



**ICT Solutions for
Brilliant Minds**

REPORT OF THE BOARD OF DIRECTORS

2018

CSC – IT Center for Science Ltd's operations in 2018

CSC – IT Center for Science Ltd (CSC) develops and provides ICT expert services at an internationally high level of quality for research, education, culture, public administration and enterprises, to help them thrive and benefit society at large. Our primary customers are the Ministry of Education and Culture, higher-education institutions, research institutes and public administration. Our international operations boost the vitality of the Finnish research community and educational system. CSC has an important role as an instrument for steering and developing the Ministry of Education and Culture's education, science and cultural policy. CSC is owned by the Finnish state (70% shareholding) and Finnish higher education institutions (30% shareholding).

CSC develops solutions for science and education

CSC's special task is to help the Finnish science and education community achieve success in its core activities. The combination, processing and analysis of big data require a computing and data management environment geared towards research needs, a fast national research network and high-quality expert support with understanding of researchers' needs. CSC provides versatile scientific computing, data management, analysis and research administration solutions and customer training for the research sector.

Key development measures taken in 2018 include the 33 M€ in infrastructure procurements made through the Ministry of Education and Culture Data and Computing 2021 development programme (DL2021). The program was expanded to include the procurement of equipment for artificial intelligence and its research, with a supplementary budget of 4 M€ granted by the state. Backbone infrastructure procurements for Funet (Finnish University and Research Network) were completed with excellent results.

Service development was continued with a high degree of customer cooperation. In cooperation with higher education institutions, CSC launched its Ideapankki service, which is geared toward the gathering and promotion of development ideas for higher education and research actors. 3.2 million M€ in new services, pilots, development projects and trials were launched. Capabilities in analytics, platform economy and artificial intelligence were built upon, particularly in training made possible by supplementary funding for the development of competence in the DL2021 programme. CSC also signed a three-year partnership agreement with the National Archives and National Library of Finland for the adoption of artificial intelligence.

The nationwide solutions implemented by CSC facilitate the organization of the practical aspects of training and teaching cooperation across organizational boundaries. Development of the National Research Information Hub continued, with the goal being to make Finnish research locatable from a single source and available to a variety of services.

VIRTA Publication Information Service launched the transfer of national publication data to the EU-funded OpenAIRE service, which offers access to open science in Europe. Open learning materials were promoted in a joint Ministry of Education and Culture, Finnish National Agency for Education and CSC project, which promotes the use of open learning materials at the national level.

In 2018, Funet launched its "Funet 2020" lifecycle upgrade project. Network updates have progressed well and on schedule. CSC also participated in planning the update of the joint Nordic NORDUnet research network.

Tailored solutions support the digitalisation of public administration

CSC delivers comprehensive solutions for data management and use to the central government and municipalities in support of management by information and interoperability. These solutions support the public sector in unique projects or undertakings with an extremely long lifespan. The long-term preservation service implemented for the Ministry of Education and Culture will be used to store such data as cultural memory organisations' materials.

CSC assumed an even stronger role as a partner to central government development projects: Its expertise was relied on for such purposes as developing the application process for central government grants, collecting economic data from municipalities and regions, exploring the potential of using data analysis and reporting and artificial intelligence and planning the Genome Centre.

Finances

Overall economic growth also helped to improve CSC's finances and paved the way for healthy growth. Financial growth for the financial period was positive, even exceeding expectations. Growth was achieved by expanding existing customer operations and with new initiatives in various customer sectors. The company's turnover was EUR 44,891,742.40 (40,523,583.27) in 2018, with a year-on-year growth of 10.8%.

The increased turnover also improved the result. Increasing the efficiency of internal operations kept the cost level in check. The relative cost level stayed at the same level as in previous years. The result after financial items was EUR 1,771,578.73 (1,590,278.79), with profit for the financial year totalling EUR 1,414,404.19 (1,268,672.93). The company's R&D expenses for 2018 were equivalent to about 11.4% (11.6%) of net sales.

Key indicators for the financial year

Key indicators	2018	2017	2016	2015
Operating profit, %	3.9	3.9	0.7	1.0
Return on equity, %	36.3	39.8	8.0	16.1
Return on investment, %	45.8	50.2	10.7	20.7
Quick ratio	2.6	2.2	2.0	2.5
Current ratio	1.1	1.0	0.9	0.8
Equity ratio, %	33.0	27.6	27.9	28.2
Gearing, %	23.7	24.8	17.9	16.8

Personnel

At the end of 2018, CSC employed 351 persons, 91% of whom were permanently employees. Employee turnover was 7.8%, which is excellent for the sector. The average duration of employment was approximately 8 years and the gender ratio was 30% women and 70% men.

