelor of Computer Science degree from Wentworth Institute of Technology

Joe owns 46,600 SSH shares and has 40,000 option rights.



FINANCIAL STATEMENTS 2018

TABLE OF CONTENTS

Report of the Board of Directors for 1 Jan – 31 Dec 2018

NET SALES EUR million	10–12/ 2018	7–9/ 2018	4–6/ 2018	1–3/ 2018	1–12/ 2018	10–12/ 2017	1–12/ 2017
BY GEOGRAPHICAL SEGMENT							
AMERICAS	3.2	2.0	2.1	1.8	9.0	2.6	8.3
APAC	0.5	0.6	0.5	0.6	2.4	0.7	2.3
EMEA	1.0	0.7	1.1	1.4	4.2	1.0	3.5
Global royalty income	1.7	0.0	0.0	1.0	2.7	2.1	2.1
Total	**6.4**	**3.4**	**3.7**	**4.8**	**18.3**	**6.4**	**16.2**
BY OPERATION							
Software fees	2.1	1.0	0.7	1.8	5.6	1.8	4.0
Professional services and other	2.1	0.2	0.9	1.0	4.3	2.5	3.9
Recurring revenue	2.2	2.2	2.1	2.1	8.5	2.1	8.3
Total	**6.4**	**3.4**	**3.7**	**4.8**	**18.3**	**6.4**	**16.2**

NET SALES

Consolidated net sales for January–December totaled EUR 18.3 million (2017: EUR 16.2 million), up 13.0 %, year on year.

The majority of SSH Communications Security's invoicing is U.S. dollar based. During the reporting period, the U.S. dollar's average exchange rate to euro weakened 4.6 % compared with the same period in 2017. With comparable exchange rates the net sales growth in 2018 would have been 16.3 % compared to 2017.

PROFIT AND PROFITABILITY TRENDS

Operating profit for January–December amounted to EUR 0.5 million (2017: EUR -1.7 million), with net profit totaling EUR 0.5 million (EUR -2.2 million). Profitability improved considerably from the previous year.

Sales, marketing and customer support expenses amounted EUR -8.5 million (2017: EUR -8.2 million), while research and development expenses totaled EUR -5.1 million (2017: EUR -5.5 million) and administrative expenses EUR -2.7 million (2017: EUR -2.8 million). Operating expenses remained on the same level compared to previous year.

BALANCE SHEET AND FINANCIAL POSITION

The financial position of SSH Communications Security remained strong during the reporting period. The consolidated balance sheet total on December 31, 2018 stood at EUR 24.2 million (31 Dec 2017: EUR 23.2 million), of which liquid assets accounted for EUR 13.5 million (31 Dec 2017: EUR 13.5 million), or 55.6 % of the balance sheet total. Interest-bearing debts were EUR 0.2 million at the end of financial year (31 Dec 2017: EUR 0.0 million). On December 31, 2018, gearing, or the ratio of net liabilities to shareholders' equity, was -93.5 % (31 Dec 2017: -104.5 %) and the equity ratio stood at 81.6 % (31 Dec 2017: 82.9 %).

The interest-bearing debt consists of a subordinated loan which Kyberleijona Oy has taken out from the non-controlling interest holder State Security Networks Group Finland. The capital and interest of the subordinated loan can only be repaid in circumstances permitted by Chapter 12 of the Finnish Limited Liability Companies Act. The capital of the subordinated loan can only be repaid to the extent the unrestricted shareholders' equity and the total amount of the subordinated loan at the time of the repayment exceeds the loss that is to be confirmed for the company's latest financial year or is included in the balance sheet of more recent financial statements. The annual interest for the loan is three per cent (3 %).

The reported gross capital expenditure for the period totaled EUR 2.3 million (2017: EUR 1.5 million). Financial income and expenses totaled EUR 0.0 million (2017: EUR -0.5 million), which consisted mainly of exchange rate gains or losses and interest expenses from customer payments with a considerable advance payment component.

SSH Communications Security had a positive cash flow of EUR 1.2 million (2017: EUR 1.3 million) from business operations, and investments showed a negative cash flow of EUR -2.3 million (2017: EUR -1.5 million). Cash flow from financing totaled EUR 0.9 million (2017: EUR 6.1 million).

RESEARCH AND DEVELOPMENT

Research and development expenses totaled EUR -5.1 million (2017: EUR -5.5 million), the equivalent of 27.9 % of net sales (2017: 33.6 %). During the reporting period, R&D cost capitalizations totaled EUR 2.3 million (2017: EUR 1.2 million). Depreciation from R&D capitalization assets was EUR -1.5 million (2017: EUR -1.7 million).

RISKS AND UNCERTAINTIES

The most significant risks that might impact the profitability of the company have remained by and large the same as in the previous reporting period and are listed below. Other risks, which are currently either unknown or considered immaterial to SSH Communications Security may, however, become material in the future.

Largest risks:

- Continuing uncertainty of the macroeconomic environment
- Cybercrime, including e.g. ransomware
- Delays in product development and closing new business
- Ability to execute our strategy
- Ability to retain and recruit key personnel
- Maintaining our ability to innovate and develop our product portfolio, including intellectual property rights (IPR)
- IPR litigation and the utilization of our patent portfolio

- A significant proportion of the company revenue is invoiced in U.S. dollars, and possible large fluctuation in the U.S. dollar exchange rates during 2019 could have unpredictable effects for profitability that difficult to estimate at this time. The company decides on hedging of USD based contracts on a case-by-case basis.

The principles and organization of risk management of SSH Communications Security can be read from the company's website www.ssh.com.

HUMAN RESOURCES AND ORGANIZATION

SSH Communications Security Group had 85 (2017: 80) employees at the end of December, up by 5 persons or 6.3 % from the previous year. The average age of the employees was 41.0 years (2017: 40.8 years). Approximately 17.6 % (2017: 17.5 %) of the employees were women and 82.4 % (2017: 82.5 %) men. At the end of the period under review, 38.8 % (2017: 36.3 %) of the employees worked in sales, marketing, and customer services, 48.2 % (2017: 43.8 %) in research and development, and 12.9 % (2017: 20.0 %) in corporate administration.

At the end of the financial period, the parent company had 62 (2017: 53) employees on its payroll. On average, the parent company had 57 (2017: 53) employees during the period under review. Parent company salaries, bonuses, and other personnel expenses during the financial period totaled EUR 5.0 million (2017: 3.9 million).

BOARD AND AUDITORS

At the Annual General Meeting held on March 28, 2018 Mr. Sam Curry and Ms. Anne Marie Zettlemoyer were elected as new members of the Board of Directors. Mr. Tatu Ylönen, Mr. Timo Syrjälä and Mr. Petri Kuivala were re-elected as members of the Board of Directors. In the Board's organizing meeting, Mr. Petri Kuivala was elected as the Chairman of the Board of Directors.

Authorized Public Accountant firm Ernst & Young Oy was elected as the auditor of the company with Erkka Talvinko, authorized public accountant, as principal auditor.

PRINCIPAL PROVISIONS OF THE ARTICLES OF ASSOCIATION

According to the Articles of Association, the highest decision-making power in the company is wielded by the shareholders at the shareholders' meeting. The Annual General Meeting (AGM) is held within six months of the completion of the company's financial period, at a time decided by the Board. The AGM decides the number of members of the Board of Directors and elects them. Additionally, under the Finnish Limited Liability Companies Act, the AGM has the authority to amend the company's Articles of Association, adopt the financial statements, approve the amount of dividend, and select the company's auditors. Each SSH Communications Security Corporation share conveys one vote at the shareholder's meeting. Under the Articles of Association, the CEO is appointed by the Board of Directors.

CORPORATE GOVERNANCE

SSH Communications Security abides by its Articles of Association as well as principles of transparent and responsible corporate governance, and high ethical standards in its governance and decision-making. The company complies with the Finnish company and securities market legislation, including the market abuse regulation, rules of Nasdaq Helsinki and Finnish Corporate Governance Code 2015 adopted by the Securities Market Association.

For more information see our Corporate Governance Statement that is published annually as a separate report and can be found at SSH's website.

RESPONSIBILITY AND BUSINESS ETHICS

SSH Communications Security is committed to systematically maintain and develop the responsibility and sustainability of business through its strategy, operations and actions. Company is committed to operate in socially and ethically responsible way.

Company's ethical principles emphasize values important to SSH, including environmental effects, anti-corruption measures, fair treatment of employees, and safety and behavioral culture within workplaces.

SSH Communications Security is responsible employer and treats all employees equally. Company does not approve harassment or discrimination in any form. Company constantly develops the safety and comfort of its workplaces as well as the management of work-related stress and coping with the workload.

SSH Communications Security regards the diversity of its personnel as essential strength and encourages the appraisal and adoption of diversity throughout the organization including top management.

The company has a separate Anti-Bribery and Anti- Corruption Policy as well as equality plan focusing on equal and fair treatment of its employees.

The company has also established a whistle-blower process, which is initiated when someone reports suspected internal or external misconduct or violation of law, regulations, human rights, labor practices, discrimination and harassment, or similar within the operations of SSH Group or by its personnel.

SHARES, SHAREHOLDING, AND CHANGES IN GROUP STRUCTURE

The reported trading volume of SSH Communications Security Corporation totaled 7,806,705 shares (valued at EUR 15,628,896). The highest quotation was EUR 2.27 and the lowest EUR 1.60. The trade-weighted average share price for the period was EUR 2.00 and the share closed at EUR 1.68 (December 28, 2018).

The company's principal owner Mr. Tatu Ylönen holds directly 47.2 % of the company's shares, Mr. Timo Syrjälä holds directly and through his company, Acme Investments SPF S.a.r.l., 9.2 % and Mr. Juha Mikkonen holds directly 5.2 % of the company's shares. More information about the shareholding can be obtained from the company´s website www.ssh.com.

The company has the following subsidiaries:

- SSH Communications Security, Inc. and SSH Government Solutions, Inc. in the USA

- SSH Communications Security Ltd. in Hong Kong,
- SSH Communications Security UK Ltd. (formerly SSH ROkITT Solutions and Services Ltd.) in the UK
- SSH Operations Ltd., Kyberleijona Ltd., and SSH Technology Ltd. in Finland. SSH Operations Ltd. has a branch in Germany.

State Security Networks Group Finland (Suomen Erillisverkot Oy) became a non-controlling interest holder of Kyberleijona Oy on August 14, 2018 with 35 % ownership. SSH Communications Security Oyj owns 65 % of the shares in Kyberleijona Oy.

During the review period, no dividend or return of capital have been distributed.

INFORMATION ON SHAREHOLDERS

DISTRIBUTION OF OWNERSHIP BY SECTOR

Type of sector	Number of shares	Percentage of shares and votes, %
Households and private individuals	28,852,609	74.36 %
Financial and insurance institutions	3,586,316	9.24 %
Public sector organizations	3,420,600	8.82 %
Companies	2,822,822	7.27 %
Foreign shareholders	118,936	0.31 %
Non-profit organizations	950	0.00 %
Total	**38,802,233**	**100.00 %**

DISTRIBUTION OF HOLDINGS BY NUMBER OF SHARES

Shares	Number of shareholders	Percentage of shareholders, %	Number of shares	Percentage of shares, %
1-100	1,628	34.34 %	88,623	0.23 %
101-500	1,304	27.50 %	389,140	1.00 %
501-1,000	649	13.69 %	537,440	1.39 %
1,001-5,000	854	18.01 %	2,045,142	5.27 %
5,001-10,000	143	3.02 %	1,082,201	2.79 %
10,001-50,000	129	2.72 %	2,798,578	7.21 %
50,001-100,000	17	0.36 %	1,103,808	2.84 %
100,001-500,000	9	0.19 %	2,226,996	5.74 %
500,001-999,999,999	8	0.17 %	28,530,305	73.53 %
Total	**4,741**	**100.00 %**	**38,802,233**	**100.00 %**
of which nominee-registered			2,979,822	7.68 %

THE TEN LARGEST SHAREHOLDERS

31 December 2018, Excluding Nominee-Registered	Percentage of shares, %	Shares
Ylönen Tatu	47.21 %	18,317,123
Mikkonen Juha Taneli	5.20 %	2,018,000
Elo Mutual Pension Insurance Company	3.87 %	1,500,000
Ilmarinen Mutual Pension Insurance Company	3.00 %	1,165,300
Gaselli Capital Oy	2.96 %	1,150,000
Varma Mutual Pension Insurance Company	2.15 %	835,011
Syrjälä Timo Kalevi	1.95 %	755,300
Taaleritehdas Mikro Markka Fund	1.29 %	500,000
AC Invest Oy	1.03 %	398,293
Kettunen Risto Juhani	0.79 %	307,000
Total	**69.44 %**	**26,946,027**

Mr. Timo Syrjälä holds directly and through his nominee-registered company 9.17 % of the company's shares.

SHARE CAPITAL AND BOARD AUTHORIZATIONS

The registered share capital of SSH Communications Security Corporation on December 31, 2018 was EUR 1,164,066.99 consisting of 38,802,233 shares.

