



CSC CORPORATE SOCIAL  
RESPONSIBILITY REPORT

2014

# CSC'S CORPORATE SOCIAL RESPONSIBILITY REPORT 2014

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# 1 ORGANISATION, CORPORATE GOVERNANCE, AND OPERATING PRINCIPLES

## 1.1 BASIC INFORMATION

CSC – IT Center for Science Ltd. is a fully state-owned enterprise that maintains and develops centralised, state-owned IT infrastructures, which it uses to provide nationwide IT services for research, education, culture, and administration. CSC's principal customers are the Ministry of Education and Culture and its subordinate organisations, higher education institutions, and research institutes. CSC provides services with the aid of centralised, state-owned or state-funded IT infrastructures. CSC's services are described on its website, [www.csc.fi](http://www.csc.fi). CSC has locations in the Keilaniemi district of Espoo and in the Renforsin Ranta business park in Kajaani. Company turnover for 2014 was EUR 32,688,759.76. The company had 266 employees at year end.

The State of Finland is CSC's sole shareholder. The Ministry of Education and Culture is responsible for CSC's ownership steering and the assessment of its overall social and economic results. According to legislation on public procurements (338/2007) and the legal practice of the European Court of Justice, CSC is a state-administered, non-profit unit. CSC provides services for its shareholder at cost price without profit or loss. In accordance with CSC's Articles of Association, the company may sell a small number of services to others on a commercial basis.

The primary norms pertaining to a state-owned company entrusted with a special mandate are based on the Finnish Limited Liability Companies Act (624/2006) and the State Shareholdings and Ownership Steering Act (1368/2007). CSC's governance is also subject to the Government resolution on state ownership policy (3 November 2011) and the Ministerial Committee for Economic Policy's statement on rewarding (13 August 2012), the company's Articles of Association, and the principles and instructions determined by the Board of Directors. Although it is an unlisted company, CSC has also decided to adhere to the applicable sections of the Corporate Governance code for listed companies, issued by the Securities Market Association on 1 October 2010.

The Annual General Meeting, Board of Directors and Managing Director share responsibility for CSC's administration and operations. Annual General Meetings are held on an annual basis before the end of June. The Board of Directors consisted of seven members in 2014. Professor Samuel Kaski was Chairman of the Board of Directors and Kimmo Koski was the company's Managing Director.

## 1.2 SOCIAL RESPONSIBILITY MANAGEMENT AND PRINCIPLES

CSC's operations are guided by values that reflect its social responsibility: Quality through cooperation, Passionate about expertise, Responsibility and openness, People are key. These values are enforced as the basis for sustainable operations that consider the relationship between economic activities and ecological, social and cultural values. These values are supported by the CSC Code of Conduct, published in 2012, that illustrates what we mean by good business practices and healthy interaction with stakeholders, society and the environment.

CSC's Board of Directors monitors the management and implementation of social responsibility as part of its order of procedure. During the annual meeting at which the Board considers the Financial Statements, it also reviews the social impact of CSC's services as well as their ability to provide society with added value in accordance with the organisation's special mandate. This assessment feeds into the Board's decision on the distribution of bonuses to management and personnel. The Board confirms the annually updated risk management plan and the approved residual risks. The Managing Director and Management Group are jointly responsible for ensuring that risk management has been appropriately arranged.

Responsibility management and the coordination of practical procedures are based on the company's normal management system. CSC's Management Group is responsible for internal control, such as the steering and operational processes used for ensuring that we operate legally and profitably and report on our financial status and activities in a reliable manner. The Financial Director is responsible for internal auditing in cooperation with management and the company's auditor. CSC is committed to promoting sustainable development objectives, and environmental management is a routine aspect of the Management Group's activities.

Implementing the various areas of social responsibility forms part of every CSC employee's daily work. Indicators promoting responsibility are used as the basis for rewarding all personnel. In 2013, the CSC Board initiated a project aimed at developing the measurement of responsibility. This project continued in 2014.

### 1.3 STAKEHOLDERS AND STAKEHOLDER DIALOGUE

CSC has a number of stakeholders, each with their own expectations. We seek open and proactive dialogue with all stakeholders. We engage in lively dialogue with customers, personnel, our shareholder, partners, and research infrastructure financiers. Other stakeholders include authorities, local communities, and the media.

Feedback received from stakeholders through various channels, including information about their expectations, plays a key role in our operations. Stakeholders' expectations are regularly assessed through questionnaires (customer surveys, personnel well-being surveys), regular meetings and quality meetings, and by following public debate.

In Appendix 1 (Stakeholder analysis), we analyse stakeholder expectations and present a summary of the actions we took in 2014.

## 2 FINANCIAL RESPONSIBILITY

### 2.1 FINANCIAL RESPONSIBILITY MANAGEMENT

CSC provides non-profit services for its shareholders in accordance with its Articles of Association. At CSC, financial responsibility means transparency and open financial management. CSC seeks to provide high-quality yet cost-effective services.

#### 2.1.1 FINANCIAL TARGETS

Good cost management was the financial target for 2014. The company's cost structure was managed with careful cost control and category-based procurement management. Personnel were encouraged to engage in internal task rotation. 2014 was the first year in which an activity-based costing model was used and feedback on its use collected. This model enables cost monitoring and reporting at a considerably more precise level.

### 2.2 FINANCIAL KEY INDICATORS

2014 was a financially successful year in spite of significant risk factors associated with the development of government finances. Key indicators for CSC's financial performance and financial activities are presented in more detail in Section 10 Balance sheet.

The following tables show key indicators, CSC's cash flows to stakeholders, and the amount and purpose of financial support received from the State.

As a non-profit company, CSC's result, solvency and liquidity are good.

KEY FIGURES	2014	2013	2012	2011
Operating profit %	0,65 %	0,66 %	0,24 %	0,21 %
Return on equity	8,93 %	6,25 %	5,28 %	4,84 %
Return on invested capital	11,68 %	10,35 %	6,34 %	8,49 %
Quick ratio	2,4	2,8	2,8	3,0
Equity ratio	25,13 %	26,42 %	28,15 %	25,42 %

## 2.2.1 Cash flows to stakeholders

STAKEHOLDER	EUR thousand	DIRECT AND INDIRECT IMPACT
Generating added value		
Customers	<p>Net sales EUR 32,689 thousand</p> <p>Support from EU, TEKES, Academy of Finland EUR 3,883 thousand</p>	<p><b>Direct financial impact:</b> Through CSC, the Ministry of Education and Culture fulfils its obligation under the Information Management Act to promote cooperation and IT system interoperability in the fields of education, science and culture.</p> <p>CSC's customers are given access to scientific computation services and an information network whose quality is highly regarded internationally, as well as training and expert guidance in the use of supercomputers.</p> <p><b>Indirect financial impact:</b> CSC has an impact on the competitiveness of Finnish research.</p>
Dispensing added value		
Suppliers	<p>EUR -18,121 thousand</p>	<p><b>Direct financial impact:</b> CSC primarily purchases goods and services from suppliers operating in Finland.</p> <p><b>Indirect financial impact:</b> Cooperation creates business opportunities and jobs for suppliers.</p>
Personnel	<p>EUR -17,554 thousand</p>	<p><b>Direct financial impact:</b> All of CSC's personnel are stationed in Finland. Personnel's salaries and bonuses have an impact on private consumption, and the taxes they pay contribute to social well-being.</p> <p><b>Indirect financial impact:</b> CSC uses training and task rotation to enhance personnel's expertise and performance. CSC's personnel have unique expertise in, for example, scientific computation, data management, and storage services.</p>
Public sector	<p>EUR -45 thousand</p>	Taxes paid by CSC to the State
Support and donations given to non-profit organisations	<p>EUR 0 thousand</p>	In accordance with its Code of Conduct, CSC does not make donations, support non-profit organisations, or sponsor any type of group.
Shareholders		CSC does not pay a dividend. CSC's operating profit of EUR 171 thousand was transferred to retained earnings in its entirety.
Financiers	<p>EUR -3 thousand</p>	Financial expenses
Result for the financial year	<p>EUR 171 thousand</p>	The profit for the financial year was transferred to retained earnings in its entirety.
Investments: depreciation	<p>EUR -684 thousand</p>	CSC's own investments focus on the maintenance, monitoring and security of the state-owned and/or state-funded computational environment and data infrastructure administered by the company.

### 2.2.2 The amount, nature and purpose of government support received

SUPPORT	EUR thousand	PURPOSE
Government subsidy	EUR 2,110 thousand	The government subsidy is intended for the development of computational service infrastructure, service concepts, and data warehouse services.
Investment support from the Ministry of Education and Culture	EUR 1,677 thousand	This support covers investments in the maintenance, monitoring and security of the state-owned and/or state-funded computational environment administered by the company.

# 3 PERSONNEL

## 3.1 HR MANAGEMENT

CSC seeks to be a desirable and responsible employer that inspires its personnel to get the best out of their expertise. CSC's HR management principles are based on the company's values and the conviction that good management is a prerequisite for commitment, good performance, and well-being at work. One goal for 2014 was to increase the agility of various operations and working methods. The SpacePilot project was launched towards the end of the year. CSC's increased payroll led to a need for more space, and we decided to plan a new multi-functional office space without designated workstations. The new solution seeks agility, community spirit, spontaneous meetings, and cooperation.

Twice a year, all CSC personnel attend development discussions in which their achievements during the previous period are evaluated and new targets are set for the following period. Discussions are supported by an online form that is signed by both parties. A personal development plan, which enables horizontal or vertical career paths, is also drawn up during development discussions. Once a year, decisions are made on whether an employee should be promoted to the next job title level on the basis of an assessment by their supervisors.

The performance evaluation carried out during development discussions affects the size of the employee's personal performance-based incentive bonus. The Board of Directors makes an annual decision on the size of the performance-based incentive and the criteria for awarding it. In 2014, the basic performance-based incentive was awarded to all personnel with a discretionary extra based on personal performance. Performance-based incentives may not exceed 12.5 per cent of annual salary. In 2013, CSC's Board of Directors launched measures to improve the transparency of the performance-based incentive system. In 2014, a revised system covered the Managing Director and Deputy Managing Director. Development of the performance-based incentive system covering all personnel continued during 2014, and efforts to develop CSC's performance benchmarks were also launched.

## 3.2 PERSONNEL KEY INDICATORS

CSC had 266 employees at the end of 2014 (254, 251 and 231 in 2013, 2012 and 2011). Figure 1 shows a breakdown of personnel by role and gender. Figure 2 shows the age structure of CSC's personnel, with the average age being 41. 93 per cent of personnel had a permanent employment contract (93% in 2013 and 90% in 2012). 5.3 per cent of employees worked part time (6.3% and 4.8% in 2013 and 2012).

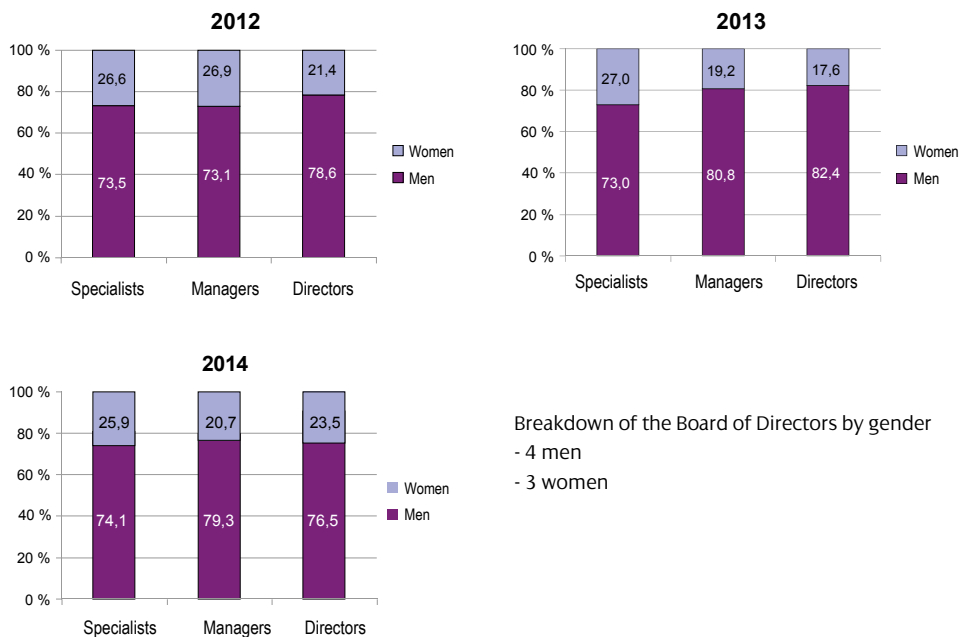


Figure 1. Breakdown of personnel by role and gender.



**Age distribution and average age**

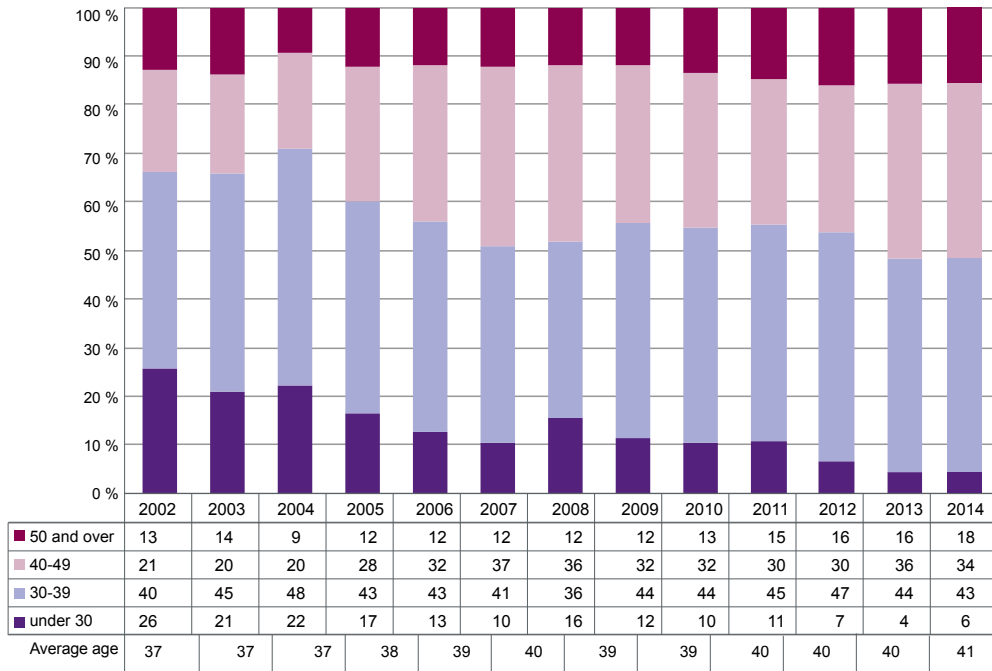


Figure 2. Age structure of CSC's personnel.