In 2016, labor market negotiations led to the signing of a competitiveness agreement, on the basis of which the agreed working hours contained in collective agreements were extended by 24 hours. CSC carried out this extension of working time as intended. In 2018, the number of working hours were extended, in practice, by increasing the length of the workday by six (6) minutes. A new local agreement was negotiated in autumn 2018, which contains an arrangement for extending working time in 2019.

Mental working capacity plays a key role in employee motivation and ability to cope at work, particularly among people working in advisory capacities. At CSC, occupational well-being was addressed in a variety of ways, such as by taking employee wishes into consideration, including them in discussions and decision-making and charting their suggestions for developing occupational well-being. In addition to this, CSC offers extensive occupational healthcare services and health insurance, as well as a wide range of subsidised opportunities for exercise, hobbies and recreational activities.

In 2018, several remodelling and development projects were completed. Workspaces were remodelled into a multi-space office. Space efficiency was improved. The average use of office space is 14.4m² / person. In addition to this, customer training facilities were also updated and a new customer counselling centre was opened. The goal of the remodelling was to create, in cooperation with the employees, a working environment that is conducive to various work profiles. Completion of the remodelling work is expected by the end of 2020.

Key personnel indicators

Key indicators	2018	2017	2016	2015
No. of personnel	351	317	289	285
permanent, %	91	92	92	92
fixed-term, %	9	8	8	8
men, %	70	72	73	74
women, %	30	28	27	26

Age distribution	2018	2017	2016	2015
under 30, %	11	9	6	6
30–39, %	31	33	36	41
40–49, %	35	34	36	34
over 50, %	23	24	22	19
average age	42	42	42	41

Education	2018	2017	2016	2015
elementary and vocational, %	15	16	17	18
university of applied science, %	15	15	13	14
University, %	55	52	51	49
Post-graduate, %	15	17	19	19

The environment

CSC is a pioneer in the sustainable development of ICT services and is committed to promoting sustainable development targets in all of its operations. We seek to minimise the environmental loading caused by our activities.

CSC seeks energy-efficient solutions in its datacenters. CSC's procurement policy also instructs employees to examine environmental factors at all stages, from planning to use and decommissioning. The workspaces used by CSC experts are very efficiently designed.

CSC adheres to the Hansel framework agreement procurement policy, in which environmental factors are also taken into consideration. CSC's procurement policy also instructs employees to examine environmental factors at all stages, from planning to use and decommissioning.

In 2015, CSC performed the corporate energy review required from major companies at four-year intervals under the Energy Efficiency Act.

Risks and uncertainty factors

CSC's risk management programme covers strategic, operative and accident risks, and assigns responsibilities for annual risk management tasks both to service production and management. In addition to this, CSC has assessed the impacts of protecting personal data.

In 2018, CSC's key strategic risk factors were its position, the processing of personal data, funding the development of services, the availability of expertise, renewing the production infrastructure, and risks associated with cybersecurity.

The period of validity of the internationally esteemed ISO/IEC 27001 certification, which is granted for CSC's security management and its associated risk management, was extended in accordance with an external follow-up evaluation.

Future outlooks

CSC's turnover is expected to grow by about 10% in 2019. While the rapid changes taking place in the operating environment require good capabilities for change management of the company, they also create significant opportunities for meeting future challenges and generating new growth. An effort will be made to respond to rapid changes in the environment by taking proactive measures in all internal company areas.

In 2019, the most important national focus of development in research services will continue to be the Ministry of Education and Culture Data and Computing 2021 development programme (DL2021). Investments made in 2018 will be implemented and the company's expanding customer base will be supported by, for example, joint pilot projects. Special attention will be given to the development of artificial intelligence and the use of sensitive data. CSC will also be participating in the European High-Performance Computing Joint Undertaking (EuroHPC), which involves the development of exascale high-performance computing and technology.

Upgrading of the Funet network will continue. The availability of data will be developed by introducing the long-term stewardship offered by FAIR Data services and building a digital preservation service for official data in cooperation with the National Library of Finland.

CSC will continue to develop information services to meet administrative requirements and the needs of its shareholders. These services include a statistics service and reporting portal for study management, and the Municipal Finance

Information Service for the State Treasury. CSC supports the development of shared architecture for education and research, and promotes its application. CSC will be carrying out the measures given in the Vision for higher education and research in 2030 in a manner agreed upon with the Ministry of Education and Culture.

The company will continue the development of customer processes and a more comprehensive inclusion of the customer steering model in strategic processes. The customer steering model published on the CSC website in 2018 will serve as the guide for this work.

The Board of Directors' proposal for the distribution of profit

The Board proposes that no dividend be paid and that the company's profit for 2018 (EUR 1,414,404.19) be transferred to retained earnings.

CSC – IT Center for Science Ltd.