SHARE SUBSCRIPTIONS WITH OPTION CERTIFICATES FROM THE COMPANY'S OPTION PLANS

Number of shares	2018	2017
I/2012 option plan class A option certificates		14,800
I/2012 option plan class B option certificates		159,150
I/2012 option plan class C option certificates		292,900
I/2013 option plan class A option certificates		6,600
I/2013 option plan class B option certificates		6,600
I/2013 option plan class C option certificates	361,350	
Total	**361,350**	**480,050**

The Annual General Meeting approved the Board of Directors' proposal to authorize the Board of Directors to decide upon the issuing of a maximum of 6,000,000 shares as a share issue against payment or by giving stock options or other special rights entitling to shares, in accordance with Chapter 10 Section 1 of the Finnish Limited Liability Companies Act, either according to the shareholders' pre-emptive right to share subscription or deviating from this right, in one or more tranches. Based on the authorization, either new shares can be issued or own shares, which the company possibly has in its possession, can be transferred. Based on the authorization, the Board of Directors has the same right as the Annual General Meeting to decide on the issuing of shares against payment and special rights (including stock options) in accordance with Chapter 10 Section 1 of the Finnish Limited Liability Companies Act. Thereby, the authorization to be given to the Board of Directors includes, inter alia, the right to deviate from the shareholders' pre-emptive rights with directed issues providing that the company has a weighty financial reason for the deviation in respect of the share issue against payment.

Furthermore, the authorization includes the Board of Directors' right to decide who are entitled to the shares and/or stock options or special rights in accordance with Chapter 10 Section 1 of the Finnish Limited Liability Companies Act as well as on the related compensation, subscription and payment periods and on the registering of the subscription price into the share capital or invested non-restricted equity fund within the limits of the Finnish Limited Liability Companies Act.

The authorization will be valid until the next Annual General Meeting, but will however expire at the latest on June 30, 2019.

The Annual General Meeting approved the Board of Directors' proposal to authorize the Board of Directors to decide upon the acquiring of a maximum of 2,000,000 shares of the company with assets belonging to the company's non-restricted equity. The shares can also be acquired otherwise than in proportion to the holdings of the existing shareholders (directed acquisition). The maximum compensation to be paid for the acquired shares shall be the market price at the time of purchase, which is determined in the public trading.

The Board of Directors proposes that the authorization for the acquiring of the company's own shares would be used, inter alia, to strengthen the company's capital structure, to finance and realize corporate acquisitions and other arrangements, to realize the share-based incentive programs of the company or otherwise to be kept by the company, to be transferred for other purposes or to be cancelled. The acquisition of shares reduces the company's distributable non-restricted equity.

Decision concerning the acquiring of own shares cannot be made so that the combined amount of the own shares which are in the possession of, or held as pledges by, the company or its subsidiaries exceeds one-tenth of all shares. The Board of Directors decides on all other matters related to the acquisition of shares.

The authorization will be valid until the next Annual General Meeting but will however expire at the latest on June 30, 2019.

SHARE-BASED PAYMENTS

The share-based payments of SSH Communications Security are stock options. Stock option programs have been in effect in the reporting period or in the comparison year from the years 2013, 2014, 2015, 2016, and 2018.

The Board of Directors decided on December 18, 2018 on a new stock option program 2019 A. The maximum number of stock options is 980,000. The share subscription period will be from December 1, 2021 to March 31, 2023. The share subscription price for the shares shall be the trade volume weighted average quotation of the company's share on Nasdaq Helsinki Ltd. during a one-month period following the publication of the company's annual results for the year 2018 (with said publication date not included in said period).

Each option gives the right to subscribe to one new share at a price and at a time specified in the terms of the stock option plan. The option rights will be canceled in case the employee leaves the company before the subscription time has begun. There are no other conditions to the beginning of the option rights.

The shares subscribed with the granted option rights include the rights to any dividend payable for the reporting period during which the shares were subscribed. Other shareholder rights commence as soon as the increase in the share capital has been registered in the Trade Register. More information on stock option plans is given in note 17 in the consolidated financial statements.

RELATED PARTY TRANSACTIONS

SSH Communications Security Corporation entered in February 2018 into a patent cross license and settlement agreement with Sony. SSH paid to Clausal Computing EUR 220,000 of the license revenue as a royalty fee.

Clausal Computing Oy sold in June 2018 all SSH Communications Security Corporation held by it to its sole shareholder and a member of SSH's Board of Director Mr. Tatu Ylönen. The ownership share or voting power of Mr. Ylönen in SSH did not change as a result of the transaction.

SSH Communications Security Corporation entered in December 2018 into a patent license agreement with one of the leading providers of patent risk management solutions. SSH will pay to Clausal Computing Oy USD 440,000 (approximately EUR 385,000) of the license revenue as a royalty fee.

During the reporting period, there have not been any other significant transactions with related parties.

EVENTS AFTER THE BALANCE SHEET DATE

There have been no material events after the balance sheet date.

DIVIDEND AND OTHER DISTRIBUTION OF ASSETS

The parent company's distributable funds are EUR 2,152,677.15, of which the profit for the financial year is EUR 1,542,069.05. The Board of Directors proposes to the Annual General Meeting on March 26, 2019 that no dividend or return of capital shall be distributed. It is proposed that the profit of the financial year shall be entered to the retained earnings in the shareholders' equity.

FINANCIAL INDICATORS

		2018	2017	2016
Net sales	EUR	18,340,371	16,232,979	15,121,803
Operating profit/loss	EUR	544,239	-1,708,913	-10,753,470
% of net sales	%	3.0	-10.5	-71.1
Profit/loss before taxes	EUR	558,577	-2,219,679	-11,017,005
% of net sales	%	3.0	-13.7	-72.9
Return on equity	%	3.8	-21.2	-112.1
Return on investments	%	4.1	-21.0	-111.8
Net interest-bearing debt	EUR	-13,295,691	-13,476,582	-7,844,754
Gearing	%	-93.5	-104.5	-94.8
Equity ratio	%	81.6	82.9	63.1
Gross investments in tangible and intangible assets	EUR	2,257,099	1,545,190	2,454,542
% of net sales	%	12.3	9.5	16.2
Research and development costs	EUR	-5,108,469	-5,456,653	-9,456,568
% of net sales	%	27.9	33.6	62.5
Average number of personnel		82	82	111
Number of personnel 31 Dec		85	80	84
Salaries and fees	EUR	-8,346,214	-8,927,260	-11,402,920

INDICATORS PER SHARE

		2018	2017	2016
Earnings per share*	EUR	-0.01	-0.09	-0.36
Earnings per share, diluted*	EUR	-0.01	-0.09	-0.36
Equity per share	EUR	0.37	0.34	0.24
Dividends	EUR	0	0	0
Dividends per share	EUR	0.00	0.00	0.00
Dividend pay-out ratio	%	0	0	0
Effective dividend yield	%	0	0	0
Return of capital	EUR	0	0	0
Return of capital per share	EUR	0	0	0
Adjusted average number of shares during the period	1,000	38,578	36,570	32,983
Adjusted number of shares at the end of the period	1,000	38,802	38,441	34,561
Adjusted number of shares considering dilution effect	1,000	40,298	41,169	38,492
Price per earnings ratio (P/E)		neg.	neg.	neg.
Market capitalization 31 Dec	mEUR	65.2	68.0	67.0

		2018	2017	2016
Share performance on the Helsinki Stock Exchange				
Average price	EUR	2.00	2.11	2.84
Share price, year end	EUR	1.68	1.77	1.94
Lowest quotation	EUR	1.60	1.72	1.86
Highest quotation	EUR	2.27	2.59	4.39
Volume of shares traded	millions	7.8	5.6	6.5
Volume of shares traded, % of total number	%	20.2	15.2	19.6
Volume of shares traded	mEUR	15.6	11.7	18.3

*Earnings per share is impacted by unpaid interest of hybrid capital securities

CALCULATION OF FINANCIAL RATIOS

Return on Equity, % (ROE)	=	Profit / loss for the financial period ――― Equity (average during the financial period)	x100
Return on Investment, % (ROI)	=	Profit / loss before taxes + Interest and other financial costs ――― Balance sheet total - Non-interest bearing debts (average during financial period)	x100
Equity Ratio, %	=	Equity ――― Balance sheet total - Advance payments received	x100
Earnings Per Share (EPS)	=	Profit / loss for the financial period – Interest on hybrid capital securities ――― Average number of outstanding shares during the financial period	
Diluted EPS	=	Profit / loss for the financial period – Interest on hybrid capital securities ――― Adjusted average number of shares considering dilution effect	
Dividend Per Share	=	Dividend ――― Number of outstanding shares during the financial period	
Dividend Pay-out Ratio, %	=	Dividend per share ――― Earnings per share	x100
Equity Per Share	=	Equity ――― Number of outstanding shares on the financial statement date, adjusted for share issue	
Gearing, %	=	Interest bearing debt - Liquid assets ――― Equity	x100

CONSOLIDATED FINANCIAL STATEMENTS

CONSOLIDATED COMPREHENSIVE INCOME STATEMENT

EUR	Note	1 Jan–31 Dec 2018	1 Jan–31 Dec 2017
NET SALES	3	**18,340,371**	**16,232,979**
Cost of goods sold		-1,434,847	-1,532,616
GROSS MARGIN		**16,905,524**	**14,700,363**
Other operating income		30,889	49,049
Sales and marketing costs	4, 5	-8,536,708	-8,243,834
R&D costs	4, 5	-5,108,469	-5,456,653
Administrative costs	4, 5	-2,746,996	-2,757,837
OPERATING PROFIT/LOSS		**544,239**	**-1,708,913**
Financial income	6	110,214	54
Financial costs	7	-95,876	-510,820
PROFIT/LOSS BEFORE TAXES		**558,577**	**-2,219,679**
Income taxes	8	-47,615	-25,907
PROFIT/LOSS FOR THE FINANCIAL PERIOD		**510,962**	**-2,245,586**
Profit/loss attributable to:			
Owners of the parent company		829,936	-2,245,586
Non-controlling interests		-318,974	-
TOTAL		**510,962**	**-2,245,586**

OTHER COMPREHENSIVE INCOME			
Items that may be reclassified subsequently to profit or loss:			
Translation differences		-99,013	381,079
TOTAL COMPREHENSIVE INCOME FOR THE PERIOD		**411,949**	**-1,864,507**
Total Comprehensive income attributable to:			
Owners of the parent company		730,924	-1,864,507
Non-controlling interests		-318,974	0
TOTAL		**411,949**	**-1,864,507**
Earnings per share	9	-0.01	-0.09
Earnings per share, diluted	9	-0.01	-0.09

CONSOLIDATED BALANCE SHEET

EUR	Note	31 Dec 2018	31 Dec 2017
ASSETS			
NON-CURRENT ASSETS			
Property, plant and equipment	10	154,798	113,250
Intangible assets	11	5,194,562	4,842,426
Investments		11,000	11,000
NON-CURRENT ASSETS, TOTAL		**5,360,360**	**4,966,676**
CURRENT ASSETS			
Inventories		28,359	
Trade receivables	12, 14	4,820,753	3,876,814
Other receivables	13	354,729	597,158
Prepaid expenses and accrued expenses		188,691	279,717
Current receivables, total		**5,392,532**	**4,753,689**
Cash and cash equivalents		**13,457,691**	**13,476,582**
TOTAL CURRENT ASSETS		**18,850,223**	**18,230,270**
TOTAL ASSETS		**24,210,583**	**23,196,947**

CONSOLIDATED BALANCE SHEET

EUR	Note	31 Dec 2018	31 Dec 2017
SHAREHOLDERS' EQUITY AND LIABILITIES			
EQUITY ATTRIBUTABLE TO THE PARENT COMPANY SHAREHOLDERS			
Share capital		1,164,067	1,153,226
Translation differences		-1,406,374	-1,307,361
Unrestricted invested equity fund		22,720,156	22,131,155
Hybrid capital securities		12,000,000	12,000,000
Retained earnings		-21,077,384	-21,083,523
Equity attributable to parent company shareholders		**13,400,465**	**12,893,498**
Non-controlling interest		821,104	0
TOTAL EQUITY		**14,221,570**	**12,893,498**
NON-CURRENT LIABILITIES			
Borrowings		162,000	0
TOTAL NON-CURRENT LIABILITIES		**162,000**	**0**
CURRENT LIABILITIES			
Advances received		6,773,303	7,649,078
Accounts payables	14	931,678	830,835
Accrued expenses	18	1,510,202	1,380,586
Other liabilities	19	611,831	442,949
TOTAL CURRENT LIABILITIES		**9,827,013**	**10,303,449**
TOTAL LIABILITIES		**9,989,013**	**10,303,449**
TOTAL EQUITY AND LIABILITIES		**24,210,583**	**23,196,947**

CONSOLIDATED CASH FLOW STATEMENT

EUR	Note	1 Jan–31 Dec 2018	1 Jan–31 Dec 2017
CASH FLOW FROM BUSINESS OPERATIONS			
Receipts from customers	3, 12	16,150,224	18,465,195
Payments to suppliers and employees	4, 18, 19	-14,853,997	-16,939,884
Cash flow from business operations before financial items and taxes		**1,296,227**	**1,525,312**
Interest paid and payments on other financial costs		-5,246	-261,376
Interest received and other financial income		651	54
Income taxes paid		-94,758	13,240
Net cash flows from operating activities		**1,196,874**	**1,277,229**
whereof change in working capital		*-1,213,873*	*850,405*
CASH FLOW FROM INVESTING ACTIVITIES			
Investments in tangible and intangible assets	10, 11	-2,257,099	-1,545,190
Investment in subsidiaries			0
Net cash flows from investing activities		**-2,257,099**	**-1,545,190**
CASH FLOW FROM FINANCING ACTIVITIES			
Proceeds from subordinated debt		162,000	0
Interest on hybrid capital securities		-900,000	-900,000
Proceeds from shares subscribed with option rights		599,841	325,365
Proceeds from share issue		1,000,000	6,970,000
Expenses from share issue		0	-253,059
Net cash flows from financing activities		**861,841**	**6,142,305**
Change in cash and cash equivalents		**-198,384**	**5,874,345**
Cash and cash equivalents in beginning of period		**13,476,582**	**7,844,754**
Exchange rate effect		179,494	-242,517
Change in cash and cash equivalents		-198,384	5,874,345
Cash and cash equivalents at end of period		**13,457,691**	**13,476,582**