Turnover among permanent employees (Figure 3) is very low in comparison to international studies in the industry (for example, 7.9% and 8.7% in 2012 and 2010; Study by Great Place to Work®). The average length of service was 8.5 years. Half of all personnel have been working for CSC for fewer than five years, while eight employees have been working for the company for over 30 years (Figure 4). Six people retired from CSC in 2006–2014. The average age at retirement was 63.98. One to three people per year will be eligible to retire over the next few years.

Employee turnover		
	IN	OUT
2014	34	22
2013	26	23
2012	37	17
2011	44	23
2010	40	21
2009	43	18
2008	31	20
2007	29	18

Employee turnover		
2014	3,2 %	
2013	5,5 %	
2012	3,5 %	
2011	4,8 %	
2010	3,7 %	
2009	4,0 %	

Figure 3. Turnover among permanent employees.

**Period of service at CSC (31.12.)**

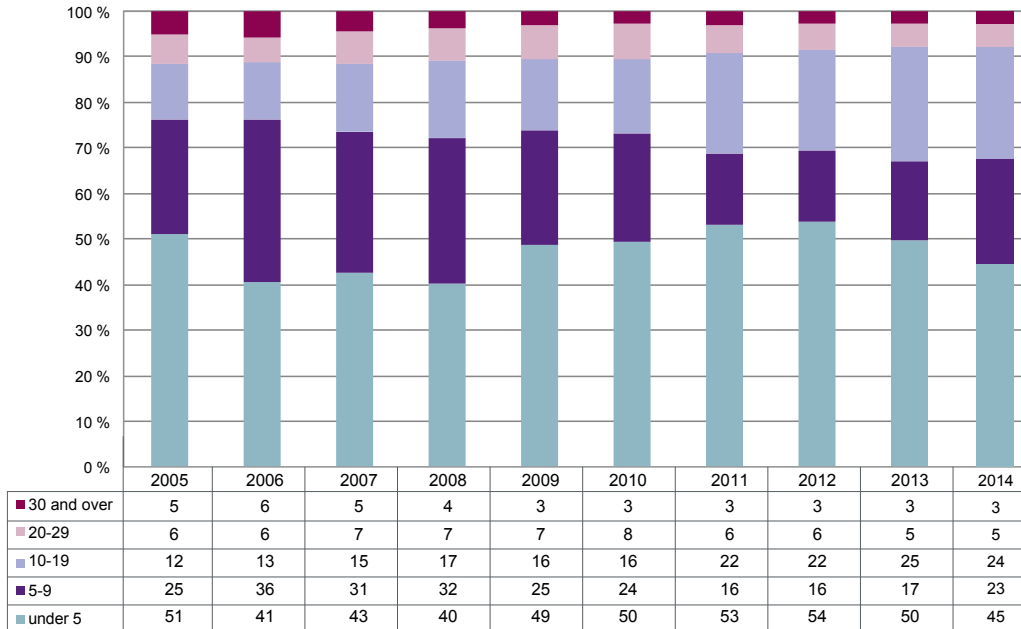


Figure 4. Period of service at CSC.

CSC's services are based on profound expertise. Personnel's expertise, versatility and ability to engage in solution-oriented activities play a key role in the company's success. Figure 5 shows a breakdown of personnel by educational background. CSC encourages lifelong learning and also supports further studies and longer sabbaticals for competence development. In 2014, personnel used a total of 418 training days (401 in 2013), representing an average of 1.6 days per person. The aforementioned figures do not include learning on the job, which plays a considerable role in personnel development. Figure 6 shows a breakdown of training days used by gender.

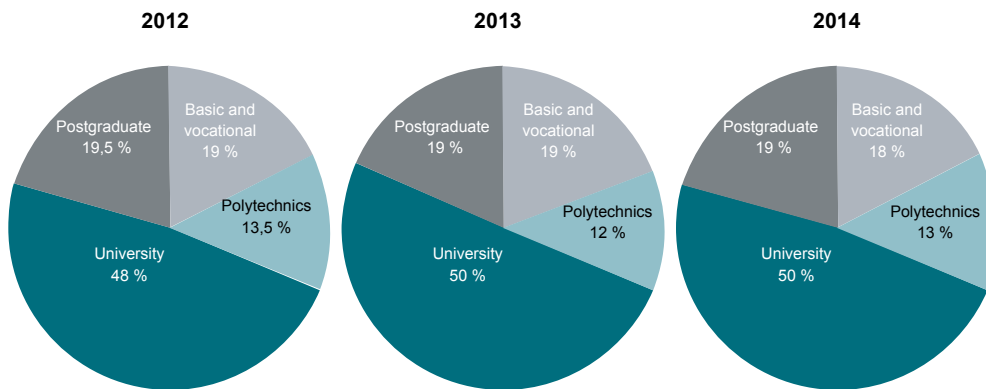


Figure 5. Breakdown of personnel by educational background.

### Training days / person



Figure 6. Breakdown of training days used by gender.

CSC has an comprehensive orientation programme for new employees, login@csc, which is run twice a year as necessary. The programme includes a greeting from the Managing Director, a presentation of CSC's services and major stakeholders, a presentation of CSC's management system and strategy, HR matters, information security matters, financial jurisdiction, and the company's history. New supervisors also receive orientation in CSC's management methods.

Every other year, CSC conducts a well-being at work survey to analyse workplace atmosphere and personnel satisfaction. The previous survey was carried out in spring 2012 in cooperation with Corporate Spirit Oy. The 2014 survey was conducted in December with the same partner. At the time of writing, only the response rate is known: 88 per cent (77% in 2012). This is excellent, and the best response rate to date. According to preliminary results, personnel are satisfied with, for example, investments in well-being, their opinions being sought during decision-making, and the developmental opportunities afforded by their work. Supervisory work and leadership culture were also rated highly in comparison to the control material.

CSC arranges its occupational healthcare in cooperation with Terveystalo. Four follow-up meetings are held with occupational healthcare personnel per year, as well as an annual meeting with management. Personnel representatives also attend these meetings. This arrangement ensures seamless cooperation and timely action in line with our early support model. The early support model was introduced in 2013. Occupational well-being training is also provided for supervisors in cooperation with CSC's pension insurance company, Ilmarinen. CSC's datacenters are challenging environments with regard to occupational safety, and we seek to minimise the amount of time personnel spend working in these areas with the aid of technical monitoring and control solutions that can be operated from office premises. Access to datacenters is restricted to those personnel that have received separate training on working in such areas. Operating instructions also require personnel to use appropriate protective gear in these areas (such as hearing protectors).

CSC's accident and sickness absence statistics are presented in Figures 7 and 8. CSC's accident frequency for 2014 was 12.3 per million work hours (8.4 and 13.1 in 2013 and 2012). The sickness absence rate was 2.5 per cent (2.5% and 2.4% in 2013 and 2012). There were no incidences of occupational diseases or work-related injuries or deaths.

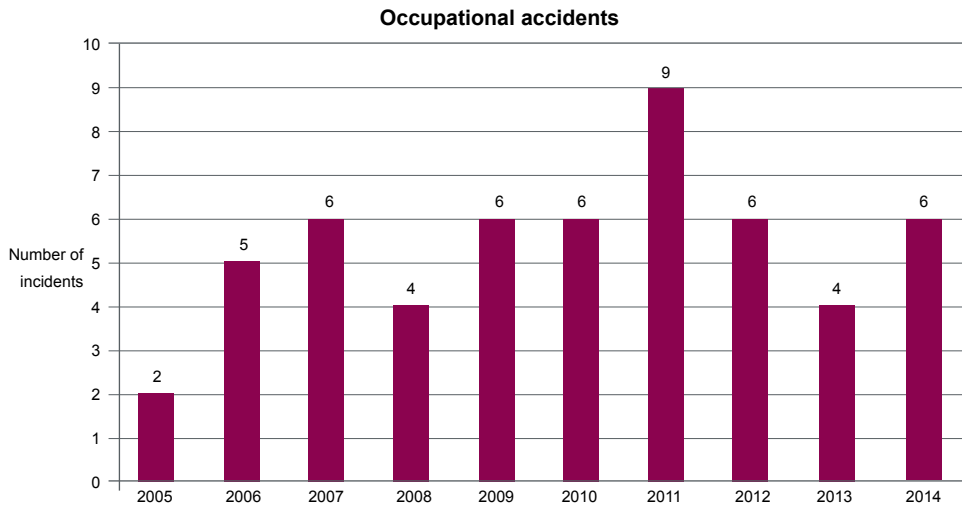


Figure 7. Occupational accidents.

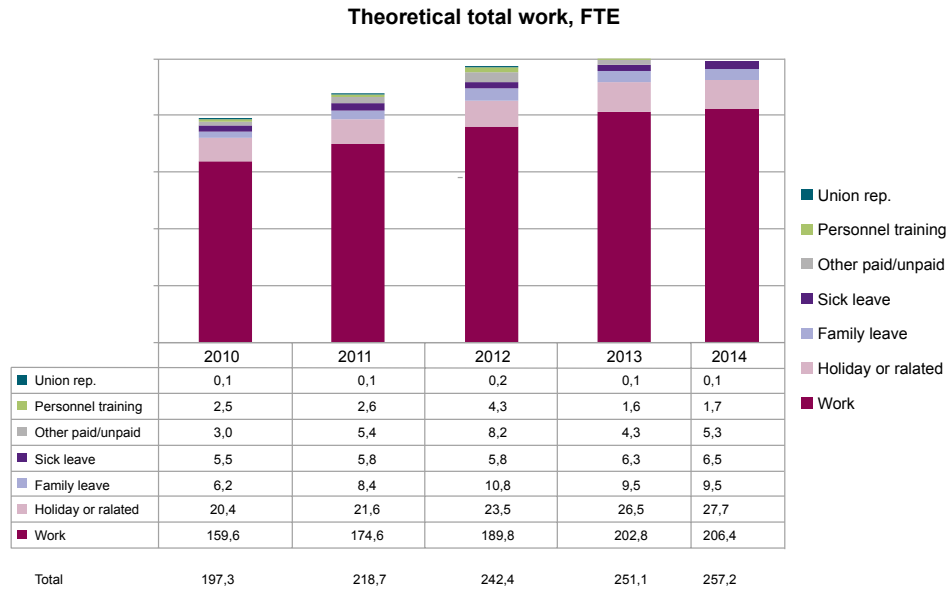


Figure 8. Theoretical total work.

## 4 THE ENVIRONMENT

### 4.1 ENVIRONMENTAL MANAGEMENT

CSC is committed to promoting sustainable development targets in its operations. Environmental management is a routine aspect of the Management Group's work.

Business flights and the electricity consumed by datacenters induce the majority of CSC's environmental loading. 2014 was the second operational year for CSC's Kajaani Datacenter. The datacenter was built using Brownfield principles, that is, making use of existing building stock. All of the electricity used at both the Espoo and Kajaani datacenters and offices was environmentally friendly, origin-certified (Finextra Oy) hydroelectric power generated at hydroelectric power plants in Svartisen, Norway. The waste heat produced by the Kajaani Datacenter is harnessed to preheat the office. The continual rise in CSC's energy consumption has ended. For the first time, energy consumption at datacentres was lower than in the previous year thanks to our upgraded equipment base and the Kajaani Datacenter's ecological efficiency. We are seeking continual improvements in the energy efficiency of our datacentres.

One of the goals of CSC's environmental policy is to improve the energy efficiency (PUE value) of datacentres. The target for 2011–2015 is an improvement of 9 per cent (in line with the targets contained in energy efficiency agreements). We were able to exceed this target in 2014, as our energy efficiency had already improved by 11.6 per cent on 2010.

The greatest risks associated with CSC's operations relate to the handling of the gas mixtures, refrigerants and generator fuel oils used in datacentre infrastructure, and the disposal of decommissioned equipment. The maintenance contracts signed by CSC require its suppliers to treat waste oil, used filters, old batteries, etc. and dispose of them in the appropriate manner. Refrigerants and gas extinguishants are recycled during maintenance or repairs. If this is not possible, the supplier arranges for their appropriate disposal. Generators are refuelled to ensure that the quality of fuel oil remains good. The decommissioning of data equipment is agreed upon in the procurement contract. Depending on the agreement made, equipment may either be returned to the manufacturer or separately recycled.

#### **CSC has set the following environmental targets to be achieved by 2015:**

- ***CSC seeks energy efficient solutions in its datacenters.***  
A 9 per cent improvement in energy efficiency is being sought in 2011–2015. CSC's goal is to use renewable energy sources to generate electricity for all of its premises.
- ***CSC seeks to save energy and natural resources, and to reduce its carbon footprint.***  
CSC is seeking to reduce environmental loading caused by procurements, business travel, and electricity consumption in particular.
- ***CSC guides and supports personnel to ensure they are committed to and have adopted environmentally friendly working methods.*** Personnel are offered the opportunity for flexible telecommuting and tools for teleconferences. Advice is given on how to save materials and electricity.

### 4.2 ENVIRONMENTAL KEY INDICATORS

#### 4.2.1 Energy

##### **Datacenter energy consumption**

2014 was the second operational year for CSC's Kajaani Datacenter, which was built in a former UPM paper mill. The reuse of the old mill premises, modern datacentre facility technology, the free cooling enabled by a cold climate, and the use of hydroelectric power enabled the construction of an ecologically efficient and environmentally friendly datacentre to meet the needs of Finnish science, research, education, and culture. The datacentre runs almost entirely on electricity. Only a small fraction of energy is used to power the diesel aggregators that provide the datacentre's reserve power supply.

In 2014, CSC's electricity consumption totalled 12.49 GWh, 98 per cent of which was accounted for by the datacentres. Electricity consumption fell by 2 per cent on the previous year. The electricity consumed by CSC's datacentres totalled 12.19 GWh (Figure 9). The fall in datacentre electricity consumption was a result of several factors, such as providing services from Kajaani's ecologically efficient datacentre and upgrading our equipment base.

CSC's target for energy efficiency (PUE) is an improvement of 9 per cent (on 2010) by 2016. PUE (Power Usage Effectiveness) is total energy divided by the energy used by servers. The target follows the spirit of energy efficiency agreements. CSC reached its target in 2014 by achieving an 11.6 per cent improvement (Figure 10).