Board of Directors

Income statement

	1.1.–31.12.2018	1.1.–31.12.2017
EUR		
Net sales	44,891,742.40	40,523,583.27
Other operating income	4,081,445.83	3,767,869.78
Personnel expenses	24,151,430.60	21,657,962.63
Depreciation	823,405.32	761,095.17
Other operating expenses	22,228,164.62	20,293,915.41
Operating profit/loss	1,770,187.69	1,578,479.84
Financial income and expenses	1,391.04	11,798.95
Profit before extraordinary items	1,771,578.73	1,590,278.79
Direct taxes	-357,174.54	-321,605.86
Profit/loss for the financial year	1 414 404.19	1,268,672.93

Balance sheet

Assets	31.12.2018	31.12.2017
EUR		
Non-current assets		
Intangible assets	52,055.92	49,550.60
Tangible assets	3,423,581.17	3,674,978.34
Investments	258,022.82	255,522.82
Holdings in group undertakings	3,733,659.91	3,980,051.76
Current assets		
Current receivables	9,055,110.39	10,401,086.06
Financial securities	12,065,169.52	6,104,604.14
Cash and cash equivalents	6,207,153.31	5,884,742.38
	27,327,433.22	22,390,432.58
	31,061,093.13	26,370,484.34
Liabilities	31.12.2018	31.12.2017
EUR		
Shareholders' equity		
Share capital	1,000,000.00	1,000,000.00
Unrestricted invested shareholders' equity	200,000.00	200,000.00
Retained earnings	2,618,330.64	1,349,657.71
Profit/loss for the financial year	1,414,404.19	1,268,672.93
Total shareholders' equity	5,232,734.83	3,818,330.64
Liabilities		
Current liabilities	25,828,358.30	22,552,153.70
	31,061,093.13	26,370,484.34

Cash flow statement	2018	2017
EUR		
Cash flow from operating activities		
Cash flow from sales	49 942,189.26	40,975,640.48
Operating expenses	-42 726,415.98	-36,205,477.26
Cash flow from operating activities before financial items and taxes	7 215,773.28	4,770,163.22
Interest and other financial expenses incurred from operating activities	1,391.04	11,798.95
Interest received from operating activities	0.00	0.00
Direct taxes paid	-357,174.54	-321,605.86
Cash flow from operating activities	6,859,989.78	4,460,356.31
Cash flow from investments		
Investments in tangible and intangible assets	-577,013.47	-158,209.36
Cash flow from investments	-577,013.47	-158,209.36
Change in liquid assets	6,282,976.31	4,302,146.95
Liquid assets at beginning of year	11,989,346.52	7,687,199.57
Liquid assets at year-end	18,272,322.83	11,989,346.52

Notes to the Cash Flow Statement

EUR

	2018	2017
Net sales		
Net sales in Finland	44,891,742.40	40,523,583.27
Other operating income	2018	2017
Research grants from the EU, TEKES and the Academy of Finland	4,081,445.83	3,767,869.78

	2018	2017
Notes on Personnel		
Number of people employed during the financial year		
Number of employees on 31 Dec	351	317
Average number of employees	342	310
Personnel expenses	2018	2017
Wages and salaries	19,714,204.64	17,642,426.10
Pension expenses	3,708,526.42	3,209,126.38
Other statutory personnel expenses	728,699.54	806,410.15
Total	24,151,430.60	21,657,962.63
Management salaries and remuneration	2018	2017
Board of Directors and Managing Director	284,629.30	281,501.26
Auditor's fees	2018	2017
Audits	20,652.75	14,817.28
Other statements	18,907.50	1,207.50
	39,560.25	16,024.78

Other operating expenses	2018	2017
IT expenses, equipment and software maintenance	9,968,277.10	8,705,105.94
Other expenses	12,259,887.52	11,588,809.47
Other operating expenses, total	22,228,164.62	20,293,915.41
Financial income and expenses		
	2018	2017
Other interest and financial income from others	12,439.08	20,882.08
Interest and financial expenses to others	-11,048.04	-9,083.13
Total interest and financial expenses	1,391.04	11,798.95
Tax itemisation		
	2018	2017
Income tax on operations	-357,174.54	-321,605.86
Change in deferred tax assets	0.00	0.00
Total	-357,115.35	-321,605.86

Notes to the Balance Sheet

Non-current assets	Intangible assets	Tangible assets	
	Intangible rights.	Machinery and equipment	Total
Acquisition cost, 1 Jan	133,761.17	8,444,741.30	8,578,502.47
Increases	15,519.56	558,993.91	574,513.47
Acquisition cost, 31 Dec	149,280.73	9,003,735.21	9,153,015.94
Accumulated depreciation, 1 Jan	84,210.57	4,769,762.96	4,853,973.53
Depreciation for the financial year	13,014.24	810,391.08	823,405.32
Accumulated depreciation, 31 Dec	97,224.81	5,580,154.04	5,677,378.85
Book value, 31 Dec	49,550.60	3,674,978.34	3,724,528.94
KBook value, 31 Dec	52,055.92	3,423,581.17	3,475,637.09