STATEMENT OF CHANGES IN CONSOLIDATED EQUITY

		Attributable to the owners of the Company							
EUR	Note	Share capital	Hybrid capital securities	Translation differences	Unrestricted invested equity fund	Retained earnings	Total	Non-controlling interests	Total Equity
Equity 1 Jan 2017	**15**	**1,036,825**	**12,000,000**	**-1,688,440**	**14,952,192**	**-18,029,682**	**8,270,894**	**0**	**8,270,894**
Comprehensive profit/loss									
Loss for the period						-2,245,586	-2,245,586		-2,245,586
Other comprehensive items									
Translation differences				381,079			381,079		381,079
Comprehensive profit/loss for financial period, total		**0**	**0**	**381,079**	**0**	**-2,245,586**	**-1,864,507**	**0**	**-1,864,507**
Hybrid capital securities						-900,000	-900,000		-900,000
Share issue		102,000			6,868,000	-253,059	6,716,941		6,716,941
Share-based payment plans						344,805			344,805
Shares subscribed on option rights	17	14,402			310,964		325,365		325,365
Transactions with shareholders		**116,402**	**0**	**0**	**7,178,964**	**-808,254**	**6,487,111**	**0**	**6,487,111**
Equity 31 Dec 2017		**1,153,226**	**12,000,000**	**-1,307,361**	**22,131,155**	**-21,083,523**	**12,893,498**	**0**	**12,893,498**

STATEMENT OF CHANGES IN CONSOLIDATED EQUITY

		Attributable to the owners of the Company							
EUR	Note	Share capital	Hybrid capital securities	Translation differences	Unrestricted invested equity fund	Retained earnings	Total	Non-controlling interests	Total Equity
Equity 1 Jan 2017		**1,153,226**	**12,000,000**	**-1,307,361**	**22,131,155**	**-21,083,523**	**12,893,498**	**0**	**12,893,498**
Adjustment on adoption of IFRS 15						-77,269	-77,269		-77,269
Equity 1 Jan 2018	15	**1,153,226**	**12,000,000**	**-1,307,361**	**22,131,155**	**-21,160,792**	**12,816,229**	**0**	**12,816,229**
Comprehensive profit/loss									
Profit/loss for the period						829,936	829,936	-318,974	510,962
Other comprehensive items									
Translation differences				-99,013			-99,013		-99,013
Comprehensive profit/loss for financial period, total		**0**	**0**	**-99,013**	**0**	**829,936**	**730,924**	**-318,974**	**411,949**
Hybrid capital securities						-900,000	-900,000		-900,000
Share issue						293,550	293,550		293,550
Shares subscribed on option rights	17	10,841			589,001		599,841		599,841
Change in group structure[1]						-140,079	-140,079	1,140,079	1,000,000
Transactions with shareholders		**10,841**	**0**	**0**	**589,001**	**-746,528**	**-146,687**	**1,140,079**	**993,391**
Equity 31 Dec 2018		**1,164,067**	**12,000,000**	**-1,406,374**	**22,720,156**	**-21,077,384**	**13,400,465**	**821,104**	**14,221,570**

[1] State Security Networks Group Finland became a non-controlling interest holder of Kyberleijona Oy with 35 % ownership.
The amount of the investment is EUR 1,000,000 and additionally, State Security Networks Group Finland has issued a subordinated loan of EUR 162,000 to Kyberleijona Oy.

Notes to the Consolidated Financial Statements

1. GENERAL INFORMATION

SSH Communications Security Corporation helps organizations access, secure and control their digital core – their critical data, applications and services. In the rapidly growing global data economy, secure access that enables digital transformation at business velocity is the new competitive advantage.

Our thousands of customers include Fortune 500 companies, the world's largest financial institutions, and major organizations in all verticals. Our solutions guard against the rapidly changing threat landscape that includes both internal and external actors.

We generate shareholder value from a combination of our world-leading expertise, proven enterprise-class solutions, professional services, support offering, and from our strong IP portfolio and well-established licensing operations.

The SSH Communications Security Group consists of SSH Communications Security Corporation and its subsidiaries. SSH Communications Security Corporation (corporate id 1035804-9) is domiciled in Helsinki, Finland and is a publicly traded company, whose share is quoted on NASDAQ Helsinki Oy (SSH1V). SSH Communications Security Corporation has its registered office at address Kornetintie 3, 00380 Helsinki, Finland.

The SSH Communications Security Board of Directors approved this financial statement for publication at its meeting on 11 February 2019. Under the Finnish Limited Liability Companies Act, the shareholders can accept or reject the financial statement at the AGM held after its publication. A copy of the financial statements is published as a part of the company's annual report.

The annual report is available on the company website at www.ssh.com, or at the head office of SSH Communications Security Corporation. All stock exchange bulletins are available on the company website www.ssh.com.

SSH Communications Security UK Ltd (registration number 09346221) is exempt from the requirements of the UK Companies Act relating to the audit of accounts under section 479A of the Companies Act 2006.

2. ACCOUNTING PRINCIPLES

Basis of Preparation

The consolidated financial statements have been prepared in compliance with the International Financial Reporting Standards (IFRS). The aforementioned standards are the standards and interpretations thereof approved for use in the EU pursuant to Regulation (EC) No. 1606/2002 implemented in the Finnish Accounting Act and legislation based thereon. The notes to the consolidated financial statements are also compliant with Finnish accounting and company legislation.

The following new and amended standards have been adopted as of January 1, 2018:

- **Amendments to IFRS 2 Share-based Payment Transactions.** Clarification and Measurement of share-based Payment Transactions. The amendments clarify the measurement for certain arrangements. The following three areas are affected: cash-settled share-based payments, share-base payments settled net of tax withholdings and modifications of share-based payment transactions from cash-settled to equity-settled.
- **IFRS 9 Financial Instruments.** IFRS 9 will replace current IAS 39 Financial Instruments: Recognition and measurement. The standard introduces new requirements for classification and measurement, impairment, and hedge accounting. The amendment did not have significant impact on the consolidated financial statements.
- **IFRS 15 Revenue from Contracts with Customers.** IFRS 15 establishes a new comprehensive framework that will apply to revenue arising from contracts with customers. Under IFRS 15, revenue is recognized at an amount that reflects the consideration to which an entity expects to be entitled in exchange for transferring goods or services to a customer. The Group's revenue from contracts with customers generally include software licenses and subscriptions, related support and maintenance fees, and consulting services. The revenue from product sales is recognized at the point of time when control of the asset is transferred to the customer, generally on delivery with the contract. Support and maintenance fees are recognized over time, evenly on an accrual basis. Revenues from services continue to be recognized when the service has been delivered to the customer.

  Generally, the Group receives short-term advances from its customer but from time to time also major long-term advance payments for subscriptions or maintenance and support services. In those cases, the financing component is taken into consideration and interest expense is recognized over the duration of the advance payment.

  The Group adopted IFRS 15 standard using the modified retrospective approach. The cumulative impact of the adoption was recognized in retained earnings on 1 January 2018 and the comparatives were not restated. Upon adoption of IFRS 15, the Group recognized EUR 0.1 million Contract liabilities for the interest on the advances received from customers with a significant financing component and charged this to retained earnings.

The consolidated financial statements are based on original acquisition costs unless otherwise noted in the accounting principles. The consolidated financial statements are presented in full euros unless otherwise stated.

New IFRS standards and interpretations

The Group has not yet adopted the following new and amended standards and interpretations already issued by the IASB. The Group will adopt them as of the effective date or, if the date is other than the first day of the financial year, from the beginning of the subsequent financial year.

- **IFRS 16 Leases** (effective for 2019 annual period with early adoption permitted at the same time with IFRS 15). New standard replaces IAS 17 standard and related interpretations. The new standard requires a lessee to recognize leasing contract in the balance sheet as a lease liability and related asset. There are optional exemptions for short-term leases with a lease term of 12 months or less and leases of low-value assets. The company has evaluated all of the Group's leases in accordance with IFRS 16.

  At the end of the financial period, the Group has non-cancellable lease agreements for office facilities with 550 thousand euros (note 21. Operating lease agreements) which forms the basis for the asset and financial liability to be recognized. The Group expects to recognize on 1 January 2019 approximately 493 thousand euros of right-of-use assets and lease liabilities. The adoption of this standard is estimated to decrease the profit in 2019 by approximately 7 thousand euros.

  The Group will adopt the standard on the required date 1 January 2019. The transition will be effected using the modified retrospective approach and the comparable numbers from the prior year will not be adjusted.

- **Interpretation of IFRIC 23 (Uncertainty over Income Tax Treatments).** The interpretation is to be applied to the determination of taxable profit (tax loss), tax bases, unused tax losses, unused tax credits and tax rates, when there is uncertainty over income tax treatments.

- **Change to IFRS 10 (Consolidated Financial Statements) and IAS 28 (Investments in Associates and Joint Ventures).** The change applies to the sale of assets between an investor and associated or joint venture company when the asset to be sold forms a business. This change is not expected to have an impact on the consolidated financial statements.

Subsidiaries

The consolidated accounts include the parent company SSH Communications Security Corporation and all its subsidiaries. Subsidiaries are companies in which the Group has a controlling interest. A controlling interest is created when the Group has power over the investee, exposure, or rights, to variable returns from its involvement with the investee and the ability to use its power over the investee to affect the amount of the Group's returns. In practice, controlling interest is established when the Group owns more than half of the votes in a company.

Group-internal share ownership is eliminated using the purchase method. Subsidiaries are consolidated from the date on which control is transferred to the Group and are no longer consolidated from the date on which that control ceases. All Group-internal transactions, receivables and debts, unrealized profit, and profit distribution have been eliminated.

The share of the non-controlling interests of the subsidiaries' profits and equity is presented as a separate item in the consolidated income statement, comprehensive income statement, statement of changes in equity, and in the balance sheet.

Converting Foreign Currency Transactions

Items of each subsidiary included in the consolidated financial statements are measured using the currency of the operating environment of that subsidiary ('functional currency'). The consolidated financial statements are presented in euros, which is the functional and reporting currency of the parent company.

Transactions in Foreign Currency

Foreign currency denominated transactions are recognized at the exchange rate of the functional currency on the transaction date. In practice, the exchange rate used is approximately the rate of the transaction date. Outstanding receivables and liabilities in foreign currencies are measured using the exchange rates on the balance sheet date. Exchange rate differences are recorded in the income statement. Exchange rate gains and losses on financing are included in financing income and costs.

Translation of Financial Statements of Foreign Subsidiaries

The comprehensive income statements and cash flow statements of subsidiaries whose functional currency is other than EUR are translated into euros using the exchange rate of the transaction dates. In practice, the translations are done once a month using the monthly average exchange rate. Balance sheet items are translated into euros with the exchange rate of the balance sheet date. The translation of the comprehensive profit/loss for the financial period using different exchange rates in the comprehensive income statement on the one hand and in the balance sheet on the other causes a translation difference recognized under Group equity under other comprehensive profit/loss items.

Translation differences generated through elimination of the acquisition costs of foreign subsidiaries and translation of equity items accrued after acquisition are recognized under other comprehensive profit/loss items. When a subsidiary is sold, accumulated translation differences are recognized in the income statement as part of the gain or loss on the sale.

Revenue Recognition

SSH Communications Security net sales derive mainly from software license sales and subscriptions, related support and maintenance fees, and consulting fees. Net sales comprise the invoiced value for the sale of goods and services adjusted with any discounts given, sales taxes, and exchange rate differences.

The revenue from product sales is recognized at the time when significant risks and rewards of the product or the right of use of the product have been transferred to the buyer and there is a binding contract between the parties, the delivery has taken place in accordance with the contract, the amount of revenue can be measured reliably, and it is probable that the economic benefits associated with the transaction will accrue to the Group.

Maintenance fees are recognized evenly on an accrual basis throughout the contract period. Revenues from services are recognized when the service has been delivered and it is probable that the economic benefits associated with the transaction will accrue to the Group.

The revenue of royalties from licenses is recognized according to the actual content of the contract.

The Group customarily receives short-term advance payments from customers, but also from time to time substantial long-term advance payments for subscription or support and maintenance fees. In these cases, the financing component is accounted for and interest expenses are recorded for the duration of the advance payment.

Government Grants

Grants received from the government for purchase of tangible assets are entered as a deduction of the book value of the asset when there is reasonable assurance that the company will receive the grant and will comply with the conditions attaching to the grant. Grants are recognized as income over the life of a depreciable asset by way of a reduced depreciation. Government grants that are intended to compensate for costs are recognized as income over the same period as the related costs are recognized. These government grants are presented under other operating income.

Property, Plant, and Equipment

The property, plant, and equipment of Group companies are measured in the balance sheet at cost less accumulated straight-line depreciation and eventual impairment losses. When a part of a current assets item is treated as a separate asset, expenses related to its replacement are capitalized and any remaining book value is written off. Expenses incurring at a later date are included in the class of property, plant, and equipment only if it is probable that the property will provide future economic benefits to the Group and that the acquisition cost can be reliably determined. Other repair and maintenance expenses are recognized in profit/loss as and when incurred.

Depreciation is calculated on a straight-line basis to reduce the purchase value of each asset item to its residual value over its estimated useful life.

- Machinery and equipment: 5 years from month of acquisition.
- Computer hardware: 3 years from month of acquisition.
- Leasehold improvements of rental premises: According to the lease term, though no more than 7 years from year of acquisition.

The residual value and useful life of assets are reviewed for each financial statement and, if necessary, adjusted to indicate changes expected in the assets’ economic benefits.