On a global scale, the energy efficiency of CSC's datacentres is excellent. Energy efficiency (PUE) at CSC's Espoo datacentres remained at the same level as in the previous year, standing at 1.57 (1.57 in 2013) and 1.45 (1.42). Although the overall PUE for the Kajaani Datacenter was 1.17 (1.21), free air-cooled MDC (Modular Data Center) achieved a PUE of 1.04 (1.06).

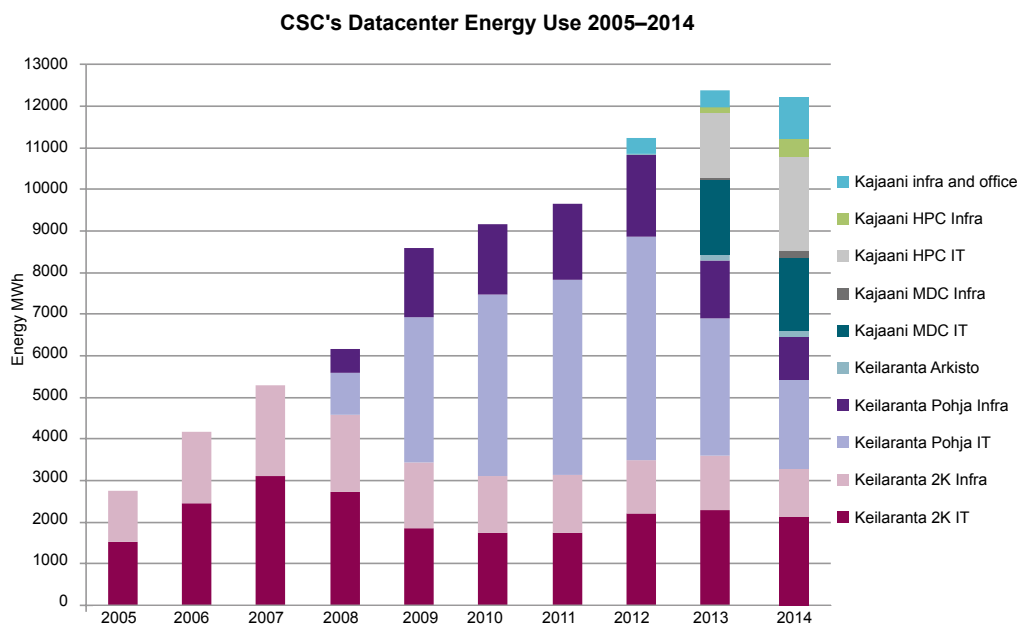


Figure 9. CSC's datacenters' energy use.

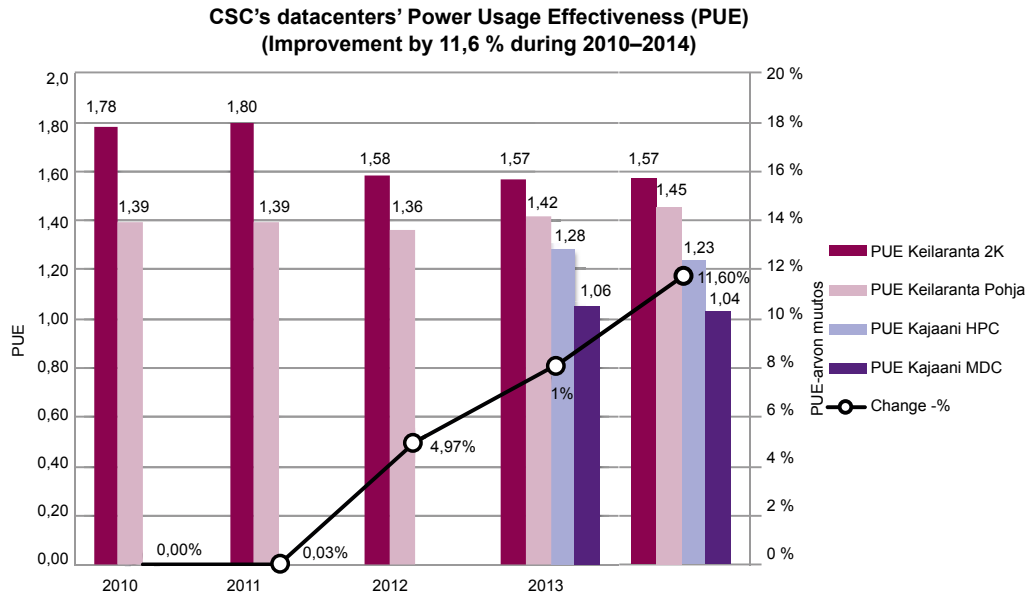


Figure 10. CSC's datacenters' Power Usage Effectiveness (PUE) .

#### Office energy consumption

Electricity consumption at the Espoo office in 2014 (Figure 11) totalled 302 MWh, which represents 2 per cent of CSC's total electricity consumption. Consumption fell on the previous year. One reason for this was the mild weather, which reduced the need for extra heat at workstations. CSC had 266 employees at year end, so energy consumption per person equalled 1.1 MWh. Electricity consumption per person has declined by 26 per cent compared to 2010. Our 2016 target – to reduce electricity consumption per person by 20 per cent compared to 2010, when measurements first started – was already achieved in 2014.

CSC's office equipment base mainly consists of laptops which use an average of one fourth less energy than desktop computers of comparable performance. The majority of the services provided in the office network have been virtualised, resulting in lower server electricity consumption and resource usage than if the services had been implemented using physical devices.

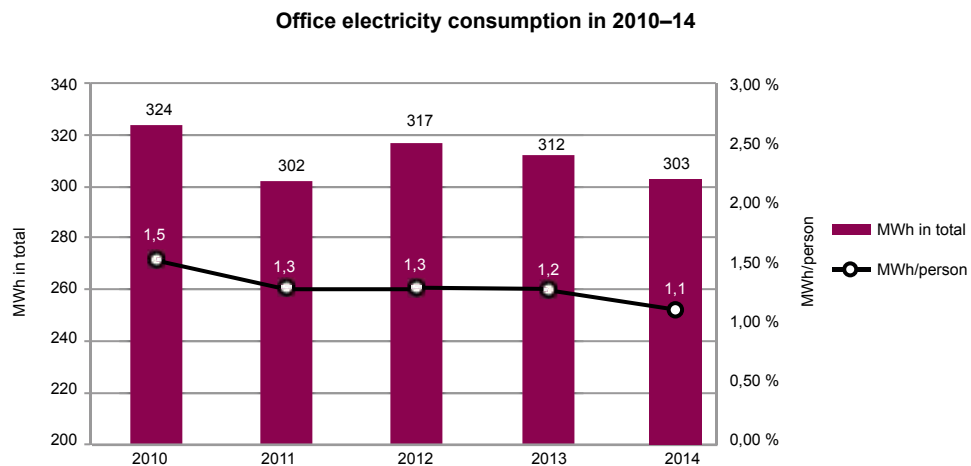


Figure 11. Office electricity consumption.

## Heating

In 2014, CSC's premises in Espoo used an estimated 1,001 MWh (Figure 12) of the district heating supplied to the businesses in the area. About half of the district heating used by CSC was produced using renewable energy sources. Consumption equates to 3.8 MWh per person. Due to the mild weather, heating consumption fell on the previous year.

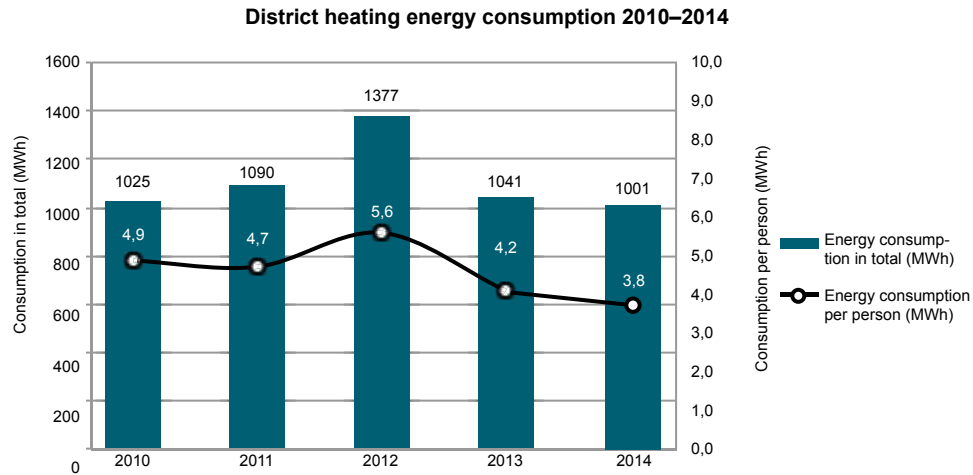


Figure 12. District heating energy consumption in Espoo office.

## 4.2.2 Air emissions

Greenhouse gas emissions have been shown in tons of carbon dioxide (tCO<sub>2</sub>), and our calculations are based on the WWF's Climate Calculator (Figure 13). The emission coefficients used in the Climate Calculator are primarily intended to assess consumption-based emissions rather than production-based emissions. CSC's operations indirectly cause greenhouse gas emissions. Direct greenhouse gas emissions are only produced by the diesel aggregators used as a reserve power supply for datacentres.

All of the electricity purchased to run CSC's datacentres was renewable energy that did not generate any carbon dioxide emissions. As in previous years, CSC's greatest sources of carbon dioxide emissions were air travel and district heating. There was a reduction in greenhouse gas emissions compared to the previous year.

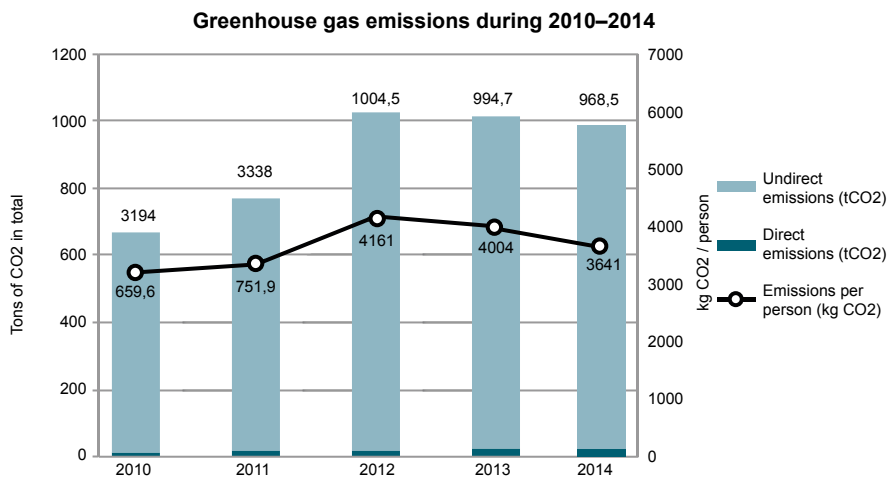


Figure 13: Greenhouse gas emissions shown in tons of carbon dioxide (tCO<sub>2</sub>).



### 4.2.3 Water

Although CSC is not a major consumer of water, personnel have been advised not to leave taps running unnecessarily. We have also sought to reduce water consumption at our Espoo office by lowering water pressure in breakroom kitchens, toilets, and public areas.

A total of 324 cubic metres of water was used at the Kajaani office and datacentre for cooling and air humidification. A precise figure for CSC's water consumption in Espoo cannot be given, as the property does not have lessor-specific water meters.

### 4.2.4 Waste

Every CSC employee sorts the waste generated at their workstation into the appropriate waste receptacles located on each floor. Recycling guidelines are displayed at office recycling points. There are receptacles for paper, energy waste, and confidential paper waste, and also biowaste receptacles in breakroom kitchens. The number of mixed waste receptacles has been minimised to boost recycling. CSC also has a cardboard recycling point and an information security receptacle designed for discs, tapes and other items that must be destroyed.

The property's waste room also has receptacles for glass, batteries, fluorescent bulbs, and IT scrap, which CSC proactively utilises in order to maintain the highest possible waste-sorting rate. We always seek to recycle usable goods. The office supply room has a shelf for used office supplies, and lotteries are run to distribute used IT equipment and furniture to personnel.

As other companies in the property also use the same waste room as CSC, it is not possible to give a precise figure for the waste sections generated by CSC. However, it has been possible to identify a reduction in the largest waste section generated in office environments – paper – as CSC's paper consumption has been declining for several years.

### 4.2.5 Compliance and environmental expenses

Potential environmental risks at datacentres are managed in accordance with current regulations. No environmental accidents were reported in 2014. The office does not use hazardous substances.

### 4.2.6 Products and services

CSC primarily provides e-services, and all of the electricity required in 2014 was renewable energy. We have been able to continually improve the energy efficiency of our datacentres. The majority of the services we provide have been virtualised, resulting in lower server electricity consumption and resource usage than if the services had been implemented using physical devices.

### 4.2.7 Transportation

CSC's role in the Finnish and international research infrastructure requires networking and, therefore, travel. We have focused our travel-related procurements on government-tendered airline and accommodation services with environmental criteria. We have sought to reduce travel by increasing opportunities for teleconferences.

Both domestic and international airline travel fell in 2014 compared to 2013 (Figure 14).

**Business flights from 2010 to 2014**

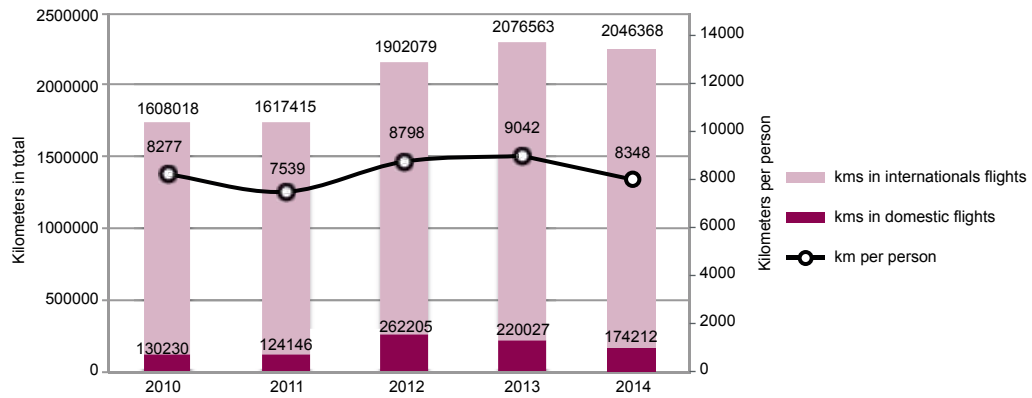


Figure 14. Business flights.