Holdings in other companies

	2018	2017
Shareholdings		
Otaverkko Oy	euroa	holding, %/no.
Acquisition cost, 1 Jan	2,522.82	5.3 / 75
Acquisition cost, 31 Dec	2,522.82	5.3 / 75
Book value, 31 Dec	2,522.82	5.3 / 75

Digile Oy/ ICT SHOK		holding, %/no.	holding, %/no.
Acquisition cost, 1 Jan	10,000.00	0.9 / 100	0.9 / 100
Acquisition cost, 31 Dec	10,000.00	0.9 / 100	0.9 / 100
Book value, 31 Dec	10,000.00	0.9 / 100	0.9 / 100
SalWe Oy/ T&H SHOK		holding, %/no.	holding, %/no.
Acquisition cost, 1 Jan	10,000.00	0.9 / 100	0.9 / 100
Acquisition cost, 31 Dec	10,000.00	0.9 / 100	0.9 / 100
Book value, 31 Dec	10,000.00	0.9 / 100	0.9 / 100
NORDUnet A/S		holding, %/no.	holding, %/no.
Acquisition cost, 1 Jan	233,000.00	17.9 / 2000	17.9 / 2000
Acquisition cost, 31 Dec	233,000.00	17.9 / 2000	17.9 / 2000
Book value, 31 Dec	233,000.00	17.9 / 2000	17.9 / 2000
EUDAT Ltd		holding, %/no.	holding, %/no.
Acquisition cost, 1 Jan	0.00	0 / 0	
Acquisition cost, 31 Dec	2,500.00	50 / 1	
Book value, 31 Dec	2,500.00	50 / 1	

Financial securities

Danske Invest Neutral K, Yhteisökorke K, Euro High Yield K, DI SICAV Eu. Corp. Sust. Bond I		
Book value	12,065,169.52	
Market price	12,240,808.72	
Difference	175,639.20	
Current receivables	2018	2017
Accounts receivable	5,451,803.22	7,531,224.37
Prepayments and accrued income	3,603,307.17	2,869,861.69
Total	9,055,110.39	10,401,086.06

Shareholders' equity	2018	2017
Share capital, 1 Jan	1,000,000.00	1,000,000.00
Share capital, 31 Dec	1,000,000.00	1,000,000.00
Unrestricted invested shareholders' equity, 1 Jan	200,000.00	200,000.00
Unrestricted invested shareholders' equity, 31 Dec	200,000.00	200,000.00
Retained earnings, 1 Jan	2,618,330.64	1,349,657.71
Transfer to share capital		
Retained earnings, 31 Dec	2,618,330.64	1,349,657.71
Profit/loss for the financial year	1,414,404.19	1,268,672.93
Total shareholders' equity	5,232,734.83	3,818,330.64
Distributable funds, 31 Dec	2018	2017
Retained earnings	2,618,330.64	1,349,657.71
Profit for the financial year	1,414,404.19	1,268,672.93
Unrestricted invested shareholders' equity	200,000.00	200,000.00
Total	4,232,734.83	2,818,330.64
Breakdown of share capital by type of share	2018	2017
	shares	shares
Shareholders have 1 vote per share	10,000.00	10,000.00

Current liabilities	2018	2017
Advance payments received	15,203,686.03	12,516,690.35
Accounts payable	2,653,752.78	2,923,805.08
Other short-term debts	2,561,439.28	2,271,790.98
Accruals and deferred income	5,409,480.21	4,839,867.29
	25,828,358.30	22,552,153.70
Responsibilities		
Leasing liabilities		
To be paid the following financial year	1,510,394.64	1,060,334.60
To be paid the coming financial year	3,643,828.60	1,752,346.14
Rent liabilities		
To be paid the following financial year	2,427,558.60	2,360,352.84
To be paid the coming financial year	16,549,380.60	17,878,057.92

Key indicators	2018	2017	2016	2015
- Operating profit, %	3.9%	3.9%	0.7%	1.0%
- Return on equity	31.3%	39.8%	8.0%	16.1%
- Return on capital invested	39.4%	50.2%	10.7%	20.7%
- Quick ratio	2.6	2.2	2.0	2.5
- Current ratio	1.1	1.0	0.9	0.8
- Equity ratio	33.0%	27.6%	27.9%	28.2%
- Relative indebtedness, %	23.7%	24.8%	17.9%	16.8%



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