The depreciation on property, plant, and equipment is ceased when the asset is classified as held for sale in accordance with standard IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations*.

Capital gains and losses are determined by comparing proceeds received with the book value of sold assets. Impairment losses incurred through transfer are recognized under other operating costs.

Intangible Assets

Research and Development Costs

Research costs are recognized as costs in the income statement. Development costs (related to the design and testing of new or improved products) from incomplete projects are recognized as intangible assets if capitalization criteria are fulfilled, to the extent of their probable economic benefits to the company. The most significant development costs to be capitalized constitute R&D personnel costs and sub-contracting costs. Other development costs are recognized directly as costs. Development costs once recognized as costs are not capitalized in subsequent financial periods.

Capitalized assets are tested annually for impairment. After initial recognition, capitalized development costs are measured at cost less accumulated depreciation and impairment losses. Capitalized development costs are depreciated on a straight- line basis over their economic lifetime, estimated at 3–5 years.

Software

Software includes acquired software licenses. These assets are entered in the balance sheet at cost and depreciated on a straight-line basis over their economic lifetime. The residual value and useful life of assets are reviewed for each financial statement and, if necessary, adjusted to indicate changes expected in the assets’ economic benefits. The economic lifetime does not generally exceed 5 years. The depreciation period for software acquired for internal use is 3–5 years.

Other Immaterial Rights

Immaterial rights include obtained technology patents, trademarks, customer registers, and technology rights. These are entered in the balance sheet at cost and depreciated on a straight-line basis over their economic lifetime. The residual value and useful life of assets are reviewed for each financial statement and, if necessary, adjusted to indicate changes expected in the assets’ economic benefits. The economic lifetime is generally 5 to 10 years.

Impairment of Tangible and Intangible Assets

The Group will review on each balance sheet date whether there is any indication of an impaired asset. Whenever indicators of impairment exist, the book value of such an asset is compared with its recoverable amount. The recoverable amount is the fair value of the asset less the costs of its sale, or its value in use, whichever is higher. The value in use is the present value of the future cash flows expected to be derived from an asset or cash-generating unit. The discount rate used to calculate the above is pre-tax rate that reflects the current market assessments of the time value of money and the risks specific to the asset.

Whenever the book value of an asset exceeds its recoverable amount, an impairment loss will be recognized for that asset. The impairment loss is recognized immediately in the income statement. After the recognition of an impairment loss, the economic lifetime of an asset subject to depreciation is re-evaluated. An impairment loss recognized in prior period for an asset other than goodwill will be reversed if there is a change in the estimates that have been used in assessing the recoverable amount of that asset.

Inventories

Inventories are valued at cost or at a net realizable value, whichever is lower. Inventories comprise finished goods for sale or for use in producing a service.

Financial Assets and Liabilities

Financial Assets

The Group has classified its financial assets into the following categories: financial assets at fair value through profit of loss, financial assets at fair value through comprehensive income statement, and financial assets at amortized value.

The assets are classified at initial recognition; the classification is based on the business model used in managing the financial assets and contractual terms of the cash flows. The assets are initially recognized at fair value. Transaction costs are included in the original book value of an asset if the asset is not to be recognized at fair value through profit or loss. Financial assets are written off from the balance sheet when the contractual right to cash flows from an asset included in financial assets ends or when the significant risks and rewards related to the asset are transferred outside the Group. All asset purchases and sales are recognized on the date of the transaction.

Financial assets through profit or loss include derivatives unless they are designated as effective hedging instruments or warrants such as currency derivatives, and fund investments. Changes in fair values of derivative financial instruments and realized and unrealized gains and losses are recognized in the income statement during the period when they incur. The Group did not have any derivatives during 2018 or 2017.

Loans and receivables are valued at cost at the time of acquisition and they are measured at amortized acquisition cost using the effective interest rate method.

Cash and Cash Equivalents

Cash and cash equivalents include cash on hand, short-term deposits at banks, and other short-term liquid investments. Assets classified as cash and cash equivalents have a maturity of three months or less at the time of acquisition.

Impairment of Financial Assets

The Group assesses at each balance sheet date whether there is any objective evidence that a financial asset or group of financial assets is impaired. If there is such evidence, the impairment will immediately be recognized in the income statement. If an impairment on an interest instrument is later reversed, this will be recognized in profit/loss.

The Group recognizes an impairment loss on trade receivables when there is objective evidence that the receivable is not fully collectible. Significant financial difficulties, likelihood of bankruptcy, neglect of payments, or delay of payment by more than 90 days on part of a debtor may be considered to constitute such evidence for an impairment loss on trade receivables. The impairment loss recognized in the income statement is the difference between the book value and current value of estimated future cash flows of a receivable discounted at the effective interest rate. If impairment loss is decreased during any later period and the basis for this can objectively be related to an event occurred after the original impairment, the reversal will be recognized in profit/loss in the income statement.

Financial Liabilities

The Group's financial liabilities are classified into financing liabilities recognized at fair value through profit/loss or other financial liabilities (financing liabilities recognized at amortized acquisition cost). A financial liability is classified as current if the Group does not have the absolute right to postpone repayment to at least 12 months from the end of the period under review. A financial liability (or part thereof) will not be written off the balance sheet until it has ceased to exist, i.e. when the obligation specified in the agreement has been discharged or reversed and its period of validity has expired.

In the SSH Communications Security Group, financial liabilities recognized at fair value through profit/ loss include the derivative instruments which do not fulfill the criteria for hedging accounting, and which are not warrants (currency derivatives). Unrealized and realized gains/losses due to changes in the fair value of these derivatives are recognized in profit/loss in the financial period during which they are generated. The Group did not have any derivative contracts during 2018 or 2017.

Other financial liabilities (financing liabilities recognized at amortized cost) include, most significantly, trade payables. They are initially recognized at fair value. After the original recognition, other financial liabilities are measured at amortized acquisition cost using the effective interest rate method.

Leases

Leases on property, plant and equipment which expose the Group to significant risks and rewards incidental to ownership are classified as finance leases. Finance lease agreements are capitalized at the commencement of the lease at the fair value of the leased asset or the present value of the minimum lease payments, whichever is lower. Finance lease asset is depreciated over its useful life or within the lease term, whichever is shorter. Lease payments are apportioned between the finance charge and repayment on the outstanding liability over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability.

Lease liabilities are included in interest-bearing liabilities. The Group did not have any finance leases at the end of 2018 or 2017.

Leases where a significant portion of the risks and rewards of ownership are retained by the lessor are classified as operating leases. Operating lease payments are recognized as other operating expenses the income statement on a straight-line basis over the lease term.

Earnings per Share

Earnings Per Share

Earnings per share is calculated by dividing the net profit/loss for the financial year attributable to the owners by the weighted average number of ordinary shares outstanding during the financial year. Earnings per share is impacted by unpaid interest of hybrid capital securities.

Diluted Earnings Per Share

A dilutive effect caused by stock options exists when the subscription price of a share is lower than the fair value of the share. In the calculation of diluted earnings per share, stock options are only considered dilutive when their conversion to ordinary shares would decrease earnings per share or increase the loss per share from continuing operations. In other words, when the Group declares a loss, no dilutive effect will be calculated. Diluted earnings per share is impacted by unpaid interest of hybrid capital securities.

Share Capital

Share capital consists of ordinary shares of the parent company classified as equity. Dividends paid on ordinary shares are deducted from equity in the period during which the decision to distribute dividends is made in the Annual General Meeting.

Share Issue Costs

Costs directly related to an issue of new shares, other than costs attributable to a business combination, are deducted, net of tax, from the proceeds recognized under equity.

Own Shares

If SSH Communications Security Corporation or its subsidiaries purchase parent company SSH Communications Security Corporation's shares, the compensation paid, including any related incremental external costs, net of tax, is deducted from total equity as own shares until the shares are canceled or transferred. If own shares are subsequently sold, any compensation received will be recognized under equity. The Group companies held no shares in the parent company on 31 December, 2018 or 31 December, 2017.

Hybrid capital securities

Hybrid capital securities is an instrument that is subordinated to the Company's other debt obligations and is treated as equity in the Group balance sheet. Unpaid interest is cumulated but presented in the financial statements only after Board of Directors' interest payment decision.

Gross Margin

Gross margin is equal to net sales less the acquisition costs of directly related materials and services.

Operating Profit/Loss

IAS 1 Presentation of Financial Statements does not define operating profit/loss. The Group uses the following definition: operating profit/loss is equal to earnings before interest and taxes.

Income Tax

Tax expenses in the income statement comprise tax based on taxable income for the period and deferred tax. Income tax is recognized in the income statement except for taxes related to items recognized under comprehensive profit/loss or directly under equity, in which case the tax impact will be incorporated in the aforementioned items. Tax based on taxable income for the period is calculated using the corporate income tax rate (and tax laws) effective in each country, adjusted for any tax from previous periods.

Deferred taxes are calculated on all temporary differences between the book value and taxable value. The largest temporary differences arise from unused tax losses which are deductible at a later date.

Deferred taxes are calculated using the statutory tax bases with confirmed content announced by the closing date or with generally accepted tax bases. Deferred tax assets are recognized to the extent that it is probable that taxable income against which the temporary difference can be applied will materialize in the future. Deferred tax liabilities are recognized at full value in the balance sheet.

Employee Benefits

Pensions

The Group's pension schemes comply with the relevant regulations and practices in each relevant country. Pension security for the Group personnel is handled through external pension insurance companies. The Group applies defined contribution pension plans, in which the Group pays fixed contributions to an outside unit. The Group has no obligation to make additional payments in case the recipient of the aforementioned contributions cannot discharge its pension payment obligations. Contributions under the defined contribution plan are recognized in the income statement for the financial period during which the contributions were made.

Share-Based Payments

Option rights have been issued to the Group management and personnel. Option rights are issued with a fixed subscription price determined in the terms and conditions of the option plan.

Option rights are measured at fair value on their date of issue and recognized as a cost in the income statement on a straight-line basis over the vesting period. The expense determined at the time of issuing the stock options is based on the Group's estimate of the number of stock options to which it is assumed that rights will vest by the end of the vesting period. The fair value is determined using the Black-Scholes pricing model. The non-market criteria are not included in the fair value of the option but taken into account in the number of stock options that are assumed to vest at the end of the vesting period. On the date of each financial statement, the Group updates its estimate of the final amount of the stock options that will vest, and changes in this estimate are recognized in the income statement. When the option rights are exercised, the proceeds received, net of any transaction costs, are recognized under share capital and unrestricted invested equity fund.

Provisions

Provisions are recognized when the Group has a present legal or constructive obligation as a result of past events, when it is probable that expenditure will be required to settle the obligation, and when a reliable estimate of the amount can be made. If the Group expects an obligation to be partly reimbursed by a third party, the reimbursement is recognized as a separate asset but only when the reimbursement is certain in practical terms. The Group recognizes a provision on loss-making agreements when the expected benefits of an agreement are less than the unavoidable costs of meeting the obligations under the agreement.

Provisions are measured at the current value of the costs required to discharge the obligation. The discount rate is determined to reflect current market assessments of the time value of money and the risks specific to the obligation.

Use of estimates

Preparation of the consolidated financial statements in accordance with IFRS requires management to make estimates and assumptions affecting the reported amounts of assets, liabilities, income and expenses, as well as the disclosure of contingent assets and liabilities. The estimates and assumptions are based on historical experience and other factors that are believed to be reasonable under the circumstances, which form the basis of making the judgments about carrying values. These estimates and assumptions are reviewed on an ongoing basis and possible effects of changes in estimates and assumptions are recognized during the period they are changed.

The estimates and assumptions that have a significant risk of causing adjustment to the carrying value of assets within next financial year relate to restructuring plans, impairment testing, claims, onerous contracts, pending patent litigations, and the probability of deferred tax assets being recovered against future taxable profits.

3. NET SALES

EUR	2018	2017
BY OPERATION		
Software fees	5,617,420	4,047,914
Professional services and other	4,254,481	3,924,684
Recurring revenue	8,468,471	8,260,381
Total	**18,340,371**	**16,232,979**

EUR	2018	2017
BY GEOGRAPHICAL SEGMENT		
AMERICAS	9,008,614	8,269,950
APAC	2,383,889	2,323,968
EMEA	4,201,143	3,539,062
Global royalty income	2,746,725	2,100,000
Total	**18,340,371**	**16,232,979**

Information about major customers

In the financial year 2018, revenue share from one customer was EUR 2.4 million, which was 13 % of the net sales of the group. In the financial year 2017, revenue share from one customer was EUR 2.1 million, which was 13 % of the net sales of the group.