Although kilometers allowances for using one's own car fell by one third, the use of taxis increased slightly. Domestic train travel was largely similar to 2013. Figure 15 shows a breakdown of business trips (excluding flights) by mode of transport for 2012–2014.

**Travelling at CSC from 2012 to 2014**

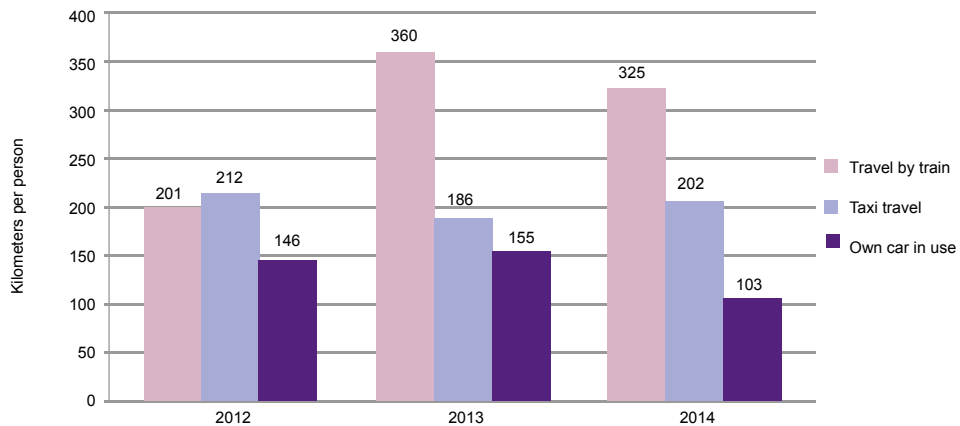


Figure 15. Breakdown of business trips (excluding flights) by mode of transport.

#### 4.2.8 Materials

In its material procurements, CSC adheres to Hansel framework agreements that take environmental perspectives into account. CSC's procurement guidelines instruct purchasers to consider environmental factors in accordance with the lifecycle model: during the planning phase, during use, and at the end of the cycle. These environmental factors could be, for example, the consumption of energy, water and other natural resources; the use of recycled materials in product manufacture; the recyclability of products; the volume and grade of waste generated; and the presence of hazardous materials.

##### Paper consumption

There is a multifunction device on each of CSC's office floors (a total of seven devices). Double-sided, black-and-white printing has been set as default. Colour print-outs can be made if required by choosing the appropriate function. 15 CSC personnel have their own private printer.

The multifunction devices go into low-power mode after being unused for two hours and into energy-saving mode after being unused for four hours, yet remain ready to print immediately when required.

Paper consumption in 2014 was 845 printouts per person (Figure 16), representing a fall of 540 printouts per person on the previous year. Paper consumption has been declining year on year, and CSC still seeks a paperless office.

### Office paper consumption 2010–2014

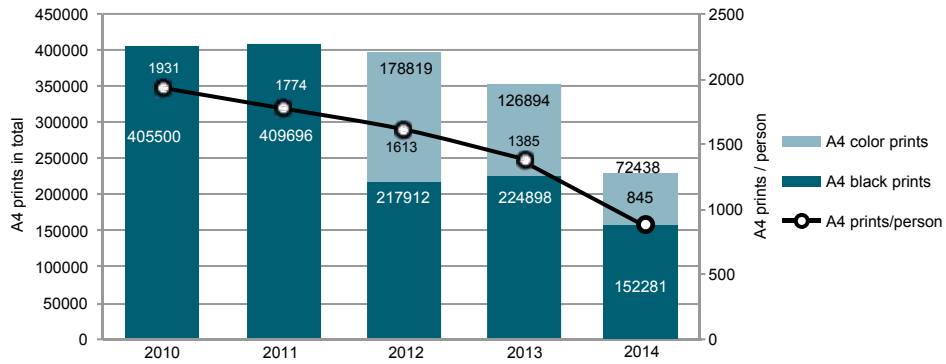


Figure 16. Office paper consumption.

#### Office furniture and furnishings

The amount of office furniture and furnishings acquired remained the same as in the previous year. New tables and chairs were bought for the classroom, worn out office chairs were replaced, and electronically adjustable desks were purchased on the recommendation of occupational healthcare.

#### Office equipment

CSC mainly acquires office equipment through leasing agreements. Equipment is in use for 2–5 years, depending on the lifecycle of the device. The useful life of mobile phones is usually shorter than that of, for example, monitors.

After use, devices are returned to the 3 Step IT leasing company, which either sells or scraps them after a security wipe has been performed. This saves resources and reduces environmental loading.

## 5 SOCIAL RESPONSIBILITY

CSC's Code of Conduct was approved in 2012 and contains principles concerning bribery, corruption, and exerting political influence. The Code governs all CSC personnel, including the Board of Directors, and its principles are included in our orientation programme. The Code has also been published on CSC's website. Goods and service providers are expected to adhere to the same principles. CSC complies with the UN Convention against Corruption (UNCAC) and the OECD (Organisation for Economic Co-operation and Development) Anti-Bribery Convention. We will not accept any action that seeks to influence our own or our stakeholders' judgement. Neither do we provide any direct or indirect support for political party candidates, parties, or political groups.

CSC does not engage in market-based business activities. In accordance with our Articles of Association, we provide services to the organisations specified by our shareholder in the business areas specified by our shareholder (a special mandate). The Ministry of Education and Culture is responsible for ownership steering on behalf of the State. In accordance with the legal practice of the European Court of Justice, CSC can, as a state-administered, non-profit unit sell some non-tendered services to central administration organisations. However, such sales cannot account for more than 10 per cent of net sales.

## 6 PRODUCT AND SERVICE RESPONSIBILITY

CSC regularly conducts customer satisfaction surveys to measure the quality of its products, and customers' expectations and user experiences. The surveys are targeted by customer segment.

### 6.1 MEASURING CUSTOMER SATISFACTION WITH RESEARCH SERVICES

In 2014, CSC conducted a survey to measure the satisfaction of researchers that had been using its services during the year. 263 researchers answered the survey – a response rate of 14 per cent. Respondents found CSC's service offering for researchers to be sufficient and of a high standard. The survey returned a Net Promoter Score of 69 (56 in 2012). A need for researchers to receive more information about services targeted at them was identified as an area for development.

**Is CSC's service offering sufficient?** (1=insufficient, 4=sufficient, don't know)

	1	2	3	4	Don't know	Total	Average
Computing resources	1	11	68	158	24	238	3,61
Software and databases in CSC's computing environment	2	15	95	104	46	216	3,39
Network services (Funet, edurom, light paths)	0	3	57	86	114	146	3,57
Software licences for you own computer	2	11	52	41	155	106	3,25
Storage and archiving	3	23	82	88	65	196	3,3

**How would you rate CSC's computing environment?** (1=weak, 4=good, don't know)

	1	2	3	4	Don't know	Total	Average
Suitability for my work	2	5	62	175	16	244	3,68
Usability	6	20	96	117	19	239	3,36
Total	8	25	158	292	0	483	3,52

### 6.2 QUESTIONNAIRE AIMED AT DECISION-MAKERS AT INSTITUTIONS OF HIGHER EDUCATION

In addition to its customer satisfaction survey, CSC's Board of Directors also asked principals of universities of applied science and vice-principals of universities for their opinions of CSC's services. Responses were received from 15 universities of applied science (63%) and 9 universities (64%). The survey's Net Promoter Score Index was 31.

## 7 HUMAN RIGHTS

CSC's Code of Conduct provide a comprehensive description of the human rights principles that we adhere to in our operations. These are supplemented by our statutory equality plan, which is regularly updated and contains practical measures for ensuring equality. CSC regularly surveys personnel's experiences of equal treatment with a well-being questionnaire. Every supervisor is responsible for ensuring that equality principles are adhered to in practice. If necessary, issues relating to equality and discrimination will be investigated in cooperation with industrial safety delegates. Collective negotiations between the company and personnel groups are standard procedure. In these negotiations, the company is represented by the HR director.

## 8 SUPPLY CHAINS

CSC adheres to its own procurement guidelines and the Act (348/2007) and Decree (614/2007) on public procurements. Procurements are also steered by legal practice relating to the Act on Public Contracts. Other legislative requirements are also considered, such as the Act on the Openness of Government Activities and, on a case-by-case basis, also the Act on the Contractor's Obligations and Liability When Work is Tendered Out and other procurement-related acts. Even minor procurements that do not fall within the scope of the Act on Public Contracts are tendered out in accordance with CSC's procurement guidelines. For strategically significant procurements, suppliers' subcontractors must also be approved in advance.

CSC has joined several framework agreements with goods and service providers. Unless there is a particular reason not to, CSC always uses these framework agreements, which are tendered by Hansel Oy. Hansel Oy's framework agreements for computers, auxiliary devices, mobile phones and printers adhere to the principles of sustainable development and therefore take environmental perspectives into account. According to a 2010 Government decision-in-principle, environmental perspectives should be taken into consideration in 70 per cent of government procurements. The Hansel framework agreements also consider environmental perspectives for scheduled flights, rail and sea travel.

CSC's procurement guidelines instruct purchasers to consider environmental factors in accordance with the lifecycle model: during the planning phase, during use, and at the end of the cycle. These environmental factors could be, for example, the consumption of energy, water and other natural resources; the use of recycled materials in product manufacture; the recyclability of products; the volume and grade of waste generated; and the presence of hazardous materials. When planning procurements, personnel also have a materials bank for sustainable procurements, competition guidelines, and a carbon footprint calculator at their disposal.

CSC includes all information security requirements in its calls for tenders. Procurement contracts for IT services, software and equipment in particular will have a separate security appendix. If necessary, the head of information security or his/her named representative will be involved in the planning and implementation phases of a procurement.

## 9 REPORTING PRINCIPLES AND FORMULAE

### 9.1 REPORTING PRINCIPLES

CSC's Corporate Social Responsibility Report is published annually in conjunction with the Annual Report. The report covers all of the operations under the control of CSC. Consolidated data includes information about the Espoo and Kajaani locations and any operations in which CSC personnel operate in connection with the Ministry of Education and Culture or institutions of higher education. Comparison data for the previous year is presented in accordance with the organisational model and operations of the year in question. Earlier key indicators have not been converted to reflect later changes.

As CSC does not have a direct or indirect holding of 50 per cent or more in any company (Tivit Oy, Otaverkko Oy, SalWe Oy), no information about these companies is included in the Corporate Social Responsibility Report. Reporting on management practices does not extend to these companies either.

CSC is aware of the challenges posed by gathering and collating data, and seeks to develop appropriate monitoring practices.

### 9.2 FORMULAE

The data used to calculate key indicators has been gathered from the accounting system and the audited Financial Statements. Key indicators have been calculated as follows:

Operating profit, % = operating profit / net sales\*100  
Return on equity = (operating profit – taxes) / equity\*100  
Return on investment = (operating profit – taxes) / capital employed\*100  
Quick ratio = current assets / current liabilities  
Equity ratio = equity / balance sheet total\*100

At the Espoo and Kajaani datacentres, the energy consumed by infrastructure and IT systems is separately monitored. Energy efficiency is measured with a PUE value (Power Usage Effectiveness) as follows:

$$PUE = (\text{total energy used by the datacentre}) / (\text{energy used by servers})$$

PUE does not provide a complete picture of energy efficiency, as it should take the datacentre's usage rate into account. However, being the most internationally used benchmark, PUE was chosen as a key indicator for its comparability.

CSC's data on HR responsibility is taken from a variety of source systems, such as the working-hour monitoring system and the personnel database (AD). HR management personnel are appointed to collate the information and submit reports on the required key indicators and statistics. Key indicators have been calculated as follows:

Turnover = (number of employees leaving the company 1 Jan–31 Dec) / (number of employees at 31 Dec) x 100%  
Accident frequency = (number of accidents 1 Jan–31 Dec) / (1,000,000 work hours)  
Sickness absence rate, % = number of days of sickness absence 1 Jan–31 Dec / (theoretical standard workings hours 1 Jan–31 Dec) x 100%

### 9.3. CORRESPONDENCE TO THE GOVERNMENT RESOLUTION ON STATE OWNERSHIP POLICY (3 NOVEMBER 2011)

The following table compares the scope of CSC's corporate social responsibility reporting to the model defined by the Government resolution on state ownership policy (3 November 2011). The table uses the following abbreviations to indicate where the relevant information may be found:

- FS = Financial Statements
- CSR = Corporate Social Responsibility Report

ID	REPORTING IN LINE WITH THE GOVERNMENT RESOLUTION ON STATE OWNERSHIP POLICY (3 NOVEMBER 2011)	INCLUDED	PAGE	ADDITIONAL INFORMATION/ DEFICIENCIES/ EXCEPTIONS
1	Organisation, Corporate Governance, and operating principles			
1.1	Basic information	Yes	CSR 3	
1.2	Corporate social responsibility management and principles	Yes	CSR 3	
1.3	Stakeholder and stakeholder dialogue	Partially	CSR 4	Stakeholder analysis Appendix 1
2	Financial responsibility			
2.1	Financial responsibility management	Yes	5	
2.1.1	Financial targets and their achievement	Yes	CSR 5 FS	
2.2	Financial key indicators	Yes	CSR 5	
2.2.1	Cash flows to stakeholders	Yes	CSR 6 FS	Notes to the Financial Statements 31 Dec 2014
	Support for non-profit organisations and sponsorship	No		CSC neither supports non-profit organisations nor sponsors any groups.
2.2.2	Financial support received from the State	Yes	CSR 7	
3	Personnel			
3.1	HR management	Yes	CSR 8	
	HR management	Yes	CSR 8	
	HR targets	Yes	CSR 8	
3.2	Number and breakdown of personnel			
	Number of personnel	Yes	CSR 8	
	Employment and service contracts	Yes	CSR 8	
	Turnover	Yes	CSR 9	
	Length of service	Yes	CSR 10	
	Age structure	Yes	CSR 9	
3.3	Reorganisations and redundancies / Employer-personnel relations			
	Terminations and lay-offs	No		CSC has never made any redundancies or lay-offs.
	Equality			
	Gender breakdown	Yes	CSR 8	
	Equality plan	Yes	CSR 23	



	Remuneration			
	Remuneration system and performance-based incentives	Yes	CSR 8	
	Competence development and training			
	Development discussions	Yes	CSR 8	
	Training and competence development	Yes	CSR 10–11	
	Well-being at work			
	Personnel satisfaction	Yes	CSR 11	
	Working capacity and well-being	Yes	CSR 11	
	Occupational health and safety			
	Accidents	Yes	CSR 11–12	
	Sickness absences	Yes	CSR 11–12	
	Occupational health	Yes	CSR 11–12	
4	The environment			
4.1	Environmental management	Yes	CSR 13	
	Key environmental impacts of operations	Yes	CSR 13	
	Managing environmental issues	Yes	CSR 13	
	Environmental targets and their achievement	Yes	CSR 13	
4.2	Environmental key indicators	Yes	CSR 13	
4.2.1	Energy	Yes	CSR 13	
4.2.2	Air emissions	Yes	CSR 16	
4.2.3	Water	Partially	CSR 17	Estimate given, as measurement impossible. The property does not contain lessor-specific water meters.
4.2.4	Waste	Partially	CSR 17	The property has a common waste area and the proportion generated by CSC cannot be measured.
4.2.5	Compliance and environmental expenses	No	CSR 17	No environmental damage
4.2.6	Products and services	Yes	CSR 17	
4.2.7	Transportation	Yes	CSR 17–18	
4.2.8	Materials	Yes	CSR 18–19	
5	Social responsibility			
	Local communities			
	Impact on local communities	Partially	CSR 4, 13–14	Estimated in relation to environmental perspectives.
	Bribery and corruption			
	Measures and practices to combat bribery and corruption	Yes	CSR 20	
	Political influence			
	Political influence and support	Yes	CSR 20	CSC does not directly or indirectly influence any political activities.