4. OTHER OPERATING COSTS

EUR		
Employee benefit expenses	**2018**	**2017**
Wages and salaries	-8,259,311	-8,314,707
Pensions, defined contribution plan	-827,306	-824,637
Other social security costs	-411,129	-484,134
Stock options issued	-293,550	-344,805
Total	**-9,791,296**	**-9,968,283**

Information about remuneration of the key management personnel is presented in note 23. Related party transactions and information on the options granted is presented in the note 17. *Share-based payments.*

Number of personnel	2018	2017
Average during the financial period	82	82
At the end of the financial period	85	80

Personnel distribution by function on 31 Dec	2018	2017
Sales, marketing, and customer support	33	29
Research and development	41	35
Administration	11	16
Total	**85**	**80**

Research and development costs, EUR	2018	2017
Total	**-5,108,469**	**-5,456,653**

Other operating costs, EUR	2018	2017
External services	-4,529,225	-3,890,688
Depreciation	-1,866,100	-2,037,801
Other costs	-1,650,634	-1,602,575
Total	**-8,045,959**	**-7,531,064**

Auditor's fees

Auditor's fees categorized into service groups were:

EUR	2018	2017
Principal auditor (Ernst & Young Oy)		
Statutory auditing	-36,000	-36,000
Other auditing	-4,100	-12,900
Tax guidance		-800
Other services	-3,601	-5,131
Other auditing firms:		
Statutory auditing	-12,907	-17,779
Other auditing	0	-4,109
Tax guidance	-16,022	-19,113
Other services	-2,769	-685
Total	**-75,398**	**-96,518**

5. DEPRECIATIONS

EUR	2018	2017
By asset category		
Machinery and equipment	92,928	141,653
Software & other intangible assets	283,419	232,039
Capitalized development costs	1,489,754	1,664,109
Total	**1,866,100**	**2,037,801**

By function	2018	2017
Sales and marketing	26,632	135,463
Research and development	1,686,428	1,827,599
Administration	153,040	74,738
Total	**1,866,100**	**2,037,801**

6. FINANCIAL INCOME

EUR	2018	2017
Interest revenue	651	54
Exchange rate gains, loans and other receivables	109,563	0
Total	**110,214**	**54**

7. FINANCIAL COSTS

EUR	2018	2017
Exchange rate losses, loans and other receivables	0	-510,155
Other interest costs	-95,876	-665
Total	**-95,876**	**-510,820**

8. INCOME TAXES

EUR	2018	2017
Income tax	-47,615	-25,907
Total	**-47,615**	**-25,907**

Reconciliation of income taxes and profit/loss before taxes

EUR	2018	2017
Profit/loss before taxes	558,577	-2,219,679
Tax at parent company tax rate (20 %)	-111,715	443,936
Effect of foreign subsidiaries' differing tax rates	-7,721	-27,862
Non-deductible expenses	-2,662	-48,222
Tax exempt revenue	453	3,545
Tax deductible hybrid loan interest expenses	180,000	180,000
Use of previously unrecognized tax losses	719,292	297,973
Tax assets not recognized for reported losses	-165,124	-29,149
Tax assets not recognized for unused tax depreciations	-726,422	-830,455
Income taxes from previous years	-32,386	-13,466
Other direct taxes	98,671	-2,206
Income taxes	**-47,615**	**-25,907**

The Group's unrecognized tax losses on deferred tax assets, which have not been booked based on the principle of prudence, are EUR 11.6 million (2017: EUR 15.2 million). EUR 5.9 million (2017: EUR 8.3 million) of the tax losses are in Finland, and EUR 5.7 million (2017: EUR 6.9 million) in the USA. The tax losses expire in Finland between the years 2022–2028, and in the USA between the years 2022–2035. The amount of unrecognized deferred tax assets from the tax losses is EUR 3.2 million (2017: EUR 4.0 million). The figures include use of losses in 2018 which have not yet been confirmed in taxation.

In addition, the parent company has EUR 28.3 million (2017: EUR 24.6 million) research and development expenses and depreciations not deducted in taxation and the amount of unrecognized deferred tax assets resulting from those is EUR 5.7 million (2017: EUR 4.9 million).

The Group's subsidiaries do not have earnings that would cause tax consequences when repatriated

9. EARNINGS PER SHARE

EUR	2018	2017
Profit/loss attributable to shareholders of the parent company	829,936	-2,245,586
Hybrid loan interest expense	-900,000	-900,000
Weighted average number of shares in issue, 1,000	38,578	36,570
Earnings per share	-0.01	-0.09
Adjusted average number of shares considering dilution effect, 1,000	40,298	41,169
Earnings per share, diluted	-0.01	-0.09

10. PROPERTY, PLANT AND EQUIPMENT

EUR	2018	2017
Machinery and equipment		
Acquisition cost 1 Jan	1,887,313	1,891,296
Exchange rate effect	11,155	-20,096
Increase	104,528	17,860
Decrease	0	-1,748
Acquisition cost 31 Dec	2,002,996	1,887,313
Accumulated depreciation 1 Jan	1,775,330	1,655,387
Exchange rate effect	10,006	-18,434
Depreciation for the financial period	89,121	138,896
Accumulated depreciation on decrease	0	-519
Accumulated depreciation 31 Dec	1,874,456	1,775,330
Book value 31 Dec	128,540	111,984

EUR	2018	2017
Other tangible assets		
Acquisition cost 1 Jan	21,976	19,538
Exchange rate effect	1,934	2,437
Increase	27,969	0
Decrease	0	0
Acquisition cost 31 Dec	51,878	21,976
Accumulated depreciation 1 Jan	20,709	15,143
Exchange rate effect	1,103	2,808
Depreciation for the financial period	3,807	2,758
Accumulated depreciation on decrease	0	0
Accumulated depreciation 31 Dec	25,620	20,709
Book value 31 Dec	26,258	1,267
Book value of tangible assets 31 Dec	**154,798**	**113,250**

11. INTANGIBLE ASSETS

EUR	2018	2017
Software		
Acquisition cost 1 Jan	2,052,916	2,078,841
Exchange rate effect	8,925	-25,925
Increase	0	0
Decrease	0	0
Acquisition cost 31 Dec	2,061,841	2,052,916
Accumulated depreciation 1 Jan	2,024,308	2,024,100
Exchange rate effect	8,219	-20,506
Depreciation for the financial period	20,410	20,714
Accumulated depreciation on decrease	0	0
Accumulated depreciation 31 Dec	2,052,938	2,024,308
Book value 31 Dec	8,904	28,608

EUR	2018	2017
Immaterial rights		
Acquisition cost 1 Jan	11,143,227	9,615,897
Increase	2,124,602	1,527,329
Decrease	0	0
Acquisition cost 31 Dec	13,267,829	11,143,227
Accumulated depreciation 1 Jan	6,329,408	4,453,975
Depreciation for the financial period	1,752,762	1,875,434
Accumulated depreciation on decrease	0	0
Accumulated depreciation 31 Dec	8,082,170	6,329,408
Book value 31 Dec	5,185,658	4,813,818
Book value of intangible assets 31 Dec	**5,194,562**	**4,842,426**

Impairment testing

At the end of the year, the company has tested the value of Intangible assets using a moderate growth rate compared to year 2018 net sales and year 2018 cost structure. The cash flow forecasts of new products in the market are based on year 2019 budget. The discount rate used in the testing was 15 %. As a result of the testing, no impairment risk was detected. According to the sensitivity analyses carried out, even a significant change in key variables (net sales, profitability and discount rate) would not create a situation where the carrying value of an asset would exceed its recoverable amount.

12. TRADE RECEIVABLES AND CONTRACT LIABILITIES

EUR	2018	2017
Total trade receivables	**4,820,753**	**3,876,814**
Total advances received	**6,773,303**	**7,649,078**

by currency, EUR	2018	2017
EUR	769,413	367,023
USD	3,728,066	2,995,568
GBP	49,929	253,598
CHF	273,345	260,625
Total (EUR)	**4,820,753**	**3,876,814**

by age, EUR	2018	2017
Non-matured	3,744,400	2,792,449
Matured		
< 30 days	489,739	369,131
30-60 days	530,176	627,194
> 60 days	343,864	421,997
Impairment losses	-287,426	-333,958
Total	**4,820,753**	**3,876,814**

13. OTHER RECEIVABLES

EUR	2018	2017
VAT receivable	171,203	200,202
Other current receivables	183,527	396,956
Total	**354,729**	**597,158**

14. FAIR VALUES OF FINANCIAL ASSETS AND LIABILITIES

The book value of trade receivables and trade payables equals their fair value because the impact of discounting is not significant considering the maturity of these items.

15. NOTES TO EQUITY

According to the Articles of Association, SSH Communications Security Corporation has a minimum share capital of EUR 600,000 and a maximum share capital of EUR 2,400,000, within which limits the share capital may be raised or lowered without amending the Articles of Association. The nominal value of one share is EUR 0.03; hence, the minimum number of shares is 20 million and maximum number is 80 million. The company has one series of shares; each share entitles its holder to one vote at the shareholders' meeting. The share capital of the company, registered in the Trade Register and fully paid up as of 31 December 2018 was EUR 1,164,066.99 (2017: EUR 1,153,226.49), and the number of shares was 38,802,8233 (2017: 38,440,883).

Changes in the share capital:	Number of shares	Share capital, EUR
31 Dec 2017	**38,440,883**	**1,153,226**
Subscriptions under stock option plans	361,350	10,841
Subscriptions under share issue	0	0
31 Dec 2018	**38,802,233**	**1,164,067**

Description of the equity reserves:

Share capital
The share capital includes the share subscription prices from share issues and share subscriptions through options unless the conditions of the share issue stipulate that the subscription price shall be registered in the unrestricted invested equity fund. Expenses related to share issue are deducted from retained earnings.

Translation differences
The translation differences fund comprises the exchange rate differences arising from the translation of the financial statements of the foreign subsidiaries.

Fair value and other reserves
The item ‘Fair value and other reserves’ consists of two different funds: a fair value reserve for available-for-sale investments and a hedging reserve for changes in the fair value of cash flow hedging instruments. In the 2018 and 2017 financial periods, SSH Communications Security had no available-for-sale financial assets and did not apply hedge accounting.

Unrestricted invested equity fund
The unrestricted equity fund consists of the dissolved share premium fund formed by share subscriptions under option rights and includes share subscription prices insofar as not registered as share capital based on a specific decision.

Hybrid capital securities
Hybrid capital securities is an instrument that is subordinated to the Company’s other debt obligations and does not have maturity date (i.e. it is perpetual). It is treated as equity in the IFRS financial statements. Hybrid capital securities do not confer to their holders any rights of shareholders and do not dilute the holdings of the current shareholders.

The other equity fund consists of hybrid capital securities of EUR 12 million issued in March 2015, subscribed by institutional investors. The principal owner of the parent company, Mr. Tatu Ylönen, subscribed EUR 500,000 of the hybrid capital securities. The capital securities bear a fixed interest rate of 7.5 per cent until 30 March 2020, after which the interest rate will increase by four percentage points. The capital securities have no maturity date, but the issuer has the right to redeem them after 3 but before 5 years from the issue date, upon certain conditions, or after 5 years from the issue date. The investors have the right to convert the capital loan into the Company’s shares at EUR 4.76 per share until 30 March 2020.

16. CAPITAL MANAGEMENT

The objective in managing Group capital is to secure the ability to continue operating. The structure of the capital can be managed through decisions concerning, for instance, dividends and other distribution of assets, purchase of the company’s own shares, and share issues. Capital management concerns equity recognized in the balance sheet. There are no requirements imposed by outside parties on the Group’s capital management. The company issued by hybrid capital securities in March 2015 and executed a directed share issue in June 2016 and in June 2017.

The indicators depicting the capital structure are the equity ratio and gearing.

Gearing

EUR	2018	2017
Borrowings	162,000	0
Cash and cash equivalents	13,457,691	13,476,582
Net liabilities	**-13,295,691**	**-13,476,582**
Equity total	**14,221,570**	**12,893,498**
Equity ratio	81.6 %	82.9 %
Gearing	-93.5 %	-104.5 %

The interest-bearing liabilities consist of the subordinated loan which Kyberleijona Oy has taken out from the non-controlling interest holder State Security Networks Group Finland. The capital and interest of the subordinated loan can only be repaid in circumstances permitted by Chapter 12 of the Finnish Limited Liability Companies Act. The capital of the subordinated loan can only be repaid to the extent the unrestricted shareholders’ equity and the total amount of the subordinated loan at the time of the repayment exceeds the loss that is to be confirmed for the company’s latest financial year or is included in the balance sheet of more recent financial statements. The annual interest for the loan is three per cent (3 %).

17. SHARE-BASED PAYMENTS

In the company's industry, it is common practice internationally that incentives are provided to employees in the form of equity settled share-based instruments, such as options. Personnel of the company belong to options plans. An employee leaving the company before the vesting of the options forfeits their options.

On the balance sheet date, SSH Communications Security had 1,496,000 stock options outstanding (2017: 1,746,163), representing 3.9 % of shares and 3.9 % of votes. The weighted average exercise price of outstanding stock options was EUR 2.57 (2017: EUR 2.79). The weighted average of the remaining subscription period was 1.8 years (2017: 1.6 years). The exercise price varies from EUR 2.09 to EUR 3.45, and the remaining subscription period from 1.4 years to 3.2 years.

A person holding option rights is entitled to subscribe shares if employed by SSH at the beginning of the subscription period.

INFORMATION ABOUT OPTION PLANS:

Option plan	Option certificate	Release date	Subscription period		Subscription price, EUR	Options not excercized
			Begin	End		
I/2013	I/2013 A	4 Jun 2013	1 Jun 2015	1 Sep 2018	1.66	0
	I/2013 B	4 Jun 2013	1 Jun 2017	1 Sep 2018	1.66	0
	I/2013 C	4 Jun 2013	1 Jun 2018	1 Sep 2018	1.66	0
	I/2013 D	4 Jun 2013	15 Feb 2015	1 Sep 2018	1.66	0
	I/2013 E	4 Jun 2013	15 Feb 2016	1 Sep 2018	1.66	0
	I/2013 F	4 Jun 2013	15 Feb 2017	1 Sep 2018	1.66	0
I/2014	I/2014 A	17 Sep 2014	17 Sep 2016	1 Dec 2018	2.55	0
	I/2014 B	17 Sep 2014	17 Sep 2017	1 Dec 2018	2.55	0
	I/2014 C	17 Sep 2014	17 Sep 2018	1 Dec 2018	2.55	0
	I/2014 D	17 Sep 2014	1 Jan 2016	1 Dec 2018	2.55	0
I/2015	I/2015 A	4 Feb 2015	15 Mar 2018	30 May 2020	3.45	660,000
	I/2015 B	4 Feb 2015	15 Mar 2019	30 May 2020	3.45	660,000
	I/2015 C	4 Feb 2015	15 Mar 2020	30 May 2020	3.45	680,000
I/2016	I/2016 A	26 May 2016	15 Mar 2017	30 May 2020	3.45	400,000
2018	2018	22 Feb 2018	1 Dec 2020	31 Mar 2022	2.09	980,000
2019A	2019 A	18 Dec 2018	1 Dec 2021	31 Mar 2023	[1]	980,000
Total						**4,360,000**

[1] The share subscription price for the shares shall be, the trade volume weighted average quotation of the company's share on Nasdaq Helsinki Ltd. during a one month period following the publication of the company's annual results for the year 2018 (with said publication date not included in said period).