	Restriction on competition			
	Compliance with competition law	Yes	CSR 22	
	Compliance			
	Compliance with legislation and regulations	Yes	CSR 20, 22	CSC has not been involved in legal proceedings or received any fines or sanctions.
6	Product responsibility			
6.1	Customer satisfaction			
	Customer service and customer satisfaction	Yes	CSR 21	
	The health and safety of products and services	No		CSC produces intangible services.
	Product and service information and marketing communications	Yes	CSR 20–21	
6.4	Protecting documents and privacy	Yes	CSR 22	
6.5	Sustainable consumption	Yes	CSR 13–19	
7	Human rights			
	Human rights issues relating to operations	Partially	CSR 22	No clear human rights targets have been set.
8	Supply chains			
	Supply chain management			
	Procurement principles and policies	Yes	CSR 22	
9	Reporting principles and formulae			
9.1	Reporting principles	Yes	CSR 23	
9.2	Formulae	Yes	CSR 23	

# ANNUAL REPORT 1.1.2014–31.12.2014

## CSC – IT CENTER FOR SCIENCE LTD. OPERATIONS IN 2014

CSC – IT Center for Science Ltd. offers and develops ICT services for research, education, culture and administration. Its customers include the Ministry of Education and Culture, higher education institutions, research institutions and enterprises. As part of the national research system, CSC implements the information strategy of the Ministry of Education and Culture, managing the IT services best handled in a centralised manner. CSC's principal tasks include expert, software and information services for science and IT, national and international data communication network, and the provision of computing resources for high-performance computing and the storage of large amounts of information. In accordance with its articles of association, CSC provides its services to scientific communities on a non-profit basis.

In financial terms, the financial year fulfilled expectations. The company's net sales for 2014 amounted to EUR 32,688,759.76 (31,185,566.00), representing growth of 4.8% year on-year. New projects and the company's more extensive portfolio of agreements particularly contributed to the growth. Profit after financial items amounted to EUR 215,933.81 (187,061.35), while profit for the financial year totalled EUR 171,202.60 (111,099.63). Profit for the financial year was at the anticipated level.

The company's R&D expenditure for 2014 amounted to around 15% (18%) of net sales.

## KEY FIGURES FOR THE FINANCIAL YEAR

As a non-profit company, CSC's profit, solvency and liquidity were at a healthy level.

Key figures	2014	2013	2012	2011
Operating profit (%)	0,65 %	0,66 %	0,24 %	0,21 %
Return on equity	8,93 %	6,25 %	5,28 %	4,84 %
Return on invested capital	11,68 %	10,35 %	6,34 %	8,49 %
Quick ratio	2,4	2,8	2,8	3,0
Equity ratio	25,13 %	26,42 %	28,15 %	25,42 %

## RISKS AND UNCERTAINTIES

No significant risks were realised during 2014. CSC's financial situation remained reasonable, even though its operating environment is undergoing structural changes. Substantial expansion of computing servers and the Kajaani Datacentre was implemented in accordance with plans. Significant disruptions to service provision were avoided by means of measures safeguarding continuity. CSC risk management was carried out in accordance with an updated risk management plan, approved residual risks, and continuity and contingency plans. CSC risk management is part of CSC's annual planning cycle and preparation. The scope of the international ISO/IEC 27001 information management system certificate granted to CSC was expanded to cover ICT platform services. Certain CSC services were found in external audits to fulfil the state administration's elevated information security level requirements. CSC also plays a special role as part of the Finnish security of supply infrastructure, meaning that its key functions must be protected against cyberthreats.

## KEY EVENTS OF THE FINANCIAL YEAR

The supercomputer Sisu was updated in August 2014, completing its final configuration, and was made available to customers in September. As a result of the update, Sisu gained five times as much computing power, achieving a level of 1.7 petaflops. In November 2014, Sisu was placed 37th in a ranking of the world's supercomputers. Phase 2 of the Taito supercluster was installed late in the year, and opened for pilot use. CSC's equipment capacity at the Kajaani Datacenter was also supplemented in late 2014 by adding the Bull supercomputer, partially funded by the EU-financed PRACE project (the Partnership for Advanced Computing in Europe). Bull was made available to all researchers after a pilot phase. Moreover, CSC increased its storage capacity over 2014. After the expansions, the most powerful computing environment in the Nordic region is now available for researchers. Finnish and European researchers will begin to actively use Sisu for research in climate, astrophysics, nanotechnology, materials science, bioscience, fusion energy and renewable forms of energy, for instance. During 2014, CSC experts introduced the new system for researchers at seminars in many different cities. The high-performance computing infrastructure project PRACE has granted a significant amount of computing time for a total of 10 Finnish research projects. The combined monetary value of these computing projects amounts to more than EUR 7 million.

In November 2014, a cost- and energy-efficient datacentre module, shared by Finnish higher-education institutions and funded by the European Regional Development Fund, was implemented at CSC's Kajaani Datacentre. This datacentre module was acquired primarily for higher-education institutions and their shared services.

In October 2014, the ISO 27001 certificate granted to CSC datacentres was expanded to cover all of CSC's ICT operations and datacentres. This certificate now covers computing services, virtual platforms, operating systems and network management, all datacenters, and any shared processes related to these.

In 2014, CSC was selected as an Intel Parallel Computing Center (IPCC). CSC will develop algorithms suitable for parallel computing together with Intel, while also optimising several high-performance computing applications for Intel's latest parallel computing architectures. This work will be carried out in cooperation with the atmospheric research team from the Physics Department of the University of Helsinki and the IPCC of French supercomputer manufacturer Bull.

In April 2014, CSS released the Pouta cloud service, designed for the special needs of CSC computing customers. The Pouta cloud service is a virtual computing environment that utilises CSC's HPC computing infrastructure. The Pouta cloud service is suitable for all scientific fields, and especially for demanding research problems that require special applications or tailored OS environments.

The Ministry of Education and Culture launched the Open Science and Research project (ATT) for years 2014–2017, designed for the promotion of information availability and open science. CSC is one of the key implementers of measures and services. In December 2014, the ATT project released a CSC-supplied search service for research material, in which researchers, research teams and organisations can store metadata depicting their research material, thus improving the locatability and further use of this material. The search engine has harvested (automatically searched) the research material metadata stored in the Finnish Social Science Data Archive and the Language Bank.

The CSC-provided VIRTU education information service, linked to the national information resource for institutions of higher education, was implemented in 2014. VIRTU enables student and study attainment information from all the universities and universities of applied sciences to be used in the joint application system of institutions of higher education, for instance. CSC also supplied the OILI service, digital enrolment service for higher education institutions. A national publication channel database and an electronic assessment tool were developed to support the Publication Forum, promoting the quality assessment of research at higher education institutions.

A new high-capacity optical fibre connection was opened in late 2014 between Finnish and Estonian higher-education institution and research networks. This connection provides major improvements in the data transfer capacity of the higher-education institution and research networks between Finland and Estonia. The data transfer capacity can be increased from the 40 Gbps, seen in the initial phases, up to eight Tbps. The agreement between CSC and Cygate on updating the Funet network to a speed of 100 Gbps was signed in October 2014. The first super-fast connections were implemented at the beginning of the year. A 100 Gbps transfer capacity enables the transfer of continuously growing digital data almost ten times faster, more flexibly and cost-efficiently than previously.

In 2014, seven projects were launched under the state and municipalities' joint JulkiCTLab development project, funded by the Ministry of Finance. These projects created a map service and geographic information service platform for the administration, studied the applicability of map services to the preparation

of decisions and knowledge management, and supported the construction and implementation of the National Data Exchange Layer, among other endeavours. CSC is responsible for the coordination of the JulkICTLab project. One of JulkICTLab's development environments is the FORGE service workshop, provided by DIGILE together with its partners. The project budget for 2015 is EUR 350,000.

Finland joined the European infrastructure for biological information and, in the autumn of 2014, signed a consortium agreement establishing the European life science infrastructure for biological information (ELIXIR). ELIXIR Finland specialises in developing, administering and providing cloud service resources designed for big data to life science organisations, biobanks and translational medical research. Finland's participation is coordinated by CSC in a consortium that also includes the Institute for Molecular Medicine Finland (FIMM) and the National Institute for Health and Welfare (THL). Biocenter Finland is also a partner.

In late 2014, Academy of Finland's Committee for research infrastructures (FIRI) granted a total of EUR 16 million for the funding of Finnish research infrastructures. CSC is one of a number of infrastructure projects that obtained funding, including the ELIXIR and FIN-CLARIN projects.

CSC's activities in international cooperation networks are aimed at supporting the internationalisation of Finnish research and promoting its competitiveness. Significant cooperative projects in 2014 included the EU-funded and CSC coordinated project EUDAT, which is building a common European data infrastructure. Another major EU-funded and CSC coordinated project, RDA, is building the social and technical bridges that enable open sharing of data globally. Other major projects in 2014 included PRACE, the high-performance computing research infrastructure; and EGI, connecting national grid communities with one another.

CSC was the most successful major Finnish company with regard to the Seventh EU Framework Programme, based on the number and financial value of projects. Framework Programmes (FP) are the EU's most significant tool for steering and funding European research and development operations.

CSC launched its new corporate communications website in October 2014, while simultaneously increasing its presence in social media channels.

## 2015

Numerous factors impact on CSC's 2015 operating environment including: the progress of the research institute reform, the launch of the Strategic Research Council's operations, the continuation of the public administration's efficiency enhancement projects, and the development of the ICT sector. The parliamentary elections and the new government's policies will also affect the CSC operating environment. Issues high on the political agenda such as digitalisation and big data are elementally related to CSC operations. The progress of the EU's Horizon 2020 programme and the update of the European Strategy Forum on Research Infrastructures will also have effects on our operating environment. The National Roadmap for Research Infrastructures, published in 2014, will still provide a strong indication of CSC's future. The Ministry of Education and Culture's intelligent strategy (OKM-KIDE) as well as other key strategies, plans and programmes drawn up by the Ministry of Education and other ministries, will also exert a background influence. CSC's business operations will see continued growth in 2015. Growth of around 5.0 per cent is forecast. This growth will be based on the expansion of CSC business operations and new projects. Changes in the operating environment will provide CSC with new challenges, which the company will attempt to meet by enhancing the efficiency of its internal operations and processes.

In 2015, CSC will further develop its cloud services, data-intensive computing services and environment through customer projects. The ePouta cloud service, suitable for the management of sensitive data, and the education-oriented virtual class service will be transferred into production. CSC is seeking to add EISCAT-3D datacentre services in Kajaani (European Incoherent Scatter Scientific Association). CSC will revamp its training and support services by means of online course materials and tutorials. CSC will manage the bidding competitions for and procurement of equipment on behalf of universities under the Finnish Grid and Cloud Infrastructure project.

CSC will continue the implementation of the Open Science and Research project (ATT) in accordance with the agreements made with the ministry. Services included in the project and managed by CSC include the IDA storage service, Etsin service for searching research data, and the AVAA platform for publishing open data. CSC will also participate in the design and implementation of a research infrastructure data bank within the framework of the ATT project. In 2015, geographic information services will be revamped and integrated with the Etsin and AVAA services. The development of operating models for the long-term pres-

ervation of research data will be launched, and services pertaining to the long-term preservation of cultural data will be further developed as part of the National Digital Library project.

CSC will develop an identification solution for the Ministry of Education and Culture's EduCloud project, while also participating in the development of the government's national identification solution. CSC will advance to the production phase in the National Data Exchange Layer project, while continuing to support the JulKICTLab project. CSC will implement new services for the Finnish Matriculation Examination Board and Statistics Finland, for instance, and participate in the modernisation of the systems of higher-education institution library consortiums.

CSC will launch Eduuni, a shared service environment for electronic work and networking, in the form of a CSC service. CSC will update the Funet network to a new capacity class in order to match the constantly increasing traffic volume.

Established at the beginning of 2015, the education and research compatibility services unit seeks to develop the compatibility of information systems and the commensurability of information. Communications services, information resources and semantic compatibility will be constructed for the needs of the Ministry of Education and Culture's administrative sector and the common needs of the public administration serving this sector. One particular goal is to improve the business prerequisites of public and private service providers with regard to the implementation of solutions that promote the digitalisation of education and research. All institutions of higher education will begin using the OILI service, integrating the national services provided by the Finnish National Board of Education with the solutions for supporting studies and teaching provided by the institutions of higher education themselves. OILI is an enrolment service.

In 2015, CSC's Research Infrastructures unit will manage and coordinate international CSC operations related to Horizon 2020- and FIRI-funded projects. Starting and continuing projects include EUDAT (European Data Infrastructure for Research), PRACE (the Partnership for Advanced Computing in Europe), EGI (European Grid Infrastructure) and RDA (Research Data Alliance).

## PERSONNEL

The number of CSC personnel saw a slight growth over 2014. In order to preserve its employer image, CSC continued participating in various kinds of recruitment events and multi-channel recruitment advertising. CSC also participated in a Universum student survey. We placed 26th in the 2014 survey (2013: 21st).

CSC's personnel management principles are based on the company's values and the belief that good management is the prerequisite for commitment, good results and well-being at work. One of the objectives for 2014 was to increase the amount of agility in various operations and operating methods. Late in the year, we launched the SpacePilot pilot project, in which assigned workstations do not exist. The matters sought through this new space solution are agility, communality, spontaneous encounters and cooperation.

As CSC's range of services changes in accordance with customer needs, we will continue to support and motivate our personnel in engaging in internal job rotation, while also providing the required training, orientation and on-the-job learning support by means of a variety of methods. 26 positions were open via internal recruitment, six of which were filled (2013: 27 and 7).

Every other year, CSC assesses workplace atmosphere and personnel satisfaction by means of an occupational well-being survey. The previous survey was conducted in the spring of 2012 in cooperation with Corporate Spirit Oy, while the last one was conducted in the autumn of 2014 with the same partner.

The reply rate in the 2014 survey was 88%. According to the results, CSC employees are satisfied with such matters as investments in occupational well-being, the fact that they are listened to in connection with decision-making, and the development opportunities provided by their work. Good supervisory work and the management culture were also ranked high. Some development targets that were highlighted included clearer job-related expectations, the efficiency of decision-making and the clarification of areas of responsibility. Some of issues that saw improvements were successfully communicating strategy and future prospects and equality felt by people of various ages.

Key figures	2014	2013	2012	2011
Number of employees	266	254	251	231
Permanent	247	235	227	209
Fixed	19	19	24	22
Men	75 %	74 %	74 %	72 %
Women	25 %	26 %	26 %	28 %

<b>Breakdown of personnel by age</b>	<b>2014</b>	<b>2013</b>	<b>2012</b>	<b>2011</b>
< 30	6 %	4 %	7 %	11 %
30–39	43 %	44 %	47 %	44 %
40–49	34 %	36 %	30 %	30 %
> 50	18 %	16 %	16 %	15 %
Average age	41	41	40	40
<b>Educational background:</b>	<b>2014</b>	<b>2013</b>		
Basic and vocational	18 %	19 %		
Polytechnics	13 %	14 %		
University	50 %	48 %		
Post graduate	19 %	19 %		

## THE ENVIRONMENT

CSC's heaviest environmental load is caused by electricity consumption in its data facilities and business flights. 2014 brought significant production increases at CSC's Kajaani Datacentre, including Phase II updates to the supercomputers, the implementation of a supercomputer prototype and increased datacentre services in the modular datacentre container.

CSC's electricity consumption for 2014 amounted to 12.49 GWh, representing a 2% decrease on the previous year. Electricity consumption at CSC office facilities totalled 302 MWh (-3.3%), while that of CSC hardware facilities amounted to 12.19 GWh. All of the electricity used by the datacenters and offices was environmentally friendly, certified (Inspecta Oy) hydroelectric power produced at the Rana and Svartisen hydroelectric power plants in Norway. The reduction of electricity consumption in the CSC hardware facilities was achieved primarily because the service provision was increasingly transferred to the eco-efficient Kajaani Datacenter, and because of the modernisation of the company's hardware.

Even in terms of international competition, CSC's datacenters boast excellent energy efficiency. The PUE value (Power Usage Effectiveness), used for measuring energy efficiency and meaning the division of total energy by the energy used by datacenters, retained its levels from the previous year at CSC's Espoo datacenters and thus amounting to 1.57 (1.57) and 1.45 (1.42). In its second year of operations, the Kajaani Datacenter was able to further improve on the previous year's excellent figures, leaving its total PUE at 1.17 (1.21). The extremely eco-efficient datacenters module even achieved a PUE value of 1.04 (1.06), which is world-class.

CSC has set the goal of improving energy efficiency (PUE) by 9% by 2016 (from 2010 levels). In 2014, CSC achieved its set goal, reaching a result of 11.6%. Another goal was to reduce electricity consumption per person by 20% by 2016, as compared to 2010 (2016 target = 1.23 MWh per person). This goal was also reached in 2014 (1.13 MWh per person). Both of these goals were achieved two years ahead of schedule.

CSC's most significant sources of carbon dioxide emissions are airline traffic and district heating. CSC was able to cut its business flights by around 10% as compared to 2013. District heating-related energy consumption was also further reduced due to the temperate weather. Employees' use of their own cars for business trips was reduced by more than 25%, although the use of taxis increased by around 10%.

## THE BOARD OF DIRECTORS' PROPOSAL FOR PROFIT DISTRIBUTION

The Board of Directors proposes that the net surplus for the financial year, EUR 171,202.60, to be carried forward to the previous years' profit, and that no dividend to be paid for the financial year.

# BALANCE SHEET 1.1.2014–31.12.2014

## INCOME STATEMENT

	1.1.–31.12.2014	1.1.–31.12.2013
EUR		
<b>Turnover/Net sales</b>	32 688 759,76	31 185 566,00
R&D funding	3 882 685,96	4 360 907,13
Personnel expenses	17 554 294,40	17 072 814,96
Depreciation	683 629,46	694 820,75
Other costs and expenses	18 120 606,93	17 574 065,54
<b>Operating profit</b>	212 914,93	204 771,88
<b>Financial income and expenses</b>	3 018,88	-17 710,53
<b>Operating profit before res. and taxes</b>	215 933,81	187 061,35
Income taxes	-44 731,21	-75 961,72
<b>Net profit/loss for the period</b>	171 202,60	111 099,63



## BALANCE SHEET

<b>Assets</b>	<b>31.12.2014</b>	<b>31.12.2013</b>
EUR		
<b>Fixed assets</b>		
Intangible assets	4 406,44	248 892,89
Tangible assets	5 334 305,57	5 358 947,66
Investments	255 522,82	255 522,82
	<hr/>	<hr/>
	5 594 234,83	5 863 363,37
 <b>Current assets</b>		
Short-term receivables	9 088 796,94	6 360 647,66
Marketable securities	2 008 478,07	2 008 478,07
Cash and bank balance	3 040 559,48	6 151 772,82
	<hr/>	<hr/>
	14 137 834,49	14 520 898,55
	<hr/>	<hr/>
	19 732 069,32	20 384 261,92
	<hr/> <hr/>	<hr/> <hr/>
 <b>Liabilities</b>		
EUR		
<b>Capital and reserves</b>		
Share capital	1 000 000,00	1 000 000,00
SVOP	200 000,00	200 000,00
Retained earnings from previous periods	631 770,09	520 670,46
Net loss/profit for the period	171 202,60	111 099,63
Total capital and reserves	<hr/>	<hr/>
	2 002 972,69	1 831 770,09
 <b>Liabilities</b>		
Current liabilities	17 729 096,63	18 552 491,83
	<hr/>	<hr/>
	19 732 069,32	20 384 261,92
	<hr/> <hr/>	<hr/> <hr/>

## FUNDS

	2014	2013
EUR		
<b>Cash flow from operating activities</b>		
Cash generated from operations	28 957 064,76	32 082 116,15
Expenses from operations	-31 612 064,85	-31 354 537,13
<b>Net cash flow before financing and taxes</b>	-2 655 000,09	727 579,02
Interests and expenses paid on financing costs of operations	-8 095,07	-24 991,62
Cash flow generated from interests of operations	11 113,95	7 281,09
Taxes paid	-44 731,21	-47 800,35
<b>Cash flow from operating activities</b>	-2 696 712,42	662 068,14
<b>Cash flow from investing activities</b>		
Investing in tangible and intangible assets	-414 500,92	-890 276,95
<b>Cash flow from investing activities</b>	-414 500,92	-890 276,95
<b>Change in liquid funds</b>		
Liquid funds at start of period	8 160 250,89	8 388 459,70
<b>Liquid funds at end of period</b>	<b>5 049 037,55</b>	<b>8 160 250,89</b>

# NOTES TO THE FINANCIAL STATEMENTS, DECEMBER 31, 2014

## FINANCIAL REPORTING PRINCIPLES

### **Fixed assets and planned depreciations**

Fixed assets have been capitalized for unreserved acquisitions. Planned depreciations are calculated based on the foreseeable time of use for the fixed asset items. The following planned depreciations are presented in the financial statement December 31, 2014. Machinery and furniture 25% of the net expenditure, from the date of acquisition. Other long term assets are depreciated on a straight-line basis over ten years.

### **Pensions**

The company's pension scheme is insured with an insurance company. The Managing Director's pension scheme is no different from that of the other staff.

### **Financial assets**

Financial assets are assessed at acquisition cost or the fair market value where this is lower.

## Notes to the income statement

### EUR

	2014	2013
Turnover		
Domestic turnover	32 688 759,76	31 185 566,00

Other operating income from the EU, Tekes and the Academy of Finland	3 882 685,96	4 360 907,13
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### Notes to personnel

	2014	2013
Total number of employees during the fiscal period ending Dec. 31	266	254
Average number of employees	261	251

### Personnel expenses

	2014	2013
Salaries	14 286 733,68	13 861 877,40
Pension costs	2 445 615,19	2 513 386,70
Other statutory staff expenses	821 945,53	697 550,86
Total	17 554 294,40	17 072 814,96

Salaries and remunerations to the management Board of Directors and Managing Director	266 177,49	266 761,75
---	------------	------------

	2014	2013
Remunerations to the Auditor		
Auditing of the accounts	4 025,34	11 536,00
Other statements	7 615,00	5 650,00
	11 640,34	17 186,00

### Other operating expenses

	2014	2013
Telecommunications, equipment and software costs	8 693 861,75	8 284 986,36
Other expenses	9 426 745,18	4 928 172,05
	18 120 606,93	13 213 158,41

### Financial income and expenses

	2014	2013
Income from interests and financing from	11 113,95	7 281,09
Expenses from interests and financing to others	-8 095,07	-24 991,62
Total financial income and expenses	3 018,88	-17 710,53

### Breakdown of taxes

	2014	2013
Income taxes from actual operations	-44 731,21	-47 800,35
Change of calculated tax receivables	0,00	-28 161,37
Total	-44 731,21	-75 961,72

## Notes to the balance sheet

<b>Fixed assets</b>	<b>Intangible assets</b>	<b>Tangible assets</b>	
	<b>Intangible rights</b>	<b>Machinery and furniture</b>	<b>Total</b>
Purchase cost 1.1.	84 210,57	7 505 669,46	7 589 880,03
Additions		414 500,92	414 500,92
Purchase cost 31.12.	84 210,57	7 920 170,38	8 004 380,95
Accrued depreciations 1.1.	76 000,97	1 906 038,51	1 982 039,48
Depreciations during the period	3 803,16	679 826,30	683 629,46
Accrued depreciations 31.12.	79 804,13	2 585 864,81	2 665 668,94
Book value 31.12.	8 209,60	5 599 630,95	5 607 840,55
Book value 31.12.	4 406,44	5 334 305,57	5 338 712,01
<b>Ownerships in other companies</b>		<b>2014</b>	<b>2013</b>
Shares owned by the company			
Otaverkko Oy	EUR	Ownership % per number of shares	Ownership % per number of shares
Purchase cost 1.1.	2 522,82	5.3 / 75	5.3 / 75
Purchase cost 31.12.	2 522,82	5.3 / 75	5.3 / 75
Book value 31.12.	2 522,82	5.3 / 75	5.3 / 75
Digile Oy/ ICT SHOK		Ownership % per number of shares	Ownership % per number of shares
Purchase cost 1.1.	10 000,00	0,9 / 100	0,9 / 100
Purchase cost 31.12.	10 000,00	0,9 / 100	0,9 / 100
Book value 31.12.	10 000,00	0,9 / 100	0,9 / 100
SalWe Oy/ T&H SHOK		Ownership % per number of shares	Ownership % per number of shares
Purchase cost 1.1.	10 000,00	0,9 / 100	0,9 / 100
Purchase cost 31.12.	10 000,00	0,9 / 100	0,9 / 100
Book value 31.12.	10 000,00	0,9 / 100	0,9 / 100
NORDUnet A/S		Ownership % per number of shares	Ownership % per number of shares
Purchase cost 1.1.		17,9 / 2000	17,9 / 2000
Purchase cost 31.12.	233 000,00	17,9 / 2000	17,9 / 2000
Book value 31.12.	233 000,00	17,9 / 2000	17,9 / 2000

**Marketable securities**

Danske Invest Neutral K ja Yhteisökorke K

Book value	2 008 478,07
Market price	2 163 985,54
Difference	155 507,47

**Short-term receivables**

	2014	2013
Sales receivables	3 577 704,96	1 931 250,16
Receivables carried forward	5 511 091,98	4 429 397,50
Total	9 088 796,94	6 360 647,66

**Capital and reserves**

	2014	2013
Share capital 1.1.	1 000 000,00	1 000 000,00
Share capital 31.12.	1 000 000,00	1 000 000,00
SVOP 1.1.	200 000,00	200 000,00
SVOP 31.12.	200 000,00	200 000,00
Profit from previous periods 1.1.	631 770,09	520 670,46
Profit from previous periods 31.12.	631 770,09	520 670,46
Net profit/loss for the period	171 202,60	111 099,63
Total capital and reserves	2 002 972,69	1 831 770,09

**Distributable assets**

	2014	2013
Profit from previous periods	631 770,09	520 670,46
Profit from the fiscal period	171 202,60	111 099,63
SVOP	200 000,00	200 000,00
<b>Total</b>	1 002 972,69	831 770,09

**Distribution of capital funds by share types**

	2014 pcs	2013 pcs
The shares are entitled to one vote per share	10 000	10 000

**Current liabilities**

	2014	2013
Advances received	11 761 883,22	13 452 021,17
Accounts payable	1 057 990,08	848 349,75
Other current liabilities	415 745,38	797 146,99
Adjusting entries for liabilities	4 493 477,95	3 454 973,92
	17 729 096,63	18 552 491,83

**Off-balance sheet commitments**

Leasing liabilities		
Payable in the next fiscal period	1 039 034,33	936 254,28
Payable in future fiscal periods	1 583 343,03	1 533 999,87
Rental liabilities		
Payable in the next fiscal period	2 703 012,60	2 669 247,12
Payable in future fiscal periods	13 805 133,30	13 753 914,15

Key figures	2014	2013	2012	2011
- Operating profit (%)	0,65 %	0,66 %	0,24 %	0,21 %
- Return on equity	8,93 %	6,25 %	5,28 %	4,84 %
- Return on invested capital	11,68 %	10,35 %	6,34 %	8,49 %
- Quick-ratio	2,4	2,8	2,8	3,0
- Equity ratio	25,13 %	26,42 %	28,15 %	25,42 %

**CSC – IT Center for Science Ltd.**

**Signing of the Board of Directors' Report and the Financial Statements**

In Espoo, March 9, 2015



Samuel Kaski



Anu Harkki



Erja Heikkinen



Pentti Heikkinen



Turo Kilpeläinen



Jussi Nuorteva



Mari Walls



Kimmo Koski  
Managing Director

**Auditor's Report to the Financial Statements**

As a result of the conducted audit of the accounts the Auditor's Report was submitted today.