CHANGES IN OUTSTANDING STOCK OPTIONS:

	2018	2017
At the beginning of the financial period	1,746,163	2,656,913
Stock options granted	781,000	0
Stock option forfeited	669,813	430,700
Stock options canceled	0	0
Stock options exercised	361,350	480,050
At the end of the financial period	1,496,000	1,746,163
Exercisable option rights at the end of the financial period	**1,496,000**	**1,746,163**

The fair value is of option programs is determined at the time the options are granted and is recorded as an expense in the profit/loss during the period of inception. The fair value is determined using the Black-Scholes pricing model. The parameters for options granted in 2018 are:

	2018
Share price at grant, EUR	2.07
Share price at financial period end, EUR	1.68
Exercise price, EUR	2.09
Expected volatility1	44.60 %
Maturity, years	4.1
Risk-free rate	0.0 %
Expected dividends, EUR	0.00
Valuation model	Black & Scholes
Fair value 31 Dec 2018, EUR	554,510

1 The expected volatility has been determined by calculating the historical volatility of the company's shares using monthly observations over corresponding maturity.

Share-based payments recognized as an expense, EUR	2018	2017
Share-based payments	293,550	344,805
Liability from share-based payments 31 Dec	0	0

18. ACCRUED EXPENSES AND DEFERRED INCOME

EUR	2018	2017
Personnel related	1,406,179	1,240,185
Accruals	104,023	140,402
Total	**1,510,202**	**1,380,586**

19. OTHER LIABILITIES

EUR	2018	2017
Personnel related	161,324	148,286
VAT liabilities	23,290	17,290
Other current liabilities	427,217	277,373
Total	**611,831**	**442,949**

20. FINANCIAL RISK MANAGEMENT

The Group is exposed to financial risks in its normal business. The purpose of the Group's risk management is to minimize negative impacts of changes on financial markets to Group income.

Foreign Exchange Risk

The Group operates internationally and is exposed to foreign exchange risk, the most significant currency being the U.S. dollar. The company reduces risk based on net position, using currency futures or options. Currently the net position is not hedged. The company decides on the hedging on case by case basis. At the moment, the Group is not using hedging accounting. Any gains or losses realized through hedging actions are thus recognized in profit/loss.

A 10 % strengthening of the U.S. dollar against the Euro using with net position on 31 Dec 2018 would increase the pre-tax profit of the Group by 45,000 euros. Similarly, a 10 % weakening of the U.S. dollar against the Euro would decrease the pre-tax profit of the Group by 37,000 euros.

Interest Rate Risk

The interest-bearing debt of the Group at the end of the review period was 162,000 euro and it consisted of a subordinated loan taken by a subsidiary company from a non-controlling interest holder. The annual interest of the loan is three per cent (3 %).

The money market investments of the Group expose the cash flow to interest rate risk but their impact is not material.

Market Risk Related to Investments

The Group's cash reserves have been invested in accordance with the policy approved by the Board of Directors. At the end of the financial reporting period, all the assets are invested in cash in financial institutions with high credit ratings.

Credit Risk

The Group has no significant concentrations of credit risk. The Group has policies in place to ensure that sales of products and services are made to customers with an appropriate credit history. The Group has not recognized significant impairment losses on 2018 or 2017. The aging distribution of trade receivables is presented in note 12. *Trade receivables*.

Liquidity Risk

The Group's cash and cash equivalents on 31 Dec 2018 were 13,457,691 euros (2017: 13,476,582 euros). The Group has no liquidity risks, since invested funds which are substantial compared to the Group's cash flows are available on a one-day notice.

The Group had trade debts and other short-term debts amounting 1,543,509 euros (2017: 1,273 ,784 euros).

21. OPERATING LEASE AGREEMENTS

The item 'Operating lease agreements' includes lease agreements not classified as finance leasing agreements. SSH Communications Security Group acts as lessee

EUR	2018	2017
Non-cancellable lease agreements for office facilities – minimum rents		
Within one year	340,227	316,788
Within more than one year but no more than 5 years	210,066	285,603
Total	**550,292**	**602,391**

The Group rents the office facilities it uses. The duration of the rental agreements is usually 3 to 5 years, and normally the agreements include options to renew past the original termination date. The index, renewal, and other terms and conditions differ from agreement to agreement. The income statement for 2018 includes rents based on rental agreements totaling EUR 383,056 (2017: EUR 515,225).

The income statement for 2018 does not contain vehicle leasing costs (2017: EUR 4,271).

22. GUARANTEES GIVEN AND OTHER COMMITMENTS

EUR	2018	2017
Rental guarantees (pledged)	83,242	80,846
Hybrid Loan, Interest	675,000	675,000

23. GROUP COMPANIES AND RELATED PARTY TRANSACTIONS

SSH Communications Security Corporation, its subsidiaries, its CEO, and its Board members and companies controlled by them belong to related party of the Group. The Group management team is not considered as part of related party as they do not have direct decision making authority.

Group companies 31 Dec 2018	Domicile	Group holding, %	Votes, %
SSH Communications Security Oyj, Helsinki	Finland		
SSH Communications Security Inc., Waltham	USA	100	100
SSH Operations Oy, Helsinki	Finland	100	100
SSH Communications Security Ltd., Hong Kong	Hong Kong	100	100
Kyberleijona Oy, Helsinki	Finland	65	65
SSH Government Solutions Inc., Waltham	USA	100	100
SSH Technology Oy, Helsinki	Finland	100	100
SSH Communications Security UK Ltd, London	United Kingdom	100	100

Employee benefits of the management

The key management personnel of the Group is defined consisting of the CEO of the parent company. The employee benefits of the CEO are presented in the table below. The sums of employee benefits are shown on an accrual basis. The CEO of SSH Communications Security Corporation has been Ms. Kaisa Olkkonen as of 1 January 2017.

Remuneration and fees – CEO

EUR	2018	2017
Salary and other short-term employee benefits	215,555	210,540
Share-based payment	0	0
Total	**215,555**	**210,540**

Fees to Members of the Board of Directors

EUR	2018	2017
Curry Sam (as of 28 Mar 2018)	22,500	-
Kuivala Petri (as of 29 Mar 2017, Chairman of the Board as of 28 Mar 2018)	31,250	15,000
Manner Jukka (Chairman of the Board as of 29 Dec 2016, until 28 Mar 2018)	7,500	28,500
Olkkonen Kaisa (until 29 Mar 2017, CEO as of 1 Jan 2017)	-	4,500
Syrjälä Timo	28,000	19,500
Vänttinen Ari (as of 29 Mar 2017, until 28 Mar 2018)	5,000	15,000
Ylönen Tatu	27,500	19,500
Koponen Harri (until 29 Mar 2017)	-	4,500
Zettlemoyer Anne Marie (as of 28 Mar 2018)	22,500	-
Total	**144,250**	**106,500**

Share and stock option holdings of Board members	31 Dec 2018 Shares	31 Dec 2018 Options	31 Dec 2017 Shares	31 Dec 2017 Options
Curry Sam	0	0	0	0
Kuivala Petri	15,000	0	0	0
Syrjälä Timo	3,559,131	0	3,559,131	0
Ylönen Tatu	18,317,123	0	18,317,123	0
Zettlemoyer Anne Marie	0	0	0	0
Total	**21,891,254**	**0**	**21,876,254**	**0**

Share and stock option holdings of the key management	31 Dec 2018 Shares	31 Dec 2018 Options	31 Dec 2017 Shares	31 Dec 2017 Options
Olkkonen Kaisa (CEO as of 1 Jan 2017)	30,000	300,000	10,000	300,000
Ahvenniemi Sami	0	50,000	0	-
Karkkulainen Simo	0	40,000	0	0
Lilja Timo	0	15,000	0	40,000
Mononen Jussi	0	115,000	0	100,000
Nordström Niklas	0	40,000	0	-
Rossi Markku	6,500	140,000	0	140,000
Scaff Joe	46,600	40,000	40,000	20,000
Total	**83,100**	**740,000**	**50,000**	**600,000**

Compensation of the key management personnel		
EUR	**2018**	**2017**
Wages and other short-term employee benefits	1,356,832	1,388,236
Share-based payments	0	0

On 31 December 2018, the CEO and members of the Board of Directors of SSH Communications Security owned 56.4 % (2017: 56.9 %) of the shares and votes in the company, either directly or indirectly through companies they own.

Management group members including the CEO directly or indirectly held about 0.2 % (2017: 0.1 %) of company shares and have a total of 740,000 (2017: 600,000) option rights.

The key conditions of the option right arrangements are described in note 17. *Share-based payments*.

Related Party Transactions

SSH Communications Security Corporation entered in February 2018 into a patent cross license and settlement agreement with Sony. SSH paid to Clausal Computing EUR 220,000 of the license revenue as a royalty fee.

Clausal Computing Oy sold in June 2018 all SSH Communications Security Corporation held by it to its sole shareholder and a member of SSH's Board of Director Mr. Tatu Ylönen. The ownership share or voting power of Mr. Ylönen in SSH did not change as a result of the transaction.

SSH Communications Security Corporation entered in December 2018 into a patent license agreement with one of the leading providers of patent risk management solutions. SSH will pay to Clausal Computing Oy USD 440,000 (approximately EUR 385,000) of the license revenue as a royalty fee.

During the reporting period, there have not been any other significant transactions with related parties.

24. EVENTS AFTER THE BALANCE SHEET DATE

There have been no material events after the balance sheet date.

PARENT COMPANY FINANCIAL STATEMENTS

PARENT COMPANY INCOME STATEMENT

EUR	Note	1 Jan–31 Dec 2018	1 Jan–31 Dec 2017
NET SALES	1	**11,981,981.77**	**8,147,301.26**
Purchasing and production costs		-701,554.11	-580,939.46
GROSS MARGIN		**11,280,427.66**	**7,566,361.80**
Other operating income		584,148.09	0.00
Research and development costs	2, 3, 6	-5,480,962.36	-5,454,219.49
Sales and marketing costs	2, 3, 6	-3,097,882.29	-2,054,019.23
Administrative costs	2, 3, 6	-2,397,169.84	-1,704,012.08
OPERATING PROFIT/LOSS		**888,561.26**	**-1,645,889.00**
Financial income	7		
Interest income and other financing income		675,991.23	434,710.09
Interest costs and other financing costs		-34,141.58	-942,075,04
PROFIT/LOSS BEFORE APPROPRIATIONS AND TAXES		**1,530,410.91**	**-2,153,253.95**
Appropriations	8		
Group contribution received		11,658.14	9,143.64
PROFIT/LOSS BEFORE TAXES		**1,542,069.05**	**-2,144,110.31**
Taxes		-	-
PROFIT/LOSS FOR THE FINANCIAL PERIOD		**1,542,069.05**	**-2,144,110.31**

PARENT COMPANY BALANCE SHEET

ASSETS			
EUR	**Note**	**31 Dec 2018**	**31 Dec 2017**
NON-CURRENT ASSETS			
Intangible assets	9		
Immaterial rights		3,503,596.40	4,813,818,26
Intangible assets, total		**3,503,596.40**	**4,813,818.26**
Tangible assets	9		
Machinery & equipment		97,095.42	99,142,67
Tangible assets, total		**97,095.42**	**99,142.67**
Investments			
Shares in Group companies	9, 17	3,109,689.01	577,666,15
Other shares		11,000.00	11,000,00
Investments, total		**3,120,689.01**	**588,666.15**
NON-CURRENT ASSETS, TOTAL		**6,721,380.83**	**5,501,627.08**
CURRENT ASSETS			
Current receivables			
Trade receivables		2,199,423.39	361,729,44
Receivables from Group companies	10	5,919,055.27	1,938,870,51
Prepaid expenses and accrued income	11	58,230.92	176,319,95
Other receivables	12	190,625.74	306,045,07
Current receivables, total		**8,367,335.32**	**2,782,964.97**
Cash and cash equivalents		6,875,723.75	11,209,229.09
CURRENT ASSETS, TOTAL		**15,243,059.07**	**13,992,194.06**
ASSETS, TOTAL		**21,964,439.90**	**19,493,821.14**

PARENT COMPANY BALANCE SHEET

EQUITY AND LIABILITIES			
EUR	**Note**	**31 Dec 2018**	**31 Dec 2017**
EQUITY	13		
Share capital		1,164,066.99	1,153,226.49
Unrestricted invested equity fund		22,720,155.85	22,131,155.35
Hybrid capital securities	14	12,000,000.00	12,000,000.00
Retained earnings		-19,504,898.75	-16,460,788.44
Loss for the financial period		1,542,069.05	-2,144,110.31
EQUITY, TOTAL		**17,921,393.14**	**16,679,483.09**
LIABILITIES			
CURRENT LIABILITIES			
Advances received		477,772.70	970,301.67
Trade payables		692,653.74	758,100.85
Payables to Group Companies		1,469,286.61	103,543.13
Accrued expenses and deferred income	15	1,282,886.34	856,802.69
Other liabilities		120,447.37	125,589.71
CURRENT LIABILITIES, TOTAL		**4,043,046.76**	**2,814,338.05**
LIABILITIES, TOTAL		**4,043,046.76**	**2,814,338.05**
EQUITY AND LIABILITIES, TOTAL		**21,964,439.90**	**19,493,821.14**

PARENT COMPANY CASH FLOW STATEMENT

EUR	1 Jan–31 Dec 2018	1 Jan–31 Dec 2017
Cash flow from business operations		
Receipts from customers	5,119,602.36	10,360,889.97
Payments to suppliers and employees	-7,859,902.60	-8,670,442.83
Cash flow from business operations before financial items and taxes	**-2,740,300.24**	**1,690,447.14**
Interest paid and other financial costs	-16,647.12	-257,108.74
Interest received and other financial revenue	503,187.30	504,691.44
Cash flow from business operations	**-2,253,760.06**	**1,938,029.84**
Cash flow from investing activities		
Investments in tangible and intangible assets	-1,788,729.92	-1,537,329.45
Other investments	0.00	-100,000.00
Cash flow from investing activities	**-1,788,729.92**	**-1,637,329.45**
Cash flow from financing activities		
Interest on hybrid capital securities	-900,000.00	-900,000.00
Proceeds from shares subscribed with option rights	599,841.00	325,364.50
Proceeds from share issue	0.00	6,970,000.00
Expenses from share issue	0.00	-253,059.40
Group contribution received	9,143.64	135,000.00
Cash flow from financing activities	**-291,015.36**	**6,277,305.10**
Change in liquid assets	**-4,333,505.34**	**6,578,005.49**
Liquid assets in the beginning of period	**11,209,229.09**	**4,631,223.60**
Change in liquid assets	-4,333,505.34	6,578,005.49
Liquid assets at the end of period	**6,875,723.75**	**11,209,229.09**

Notes to the Parent Company Financial Statements

ACCOUNTING PRINCIPLES

The financial statement of the parent company, SSH Communications Security Corporation, is drawn up in accordance with the Finnish Accounting Standards. Figures are given to an accuracy of one cent (EUR 0.01). All items in the balance sheet are recognized at original acquisition cost. Information on financial risk management is presented in the consolidated financial statements (Note 20. Financial Risk Management).

Principles of Revenue Recognition

The revenue from product sales is recognized at the time when significant risks and rewards of the product or the right of use of the product have been transferred to the buyer and there is a binding contract between the parties, the delivery has taken place in accordance with the contract, the amount of revenue can be measured reliably, and it is probable that the economic benefits associated with the transaction will accrue to the Group.

Revenue from services rendered under maintenance agreements are amortized across the agreement period. Revenues from services are recognized when the service has been delivered and it is probable that the economic benefits associated with the transaction will accrue to the Group.

The revenue of royalties from licenses is recognized according to the actual content of the contract.

Apportioning of Costs to Functions

Costs are apportioned to functions according to the matching principle.

Leases

The parent company has rental agreement for office premises at Kornetintie 3, Helsinki and minor other assets. Leasing payments paid pursuant to these agreements are recognized as costs over the rental or leasing period under agreements.

Income Tax

The income tax in the income statement comprises direct taxes based on the taxable profit for the financial period and adjustments to taxes on previous financial periods. The parent company does not recognize deferred tax receivables or liabilities in its financial statement. The parent company has confirmed tax losses of EUR 8.0 million (EUR 8.9 million). In addition, the parent company has EUR 28.3 million (EUR 24.6 million) research and development expenses and depreciations not deducted in taxation, whereof no deferred tax asset has been recognized.

Fixed Assets

Fixed assets are recognized in the balance sheet at acquisition cost less planned depreciation and any impairment. Planned depreciations are calculated on a straight-line basis according to the economic life of each asset category.

The asset categories and their depreciation periods are:

Machinery and equipment	5 years from month of acquisition
Computer hardware	3 years from month of acquisition
Immaterial rights	5 years from month of acquisition
Development costs	5 years from month of capitalization
Other capitalized expenditure	5 years from year of capitalization
Leasehold improvements of rental premises	Length of the rental agreement, though no more than 7 years, from year of capitalization

Research and Development Costs

Research and development costs are recognized as costs in the financial period in which they occurred except for those product development costs which are capitalized once certain criteria have been met. Capitalized development expenses are depreciated systematically over their useful lives.

Foreign Currency Transactions

Transactions denominated in foreign currencies are recognized at the exchange rate on the transaction date. Outstanding receivables and liabilities in foreign currencies are recognized using the exchange rates on the balance sheet date. Exchange rate gains and losses on actual business operations are considered sales adjustment items or adjustment items to materials and services. Exchange rate gains and losses on financing activities are recognized under financing income and costs.

Option Rights

Employees of the parent company and its subsidiaries have been granted option rights. The option rights entitle their holders to subscribe shares in the parent company at a fixed subscription price specified in the terms of the option plan. No costs are recognized in the income statement or balance sheet regarding the granting of option rights.

Hybrid capital securities

Hybrid capital securities is an equity-related instrument that is presented as a separate item in equity. Interest payments on hybrid capital securities are decided by the Board. Unpaid interest accumulated at the balance sheet date is presented in note 16. *Other commitments.*

1. NET SALES BY MARKET AREA

EUR	2018	2017
Finland	1,492,489.79	166,256.23
Rest of Europe	3,789,682.43	5,842,036.51
Other	6,699,809.55	2,139,008.52
Total	**11,981,981.77**	**8,147,301.26**

2. OPERATING COSTS

EUR	2018	2017
Other operating costs		
External services	-2,537,377.32	-2,279,847.16
Depreciation	-1,762,919.96	-2,008,594.81
Other	-2,020,610.48	-1,284,737.54
Total	**-6,320,907.76**	**-5,573,179.51**

Auditor's fees

EUR	2018	2017
Principal auditor (Ernst & Young Oy)		
Statutory auditing	-36,000.00	-36,000.00
Other auditing	-5,619.00	-12,900.00
Tax guidance	0.00	-800.00
Other services	-2,082.00	-5,131.00
Total	**-43,701.00**	**-54,831.00**

3. PERSONNEL COSTS AND AVERAGE NUMBER OF EMPLOYEES

Personnel costs

EUR	2018	2017
Wages and salaries	-4,813,050.57	-3,671,374.61
Pension costs	-773,822.25	-794,332.24
Other ancillary personnel costs	-178,938.44	-214,387.34
Total	**-5,765,811.26**	**-4,680,094.19**

Average number of employees	2018	2017
	57	53

4. PERSONNEL DISTRIBUTION BY FUNCTION AT THE END OF THE FINANCIAL PERIOD

	2018	2017
Research and development	10	34
Sales and marketing	36	6
Administration	11	13
Total	**57**	**53**

5. SALARIES AND FEES PAID TO MANAGEMENT AND MEMBERS OF THE BOARD OF DIRECTORS

See note 23 in the consolidated financial statements.

6. DEPRECIATION AND IMPAIRMENT

EUR	2018	2017
Immaterial rights	207,254.98	211,324.53
Capitalized development costs	1,473,418.94	1,664,109.02
Machinery and equipment	82,246.04	133,161.26
Total	**1,762,919.96**	**2,008,594.81**

In the financial years 2018 and 2017, the company has not recorded any impairments.

7. FINANCIAL INCOME AND COSTS

EUR	2018	2017
Interest income	83,519.11	80,300.36
Received payment of impaired internal loan	445,974.70	424,391.08
Impairment on investments and internal receivables	0.00	-239,343.87
Exchange rate gains and losses (net)	112,596.63	-518,968.98
Interest, expenses and other financial costs	-240.79	-253,743.54
Total	**641,849.65**	**-507,364.95**

8. APPROPRIATIONS

EUR	2018	2017
Group contribution from SSH Technology Oy	11,658.14	9,143.64
Total	**11,658.14**	**9,143.64**

9. INTANGIBLE AND TANGIBLE ASSETS AND LONG-TERM INVESTMENTS

EUR	2018	2017
Intangible assets		
Immaterial rights		
Acquisition cost 1 Jan	13,066,778.61	11,539,449.16
Increase	1,708,531.13	1,527,329.45
Decrease	-2,143,778.40	0.00
Acquisition cost 31 Dec	12,631,531.34	13,066,778.61
Accumulated depreciation 1 Jan	8,252,960.35	6,377,526.80
Depreciation for the financial period	1,680,673.92	1,875,433.55
Accumulated depreciation on decrease	-805,699.33	0.00
Accumulated depreciation 31 Dec	9,127,934.94	8,252,960.35
Book value 31 Dec	**3,503,596.40**	**4,813,818.26**
Tangible assets		
Machinery and equipment		
Acquisition cost 1 Jan	1,658,011.36	1,648,011.36
Increase	80,198.79	10,000.00
Decrease	0.00	0.00
Acquisition cost 31 Dec	1,738,210.15	1,658,011.36
Accumulated depreciation 1 Jan	1,558,868.69	1,425,707.43
Depreciation for the financial period	82,246.04	133,161.26
Accumulated depreciation on decrease	0.00	0.00
Accumulated depreciation 31 Dec	1,641,114.73	1,558,868.69
Book value 31 Dec	**97,095.42**	**99,142.67**
Investments		
Book value 1 Jan	588,666.15	510,126.88
Increase	2,532,022.86	100,000.00
Decrease	0.00	-21,460.73
Book value 31 Dec	**3,120,689.01**	**588,666.15**

The parent company has granted a subordinated loan of EUR 300,000 to Kyberleijona Oy. The capital and interest of the subordinated loan can only be repaid in circumstances permitted by Chapter 12 of the Finnish Limited Liability Companies Act. The capital of the subordinated loan can only be repaid to the extent the unrestricted shareholders' equity and the total amount of the subordinated loan at the time of the repayment exceeds the loss that is to be confirmed for the company's latest financial year or is included in the balance sheet of more recent financial statements. The annual interest for the loan is three per cent (3 %). As part of the cooperation agreement between SSH and State Security Networks Group Finland, SSH has strengthened the equity of Kyberleijona by EUR 2,532,022.86.

10. RECEIVABLES FROM GROUP COMPANIES

EUR	2018	2017
Trade receivables	5,907,397.13	1,929,726.87
Group contribution receivable	11,658.14	9,143.64
Total	**5,919,055.27**	**1,938,870.51**

11. PREPAID EXPENSES AND ACCRUED INCOME

EUR	2018	2017
Prepaid expenses	58,230.92	176,319.95
Other	-	-
Total	**58,230.92**	**176,319.95**

12. OTHER RECEIVABLES

EUR	2018	2017
VAT receivable	37,519.34	9,812.91
Other receivables	153,106.40	296,232.16
Total	**190,625.74**	**306,045.07**

13. EQUITY

EUR	2018	2017
Share capital 1 Jan	1,153,226.49	1,036,824.99
Increase in share capital	10,840.50	116,401.50
Share capital 31 Dec	1,164,066.99	1,153,226.49
Unrestricted invested equity fund	22,720,155.85	22,131,155.35
Hybrid capital securities	12,000,000.00	12,000,000.00
Retained earnings	-19,504,898.75	-16,460,788.44
Profit/loss for the financial period	1,542,069.05	-2,144,110.31
Total	**17,921,393.14**	**16,679,483.09**

Statement on Distributable Funds	2018	2017
Retained earnings	-19,504,898.75	-16,460,788.44
Loss for the financial period	1,542,069.05	-2,144,110.31
Unrestricted invested equity fund	22,720,155.85	22,131,155.35
Capitalized development costs	-2,604,649.00	-4,084,206.92
Total	**2,152,677.15**	**-557,950.32**

14. HYBRID CAPITAL SECURITIES/ SHAREHOLDERS' EQUITY

A hybrid capital security is an instrument that is subordinated to the Company's other debt obligations and It does not have maturity date (i.e. it is perpetual). It is treated as equity in the financial statements. Hybrid capital securities do not confer to their holders any shareholder rights and do not dilute the holdings of the current shareholders.

Hybrid capital securities in the amount of EUR 12 million were issued in March 2015 and subscribed by institutional investors. The capital securities bear a fixed interest rate of 7.5 per cent until 30 March 2020, after which the interest rate will increase by four percentage points. The capital securities have no maturity date, but the issuer has the right to redeem them after 3 but before 5 years from the issue date, upon certain conditions, or after 5 years from the issue date. The investors have the right to convert the capital loan into the Company's shares at EUR 4.76 per share until 30 March 2020.

Paid interest from hybrid capital securities reduce the amount of retained earnings. Unpaid interest from hybrid capital securities is presented in note 16. Other commitments. Paid interest in the financial year 2018 was EUR 900,000 (EUR 900,000).