In Espoo, March 17, 2015

PricewaterhouseCoopers Oy



Leena Puumala  
APA

**A list of the ledgers during the fiscal period January 1, 2014 – December 31, 2014**

Cash book  
Journal  
General ledger  
Accounts receivable ledger  
Accounts payable ledger  
Invoice ledger  
Purchase invoice ledger  
Postdated receipts  
Salary summary  
Salary payment receipts  
Payment receipts  
VAT payment receipts



# AUDITOR'S REPORT

## TO THE ANNUAL GENERAL MEETING OF CSC – IT CENTER FOR SCIENCE LTD.

We have audited the accounting records, financial statements, report of the Board of Directors, and the administration of CSC – IT Center for Science Ltd. for the financial year 1 January 2014–31 December 2014. The financial statements comprise the balance sheet, income statement, cash flow statement, and notes to the financial statements.

## RESPONSIBILITY OF THE BOARD OF DIRECTORS AND THE MANAGING DIRECTOR

The Board of Directors and the Managing Director are responsible for the preparation of the financial statements and the report of the Board of Directors, and for ensuring that they present a true and fair view in accordance with the laws and regulations governing the preparation of financial statements and reports of the Board of Directors in Finland. The Board of Directors is responsible for the appropriate arrangement of the company's accounts and financial management. The Managing Director ensures that the company's accounts are in compliance with the law and that its financial affairs have been arranged in a reliable manner.

## AUDITOR'S RESPONSIBILITY

Our responsibility is to express an opinion on the financial statements and the report of the Board of Directors based on our audit. The Auditing Act requires that we comply with the requirements of professional ethics. We conducted our audit in accordance with good auditing practice in Finland. Good auditing practice requires that we plan and perform the audit to obtain reasonable assurance of whether the financial statements and the report of the Board of Directors are free from material misstatement, and whether the members of the Board of Directors or the Managing Director are guilty of an act of negligence that may result in the company being liable for damages or whether they have violated the Limited Liability Companies Act or the company's Articles of Association.

An audit involves procedures to obtain accounting evidence on the figures included in the financial statements and the report of the Board of Directors and the other information presented in them. The procedures selected are left to the discretion of the auditor, and include an assessment of the risks of material misstatement, whether due to fraud or error. When assessing these risks, the auditor takes internal control into account, as it plays a significant role within the company in ensuring that the financial statements and the report of the Board of Directors provide a true and fair view. The auditor assesses internal control in order to plan appropriate auditing procedures, but not for the purpose of presenting an opinion on the effectiveness of the company's internal control. An audit also includes evaluating the appropriateness of the accounting policies used and the reasonableness of the accounting estimates made by management, as well as evaluating the overall presentation of the financial statements and the report of the Board of Directors.

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

## OPINION

In our opinion, the financial statements and the report of the Board of Directors give a true and fair view of the company's financial position and performance in accordance with the laws and regulations governing the preparation of financial statements and reports of the Board of Directors in Finland. The information in the report of the Board of Directors is consistent with the information in the financial statements.

Helsinki, 17 March 2015

PricewaterhouseCoopers Oy



Leena Puumala, KHT

Authorised Public Accountants, Leena Puumala, Authorised Public Accountant

# CORPORATE GOVERNANCE

CSC's corporate governance is based on the Limited Liability Companies Act and the company's Articles of Association. Although CSC is an unlisted company, it has decided to adhere to the applicable sections of the Corporate Governance code for listed companies, issued by the Securities Market Association on 1 October 2010. CSC is also subject to the Government resolution on state ownership policy (3 November 2011).

CSC's statutory administrative organs are the General Meeting, the Board of Directors, and the Managing Director. The Managing Director and Management Group are responsible for the company's operative management.

## ANNUAL GENERAL MEETING

The General Meeting is CSC's highest decision-making body. Annual General Meetings (AGM) are held on an annual basis before the end of June. CSC's Board of Directors convenes the AGM. The AGM considers all of the obligatory matters laid down in the Limited Liability Companies Act and the company's Articles of Association.

The AGM notice must be sent to shareholders, by some verifiable means in writing, no earlier than four (4) weeks and no later than eight (8) days before the meeting.

## CSC'S BOARD OF DIRECTORS

CSC's Board of Directors consists of four to seven members. Members are elected by the Annual General Meeting. In accordance with the company's Articles of Association, members are elected for a term that runs until the end of the following Annual General Meeting, which decides on the election of new members.

The Board of Directors is quorate when over half of its members are present, one of which must be the Chair or, the Chair being indisposed, the Vice Chair.

The Annual General Meeting elects the Chair and Vice Chair of the Board of Directors. Although the Managing Director is not a member of the Board of Directors, he/she will act as presenter and secretary. The Board of Directors adheres to the order of procedure approved on 19 March 2010.

The Board of Directors convened 7 times in 2014. CSC does not have any committees.

The personal details and connections of members of CSC's Board of Directors are presented later on in this Annual Report.

## DUTIES OF THE BOARD OF DIRECTORS

The Board of Directors oversees the management of the company and appropriate arrangement of its operations in accordance with the Limited Liability Companies Act. The Board is also responsible for the appropriate arrangement of the company's accounts and financial management.

It is the Board's task to promote the interests of the company and all its shareholders. In order to do this, the Board must:

- convene the Annual General Meeting of shareholders
- steer and supervise the company's operative management
- appoint and dismiss the company's Managing Director
- approve the Managing Director's service contract and other benefits
- approve any performance-based incentives for the company and the Managing Director, and the criteria for awarding them
- monitor the company's workplace atmosphere and its development
- approve the company's risk management principles and perform an annual assessment of the major risks associated with the company's operations, including their management
- approve the company's long-term strategic and financial targets and continually monitor progress towards their achievement
- convene at least once a year without operative management being present
- approve the budget
- approve the Financial Statements and Annual Report

- approve an order of procedure for the Board's activities and review it on an annual basis
- assess the performance of the company's Corporate Governance at least once a year and ensure that it is kept up to date

Every Board member must maintain professional confidentiality with regard to any information received through virtue of being a Board member.

## MANAGING DIRECTOR

The Board of Directors appoints the Managing Director. The Managing Director's terms of service are defined in a written contract approved by the Board of Directors. The Managing Director handles the day-to-day administration of the company in accordance with the instructions and guidelines issued by the Board of Directors. No pension scheme applies to the Managing Director in addition to the statutory pension system.

## DEPUTY MANAGING DIRECTOR

The Board of Directors may appoint a Deputy Managing Director. CSC did not have a Deputy Managing Director at the end of the 2014 financial year.

## MANAGEMENT GROUP

The Managing Director convenes the Management Group. The Management Group prepares strategic policies, drafts the action plan and budget, plans investments and monitors their progress, allocates resources, makes decisions on key operations and significant operative matters, and monitors the implementation of its decisions. The Management Group convened 12 times in 2014. The personal details and connections of members of CSC's Management Group are presented later on in this Annual Report.

## REMUNERATION

The 2014 Annual General Meeting decided to pay monthly emoluments of EUR 900 to the Chair, EUR 600 to the Vice Chair, and EUR 500 to Board members. In addition, fees of EUR 250 per meeting will be paid to the Chair, Vice Chair, and Board members. The auditors' fees will be paid to invoice.

The company's Board of Directors decides on the remuneration paid to the company's management. In addition to salary, the Board also decides on the performance-based incentive to be awarded to members of the Management Group and other personnel. Payment of an incentive depends on the achievement of strategic targets and success in the implementation of CSC's mission, vision and core values. The company has not issued any options or option rights.

## RISK MANAGEMENT, INTERNAL CONTROL AND INTERNAL AUDITING

The Board of Directors oversees the management of the company and appropriate arrangement of its operations. The Managing Director and the Management Group ensure that the accounts, finances and day-to-day administration of the company are reliably handled in accordance with the law.

CSC's Corporate Governance defines procedures for business steering and control, and how related matters should be approved and monitored.

The company's financial performance is monitored on a monthly basis via the company-wide financial steering system. This system contains the income statement, balance sheet, cash flow statement, and outlook for the current financial year, plus other important data concerning business operations.

The company's financial and action plans are monitored and compared to actual performance on a monthly basis. CSC uses a unit-specific financial reporting system. This enables progress in financial and action plans to be monitored for profit centres as well.

No separate organisation has been established for internal auditing. Responsibility for internal auditing follows the divisions of responsibility for other business operations. Financial administration is responsible

for internal auditing in cooperation with management and the company's auditor. The company's auditor must take internal audit requirements into account when carrying out external audits.

CSC's CFO is responsible for the company's cash management and investment activities in accordance with the Board of Directors' guidelines.

The auditor meets with the Board of Directors at least once a year and informs the Board of any issues of importance to the company. The auditor also meets with the company's management at least twice a year. The auditor meets with the company's financial administration at least four times a year.

CSC's risk management is implemented in accordance with the revised risk management plan, the approved residual risks, and continuity and contingency plans. CSC's risk management is part of CSC's annual planning cycle and preparedness.

CSC's ISO/IEC 27001 certification for international information security management systems was extended to encompass all ICT platform services. An external audit showed that certain services also meet the stricter information security requirements contained in the government's VAHTI guidelines. CSC also plays a special role in Finland's national maintenance reliability infrastructure, which is why its core operations should also be protected from cyber threats.

## AUDITOR

The company has one auditor, which must be a firm of Authorised Public Accountants. The auditor's term of office runs until the end of the following Annual General Meeting, which decides on the election of the new auditor.

The auditor audits the company's Financial Statements, accounts, and administration.

In 2013, the Annual General Meeting selected PricewaterhouseCoopers Oy, Authorised Public Accountants, as the company's auditor with Leena Puumala, Authorised Public Accountant, as chief auditor.

# CSC'S MANAGEMENT GROUP – PERSONAL INFORMATION WITH RESPONSIBILITIES AND OUTSIDE INTERESTS

## MANAGEMENT GROUP

Managing Director

**KIMMO KOSKI** (b. 1964)

D.Sc. (Tech.)

**Employment history summary:**

- CSC, Managing Director, 2004–
- Nokia Technology Platform Engineering Environment, Strategy and Roadmaps Manager, 2004
- Nokia Research Center, IT Manager, 2000–2003
- CERN, Switzerland, Scientific Associate, 1996–1997
- CSC, positions as Manager and Specialist, 1989–2000

**Board member since:**

- Secretary of the CSC Board of Directors 2004

**Summary of concurrent confidential posts:**

- European Data Infrastructure (EUDAT), Coordinator
- Open Science and Research Initiative (ATT), Strategy Group, Member

Director, Information Management Services

**JANNE KANNER** (b. 1973)

M.Sc.

**Employment history summary:**

- CSC, Director, 2007–
- CSC, Technology Director, 2004–2007
- CSC, Development Manager, 2002–2004
- CSC, Specialist, 1999–2002
- University of Jyväskylä, 1998–1999
- Vapo Oy (part-time), 1992–1998

**Summary of concurrent confidential posts:**

- NORDUnet A/S Board member, 2004–  
Chairman of the Board, 2008–2010  
Vice-chairman of the Board, 2010–2012
- Otaverkko Oy, Board member, 2009–
- TIVIT Oy, Board member, 2010–2013
- TERENA, President, 2009–2011

Vice Managing Director

**TIINA KUPILA-RANTALA** (b. 1963)

Ph.D., Master of Business Administration

**Employment history summary:**

- CSC, Vice Managing Director, 07/2011–
- CSC, Director, Business and Operational Development, 2010–06/2011
- CSC, Development Manager, 2002–2010
- Nokia Networks, Project Manager, 2001
- CSC, Systems Specialist, 1996–2001
- University of Helsinki, Department of Physics, Assistant, Scholarship Researcher (Jenny and Antti Wihuri Foundation, Magnus Ehrnrooth Foundation), 1992–1996
- Nokia Telecommunications, System Analyst, 1990–1991

Director, Marketing and Communications

**MINNA LAPPALAINEN** (b. 1967)

M.Sc. (Econ.)

**Employment history summary:**

- CSC, Director, Marketing and Communications, 06/2014-
- Taaleritehdas Oyj, Marketing Manager, 2012–2014
- Vattenfall Sähkönyhti Oy (B2C Sales Nordic), Manager, Sales and Customer Relationships 2010–2012
- Digi TV Plus Oy, Marketing Manager 2007–2010
- A-lehdet Oy, Marketing Manager, 2005–2006
- Sanoma Magazines Finland Oy, Product Manager 1999–2005
- TietoEnator Oyj, positions as Manager and Specialist, 1995–1999

Director, Services for Research

**PEKKA LEHTOVUORI** (b. 1973)

Ph.D.

**Employment history summary:**

- CSC, Director, Services for Research, 2013–
- CSC, positions as Manager and Specialist, 2001–2013
- FBD Ltd. Senior Scientist, 2002–2005
- University of Jyväskylä, Researcher, 1997–2001

**Summary of concurrent confidential posts:**

- Scientific Computing Collaboration Forum, Specialist
- NeIC (Nordic e-Infrastructure Collaboration), Board Member
- European Grid Initiative (EGI) Council, vice representative for Finland
- ELIXIR Finland, Deputy Head of Node

Director, Customer and Service Integration

**KLAUS LINDBERG** (b. 1958)

M.Sc. (Tech.)

**Employment history summary:**

- CSC, Director, Customer and Service Integration, 2013–
- CSC, Director, Information Management Services, 2002–2013
- CSC, positions as Manager and Specialist, 1989–2002
- Helsinki University of Technology, Research Assistant, 1984–1989

**Summary of concurrent confidential posts:**

- JullICTLab steering group, Specialist Member nominated by Ministry of Finance
- OpIT working group nominated by the Ministry of Education, Member

Director, Interoperability Services for Education and Research

**ANTTI MÄKI** (b. 1978)

Master of Social Sciences

**Employment history summary:**

- CSC, Director, Interoperability Services for Education and Research, 01/2015-
- CSC, Development Manager, 2013–2014
- CSC, Project Manager, 2012–2013
- CSC, Specialist, 2010-2011
- University of Helsinki, IT-services, Project Manager, 2009–2010
- University of Helsinki, IT Department, Specialist, 2007–2009
- University of Helsinki, Faculty of Social Sciences, Project Secretary, 2002–2006

**Summary of concurrent confidential posts:**

- Joint admission system for Higher Education, Steering Group Member, 2013–
- Steering group for the National Datawarehouse for Higher Education and Data harvesting by Ministry of Education and Culture, Secretary, 2014-
- SADE project, Services for Learner, Cluster Group Member, 2014–

Financial Director

**KIMMO NIITTUAHO** (b. 1966)

M.Sc. (Econ.)