15. ACCRUED LIABILITIES AND DEFERRED INCOME

EUR	2018	2017
Personnel related	1,201,761.34	804,617.69
Accruals	81,125.00	52,185.00
Other accrued liabilities and deferred income	0.00	0.00
Total	**1,282,886.34**	**856,802.69**

16. OTHER COMMITMENTS

EUR	2018	2017
Non-cancellable lease agreements for office facilities – future rent payments		
Within one year	195,917.40	168,939.96
Within more than one year but no more than 5 years	65,305.80	225,253.28
Total	**261,223.20**	**394,193.24**

EUR	2018	2017
Guarantees given and other commitments		
Rental guarantees (pledged)	52,281.40	52,281.40
Hybrid Loan, Interest	675,000.00	675,000.00

17. GROUP COMPANIES

Parent and subsidiary relationships of the Group 31 December 2018	Domicile	Group Holding, %	Votes, %
SSH Communications Security Oyj, Helsinki	Finland		
SSH Communications Security Inc., Waltham	USA	100	100
SSH Operations Oy, Helsinki	Finland	100	100
SSH Communications Security Ltd., Hong Kong	Hong Kong	100	100
Kyberleijona Oy, Helsinki	Finland	65	65
SSH Government Solutions Inc., Waltham	USA	100	100
SSH Technology Oy, Helsinki	Finland	100	100
SSH Communications Security UK Ltd, London	United Kingdom	100	100

Dividend Proposal and Signatures

DIVIDEND PROPOSAL

The parent company's distributable funds are EUR 2,152,677.15, of which the profit for the financial year is EUR 1,542,069.05. The Board of Directors proposes to the Annual General Meeting on March 26, 2019 that no dividend or return of capital shall be distributed. It is proposed that the profit of the financial year shall be entered to the retained earnings in the shareholders' equity.

SIGNATURES FOR THE FINANCIAL STATEMENTS AND REPORT OF THE BOARD OF DIRECTORS

Helsinki, 11 February 2019

PETRI KUIVALA
Chairman of the Board of Directors

TATU YLÖNEN
Member of the Board of Directors

TIMO SYRJÄLÄ
Member of the Board of Directors

SAM CURRY
Member of the Board of Directors

ANNE MARIE ZETTLEMOYER
Member of the Board of Directors

KAISA OLKKONEN
CEO

AUDITOR'S NOTE

Our auditors' report has been issued today.

Helsinki, 11 February 2019

Ernst & Young Oy
Authorized Public Accountants

ERKKA TALVINKO
Authorized Public Accountant

Auditor's Report (Translation of the Finnish original)

To the Annual General Meeting of
SSH Communications Security Oyj

Report on the Audit of Financial Statements

Opinion

We have audited the financial statements of SSH Communications Security Oyj (business identity code 1035804-9) for the year ended 31 December, 2018. The financial statements comprise the consolidated balance sheet, statement of comprehensive income, statement of changes in equity, statement of cash flows and notes, including a summary of significant accounting policies, as well as the parent company's balance sheet, income statement, statement of cash flows and notes.

In our opinion
- the consolidated financial statements give a true and fair view of the group's financial position as well as its financial performance and its cash flows in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU.
- the financial statements give a true and fair view of the parent company's financial performance and financial position in accordance with the laws and regulations governing the preparation of financial statements in Finland and comply with statutory requirements.

Our opinion is consistent with the additional report submitted to the Board of Directors.

Basis for Opinion

We conducted our audit in accordance with good auditing practice in Finland. Our responsibilities under good auditing practice are further described in the Auditor's Responsibilities for the Audit of Financial Statements section of our report.

We are independent of the parent company and of the group companies in accordance with the ethical requirements that are applicable in Finland and are relevant to our audit, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

In our best knowledge and understanding, the non-audit services that we have provided to the parent company and group companies are in compliance with laws and regulations applicable in Finland regarding these services, and we have not provided any prohibited non-audit services referred to in Article 5(1) of regulation (EU) 537/2014. The non-audit services that we have provided have been disclosed in note 4 to the consolidated financial statements.

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

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

We have fulfilled the responsibilities described in the Auditor's responsibilities for the audit of the financial statements section of our report, including in relation to these matters. Accordingly, our audit included the performance of procedures designed to respond to our assessment of the risks of material misstatement of the financial statements. The results of our audit procedures, including the procedures performed to address the matters below, provide the basis for our audit opinion on the accompanying financial statements.

We have also addressed the risk of management override of internal controls. This includes consideration of whether there was evidence of management bias that represented a risk of material misstatement due to fraud.

Key Audit Matter	How our audit addressed the Key Audit Matter
Revenue Recognition *We refer to the Group's accounting policies and the notes 2 and 3* The Group has multiple revenue sources including licenses, maintenance contracts, and consulting services. Since sales contracts include many different terms, there is a risk of incorrect timing of revenue recognition due to fraud or misstatements. Due to this the revenue recognition was determined to be a key audit matter and a significant risk of material misstatement referred to in EU Regulation No 537/241, point (c) of Article 10(2).	Our audit procedures included, among others: • We evaluated the revenue recognition principles applied by the Group towards applicable accounting standards • We evaluated the revenue recognition of different sources of revenue in the relation to the terms of the sales agreements • We tested the timing of the revenue recognition • We evaluated the appropriateness of the notes related to Group's revenue
Valuation of Intangible Assets *We refer to the Group's accounting policies and the notes 2 and 11* Capitalized R&D expenses aggregated to 5.195 k€ representing a material amount of the consolidated assets (21%) and equity (37%). Capitalized expenses are tested annually for impairment. As the impairment test contains estimates, the audit procedures related to the test prepared by the management were material in respects of the audit. The Group Management exercises judgment determining the assumptions related to future market conditions and economic trends as the general economic growth and sales and margin trends. Due to this the valuation of intangible assets was determined to be a key audit matter and a significant risk of material misstatement referred to in EU Regulation No 537/2014, point (c) of Article 10(2).	Our audit procedures included, among others: • Use of valuation experts in assisting our evaluation of the methods and assumptions, applied by the Group • Evaluation of the relevant assumptions used in the impairment testing of the intangible assets, focusing on the reasonableness of the forecasted economic information and the estimation and allocation of the revenue and costs related to each R&D asset • Estimating the accuracy of the management's earlier estimates • Evaluation of the notes representing the impairment test of the intangible assets

Responsibilities of the Board of Directors and the Managing Director for the Financial Statements

The Board of Directors and the Managing Director are responsible for the preparation of consolidated financial statements that give a true and fair view in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU, and of financial statements that give a true and fair view in accordance with the laws and regulations governing the preparation of financial statements in Finland and comply with statutory requirements. The Board of Directors and the Managing Director are also responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Board of Directors and the Managing Director are responsible for assessing the parent company's and the group's ability to continue as going concern, disclosing, as applicable, matters relating to going concern and using the going concern basis of accounting. The financial statements are prepared using the going concern basis of accounting unless there is an intention to liquidate the parent company or the group or cease operations, or there is no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of Financial Statements

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

As part of an audit in accordance with good auditing practice, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the parent company's or the group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of the Board of Directors' and the Managing Director's use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the parent company's or the group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the parent company or the group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events so that the financial statements give a true and fair view.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Other Reporting Requirements

Information on our audit engagement

We were first appointed as auditors by the Annual General Meeting on 20.4.2016, and our appointment represents a total period of uninterrupted engagement of 3 years.

Other information

The Board of Directors and the Managing Director are responsible for the other information. The other information comprises the report of the Board of Directors and the information included in the Annual Report, but does not include the financial statements and our auditor's report thereon. We have obtained the report of the Board of Directors prior to the date of this auditor's report, and the Annual Report is expected to be made available to us after that date.

Our opinion on the financial statements does not cover the other information.

In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. With respect to report of the Board of Directors, our responsibility also includes considering whether the report of the Board of Directors has been prepared in accordance with the applicable laws and regulations.

In our opinion, the information in the report of the Board of Directors is consistent with the information in the financial statements and the report of the Board of Directors has been prepared in accordance with the applicable laws and regulations.

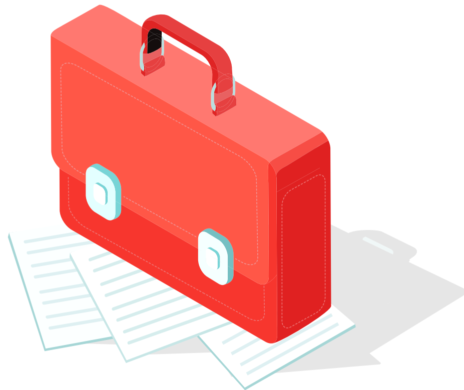
If, based on the work we have performed on the other information that we obtained prior to the date of this auditor’s report, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Helsinki 11.2.2019

Ernst & Young Oy
Authorized Public Accountant Firm

Erkka Talvinko
Authorized Public Accountant

CORPORATE GOVERNANCE



CORPORATE GOVERNANCE

SSH Communications Security aims for transparent and responsible corporate governance through compliance with laws, regulations, and best practices as well as high ethical standards applied in its governance and decision-making. SSH Communications Security's corporate governance practices are subject to its articles of association, Finnish Limited Liability Companies Act, securities market legislation, including the market abuse regulation, rules of Nasdaq Helsinki, and Finnish Corporate Governance Code 2015 adopted by the Securities Market Association. The Corporate Governance Code is available at **www.cgfinland.fi**.

More information on the governance practices of the company, see our Corporate Governance Statement that is published annually as a separate report and can be found at SSH's website.

SSH implements a one-tier governance model, in which the management of the SSH Group is a responsibility of the General Meeting of shareholders, the Board of Directors, and the CEO. Duties are defined by the Finnish Limited Liability Companies Act and the company's articles of association.

SSH Communications Security's highest decision-making body is the General Meeting, which is composed of the company's shareholders. The General Meeting makes decisions on matters falling within its competence as stipulated by the Finnish Limited Liability Companies Act and the company's articles of association. The Annual General Meeting elects the Board of Directors and auditors. The Board of Directors is responsible for strategic management and decides on the SSH Group's administrative systems and ensures compliance with good governance principles. The Board appoints the CEO, who is in charge of the operative, day-to-day management of the company. CEO is assisted in his/her work by the Executive Management Team.

More information can be found from the annual Corporate Governance Statement and from the company website.

BUSINESS ETHICS AND SOCIAL RESPONSIBILITY

SSH operates in a socially and ethically responsible manner, respects the environment and society, promotes internationally proclaimed human rights, and ensures ethical business practices at all times.

SSH has set out a clear Anti-Bribery & Anti-Corruption Policy which prohibits all forms of bribery and corruption. The policy is communicated to all employees during new employee training. Any allegations of bribery or corruption will be investigated thoroughly. The Anti-Bribery & Anti-Corruption Policy is available on our web site. SSH has also established a whistle-blower process which is initiated when someone reports suspected internal or external misconduct or violation of law, regulations, human rights, labor practices or similar within the operations of SSH Group or by its personnel.

SSH respects the surrounding environment and aims to make sure that all of its offices are green and energy-efficient, and environmental impacts are maintained as low as possible. Most of the environmental impact comes from energy consumption of the offices, which is minimized by reusing supplies and recycling. Travel emissions from employee commuting and business travelling are minimized by supporting remote working and online conferencing options. All employees of SSH have the right to a safe and healthy working environment where personal well-being is promoted, and any form of discrimination or harassment is prohibited. Every employee is treated with equal consideration and fairness. All decisions concerning employment are determined by the employee's performance, not on any discriminatory grounds, such as gender, age, nationality, ethnicity, religion, political affiliation, disability, or sexual orientation. In 2018, all full-time employees had individual development discussions and were part of the performance management program.

SSH considers diversity as a strength and actively encourages diversity throughout the organization, including top management and the Board of Directors. The principles on diversity are always taken into account when considering nominations to the Board of Directors. SSH aims to have board members representing both genders, as well as different professional and educational backgrounds.

At the end of 2018, SSH Communications Security Group had 85 employees, up by 5 persons or 6.3 % from the previous year. The average age of the employees was 41.0 years. Approximately 17.6% of the personnel were female and 82.4% were male. Approximately 8.4% of the employees were under 30 years, 38.5% between 30-39 years, 36.2% between 40-49 years, and 16.9% over 50 years. Approximately 40.5% of the employees had been working for SSH less than 2 years, 31.0% for 2-5 years, 14.3% for 5-10 years, and 14.3% for over 10 years.

INFORMATION FOR SHAREHOLDERS

All published investor information, including annual reports, interim reports and stock exchange releases are available on the company's website at www.ssh.com/investors. All investor information is published in English. Stock exchange releases and interim reports are also published in Finnish.

Subscriptions to the emailing list for stock exchange releases can be made by sending your contact details to investor-relations@ssh.com. SSH follows a silent period starting 30 days before the publication of its financial reports, during which company refrains from contact with representatives of the capital markets and financial media.

ANNUAL GENERAL MEETING

The company's Annual General Meeting 2019 will be held at Taitotalon Kongressikeskus, Auditorio Fakta, Valimotie 8, Helsinki, on Tuesday 26th of March 2019 at 10:00 a.m.

FINANCIAL CALENDAR 2019

The company will publish the following financial reports during 2019:

Financial Statements Bulletin	February 12, 2019
Annual Report	Week 9
Interim Report, First quarter	April 17, 2019
Interim Report, First two quarters	July 17, 2019
Interim Report, First three quarters	October 23, 2019

SSH COMMUNICATIONS SECURITY SHARE FACTS

Listing since 2000	Nasdaq Helsinki Ltd.
Trading symbol	SSH1V
Number of shares	38,802,233

INVESTOR RELATIONS CONTACTS

For any inquiries, please contact: investor-relations@ssh.com

CONTACT INFORMATION

Corporate Headquarters / Finland

SSH Communications Security Corporation
Kornetintie 3
00380 Helsinki, Finland
Tel: +358 20 500 7000
Email: info.fi@ssh.com

www.ssh.com

USA

SSH Communications Security, Inc.
460 Totten Pond Road, Suite 460
Waltham, MA 02451, USA
Tel: +1 781 247 2100
Email: info.us@ssh.com

Hong Kong

SSH Communications Security Ltd.
51/F Hopewell Centre
183 Queen's Road East
Wan Chai, Hong Kong
Tel: +852 3602 3072
Email: info.hk@ssh.com

Germany

SSH Operations Ltd.
Max-Planck-Str. 4
85609 Aschheim
Tel. +49 89 24414124-0
Email: info.de@ssh.com