**Employment history summary:**

- CSC, Financial Director, 2011–
- CSC, Financial Manager, 2003–2011
- Pirelli Oy, Controller, 2001–2003
- LM Ericsson Oy, Business Controller, 2000–2001
- AKB Services, Controller, 1995–2000

**Summary of concurrent confidential posts:**

- Toppi Oy, Board member, 2013–

HR Director

**JARI RAJALA** (b. 1971)

M.A. (Education)

**Employment history summary:**

- CSC, HR Director, 2011–
- CSC, HR Manager, 2007–2011
- CSC, Administrative Director, 2004–2007
- CSC, positions as Manager and Specialist, 1997–2004

Application Specialist, Personnel Representative in Administration

**ATTE SILLANPÄÄ** (b. 1972)

Ph.D.

**Employment history summary:**

- CSC, Application Specialist, 2005–
- University of Naples Federico II, Italy, Researcher, 2004–2005
- University of Oulu, Researcher, 1997–2004

**Summary of concurrent confidential posts:**

- CSC, Personnel representative in administration, 2010–

Director, ICT Platforms

**TERO TUONONEN** (b. 1971)

M.Sc. (Computer Science)

**Employment history summary:**

- CSC, Director, ICT Platforms, 2010–
- CSC, Manager, Information Management, 2009–2010
- CSC, Development Manager, 2006–2008
- Nokia Technology Platforms, IT Manager/Solutions Manager, 2005–2006
- Nokia Research Center, IT Manager, 2001–2005
- Nokia Research Center, IT Specialist, 1996–2001

Director, Research Infrastructures

**PER ÖSTER** (b. 1959)

Ph.D.

**Employment history summary:**

- CSC, Director, Research Infrastructures, 2013–
- CSC, Director, Research Environments, 2010–2013
- CSC, Director, Application Services, 2007–2010
- KTH Royal Institute of Technology, Stockholm, Sweden, Paralleldatorcentrum (PDC), Associate Director, 2001–2007
- KTH Royal Institute of Technology, Stockholm, Sweden, Paralleldatorcentrum (PDC), Associate Director, Research and Customer Relations, 1996–2001
- KTH Royal Institute of Technology, Stockholm, Sweden, Paralleldatorcentrum (PDC), Project Manager, Industrial Applications, 1994–1996
- Volvo Data AB, Gothenburg, Sweden, Consultant, Applied Mathematics, 1992–1994
- Volvo Data AB, Gothenburg, Sweden, System Analyst and Product Manager, Technical Computing, 1990–1992
- Chalmers University of Technology and University of Gothenburg, PhD grant and PhD research position, 1984–1990

**Summary of concurrent confidential posts:**

- European Grid Initiative (EGI), Executive Board Member, 2013–
- European Grid Initiative (EGI) Council, Chairman, 2009–2012
- EGI.eu Foundation Executive Board, Chairman, 2010–2012
- Finnish Graduate School in Computational Sciences (FICS), Strategic Committee Member, 2010–2014



# BOARD OF DIRECTORS – PERSONAL INFORMATION WITH RESPONSIBILITIES AND OUTSIDE INTERESTS

## BOARD OF DIRECTORS

Professor, Director of Helsinki Institute for Information Technology (HIIT)

**SAMUEL KASKI** (b. 1968)

D.Sc. (Tech.) (Chair since 2012)

**Employment history summary:**

- TKK/Aalto University, Professor, 2005–
- University of Helsinki, Professor, 2004–2005
- Academy Research Fellow, 200–2004

**Board member since:** 2012

**Summary of concurrent confidential posts:**

- Finnish Centre of Excellence in Computational Inference Research, Director
- Biocentrum Helsinki, Board member
- Institute for Molecular Medicine Finland FIMM, vice member of Board

Director Business Solutions, Natural Resources Institute Finland (NRIF)

**ANU HARKKI** (born 1951)

Doctor of philosophy, docent, MBA

**Employment history summary:**

- NRIF, Director Business Solutions, 2015–
- MTT, Research Director, 2010–2014
- Sitra, Program Director 2005–2009
- LSM, Managing Director 2002–2005
- Noviant Ltd, Research Director 1999–2001
- Cultor Food Science (New York), VP Prod. tech. dev. ja VP Strat. Marketing 1996–1999
- Cultor Oyj several positions 1990–1996
- VTT, research scientist, 1986–1989

**Board member since:** 2014

**Summary of concurrent confidential posts:**

- Muuvit health and learning gmbh, chairman of the board, 2011–
- Finnish Organic Research Institute, chairman of the board, 2013–
- Evira, member of the science council, 2012–

Counsellor of Education, Ministry of Education and Culture

**ERJA HEIKKINEN** (b. 1964)

Ph.D., Docent

**Employment history summary:**

- Ministry of Education and Culture, Counsellor of Education, 2005–
- Tekes, Technology Specialist, 2001–2005
- University of Helsinki, Adjunct Professor, 2001–
- CSC – Scientific Computing Ltd, Biosciences Specialist, 1997–2001
- Academy of Finland Junior Researcher at the University of Tübingen (Germany) and University of California, Davis (USA), 1992–1995
- Biocenter Oulu, Coordinator, 1995–1997

**Board member since:** 2008

CEO, Gateway Technolabs Finland Oy

**PENTTI HEIKKINEN** (b. 1960)

M.Sc. (Econ.), University of Jyväskylä

Stanford Executive Program diploma, Stanford Graduate School of Business

**Employment history summary:**

- Gateway Technolabs Finland Oy, CEO, 2008–
- TietoEnator Corp., President and CEO, 2006–2007
- TietoEnator Corp., Chief Operating Officer, 2004–2005
- TietoEnator Corp., Telecom & Media Division, President, 2001–2003
- TietoEnator Corp., Services Division, President, 1999–2000
- Tieto Corp., Public Administration Division, President, 1996–1998
- VTKK Government Systems Ltd, Managing Director, 1994–1995
- CapGemini Finland, Director, 1991–1993
- VTKK Group, Director, 1987–1990
- VTKK, Management Consultant, 1985–1986

**Board member since:** 2012

**Summary of concurrent confidential posts:**

- Basware Oyj, Member of the Board, 2009–
- Tecnotree Oyj, Member of the Board, 2009–

Rector, Kajaani University of Applied Sciences

**TURO KILPELÄINEN** (b. 1980)

Ph.D. (econ.)

**Employment history summary:**

- Kajaani University of Applied Sciences, rector, 2010–
- Kajaani University of Applied Sciences, principal lecturer, 2008–2009
- Accenture, consultant, 2006–2008
- University of Jyväskylä, researcher, 2003–2006

**Board member since:** 2014

**Summary of concurrent confidential posts:**

- Rectors' Conference of Finnish Universities of Applied Sciences ARENE, member of board, 2012–2014

Director General, National Archivist, National Archives Service of Finland

**JUSSI NUORTEVA** (b. 1954)

Dr.Theol., Phil.Lic., Docent

**Employment history summary:**

- Director General, National Archives Service of Finland, 2003–
- University of Helsinki, Docent, 1998–
- Finnish Literature Society, Secretary General, 2000–2003
- Academy of Finland, Secretary General of the Research Council for Culture and Society, 1998–2000

**Board member since:** 2007 (Deputy Member), 2008 (Member)

**Summary of concurrent confidential posts:**

- The Chancery of the Orders of the White Rose of Finland and of the Lion of Finland, Vice Chancellor
- National Board of Heraldry, chair
- Finnish National Commission for UNESCO, member
- Academy of Finland, Finnish Research Infrastructures Committee, member
- University of Helsinki, Scientific Advisory Board at the Centre for European Studies, Chair
- Riksbankens Jubileumsfond (Sweden), Research Infrastructures Advisory Group, member
- Alliance for Permanent Access, Board member

President and CEO, Professor, Natural Resources Institute Finland (NRIF)

**ANNA-MARI WALLS** (b. 1961)

Ph.D., Docent

**Employment history summary:**

- President and CEO, Natural Resources Institute Finland, 2015-
- Finnish Environment Institute, Marine Research Centre, Director, Professor, 2009–2014
- MTT Agrifood Research, Research Director, 2008–2009
- MTT Agrifood Research, Environmental Research, Programme Director, 2006–2007
- University of Turku, Professor (acting), 2004–2005
- University of Turku and Academy of Finland, FIBRE Programme Director, 1997–2003
- Maj and Tor Nessling Foundation, head of Research, 1995–1997

Board member since: 2010

**Summary of concurrent confidential posts:**

- Finnish Meteorological Institute, Chairman of the Board, 2015–
- University of Eastern Finland (UEF), Member of the Board, 2015–
- Research Council for Biosciences and Environment at the Academy of Finland, Member, 2010–2015
- Finnish Forest Research Institute (Metla) Board member, 2012–2015
- Finnish Game and Fisheries Research Institute (RKTL), Board member, 2012–2015
- WWF Finland, Board member, 2010–2014
- Finnish Game and Fisheries Research Institute (RKTL), Board member, 2012–2015
- WWF Finland, Board member, 2010–

## APPENDIX 1

Table 1. Stakeholder analysis

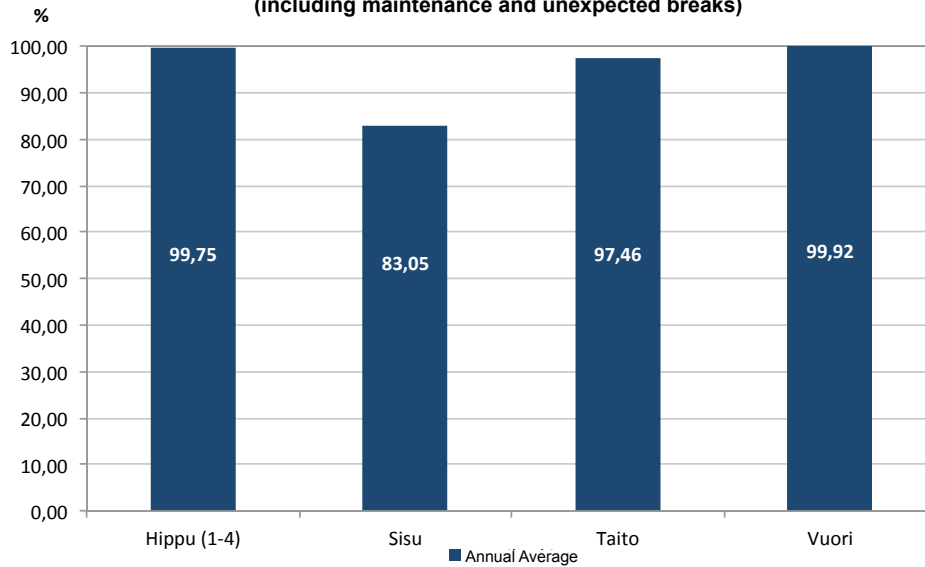
Stakeholders and their expectations of CSC	How we analyse stakeholder expectations and measure our performance	How we meet their expectations	Examples of dialogue and actions in 2014
<b>Customers</b>			
<p>A reliable and secure provider</p> <p>Good customer relations and professional service</p> <p>Cost-effective services and customer support</p> <p>Customer communications that is easy to relate to</p> <p>Supporting open science through the Ministry of Education and Culture's ATT project</p>	<p>Customer satisfaction surveys</p> <p>Customer feedback</p> <p>Quality assessment meetings</p>	<p>Personal meetings</p> <p>Customer events, training</p> <p>Technical support</p> <p>Responding to customer queries</p> <p>Regular quality assessment meetings</p> <p>Networking events</p> <p>Customer extranets and www.csc.fi</p> <p>Targeted customer communications</p>	<p>We kept in contact with our customers at a variety of different meetings, events, trade fairs, seminars, and training sessions</p> <p>We arranged numerous visits to higher education institutions all across Finland. During these visits, our Managing Director met with the management of over 13 institutions</p> <p>To promote the adoption of new computational resources, we held 25 events across Finland for over 600 researchers</p> <p>We arranged 92 customer training events (a total of 149 training days) for 3,054 participants.</p> <p>In autumn 2014, we opened a new customer-oriented web service (csc.fi).</p> <p>In October 2014, ISO 27001 certificate was extended to encompass all of CSC's ICT operations and datacentres.</p> <p>In 2013, we launched a revamp of our quality reporting procedures for the Ministry of Education and Culture's Department of Education and Science (KTPO), which continued in 2014. The KTPO purchases services for higher education institutions on their behalf (about half of CSC's turnover)</p> <p>In 2013, we started revising our cost calculation principles, which will enable greater financial transparency. This work continued in 2014.</p>

<b>Personnel</b>			
Open and trustworthy dialogue	Well-being surveys	Daily discussion	Management held ten (approx. once per month) briefings aimed at all personnel
Timely communications	Competence analyses	Regular briefings from management once a month	We launched a new Intranet site, including a section for the Managing Director to support strategy work
Equal treatment	Initiatives	Personal development discussions twice a year	The Managing Director visited all team meetings
A motivating rewarding system		Competence development	We provided new communications channels to boost internal information flow (such as Yammer)
Ensuring well-being at work		Intranet and other internal communications channels	We launched a project to develop new, modern workspaces (SpacePilot)
		Orientation	
<b>Shareholder</b>			
Carrying out our special mandate cost-effectively and to a high standard	Proactively keeping in contact	Regular meetings between company management and the Ministry of Education and Culture, which is responsible for ownership steering	CSC's Board of Directors evaluated the company's performance-based incentive scheme and launched developments to achieve greater transparency
Healthy finances and social		Financial Statements, Corporate Governance, and Annual Report	Reporting on results in accordance with the annual calendar
		Annual shareholder's meeting	Participating in preparatory work for the Ministry of Education and Culture's ownership strategy
			Assessing operations and developing measures
<b>Suppliers (Partners)</b>			
Long-term, open partnerships	Feedback from suppliers	Regular meetings and quality development meetings	Our procurements are made in accordance with legislation on public-sector procurements
Corporate responsibility	Price and other negotiations	Long-term agreements	We are a reliable partner in projects funded by the EU, Academy of Finland, Tekes, and Nord-Forsk
Equal treatment in procurements		Participation in industry activities and events	
		CSC's website	
<b>Research infrastructure financiers</b>			
Responsible cost monitoring and result reporting	Success measured by the number of projects and their monetary value	Keeping in regular contact	Participating in calls announced by the Academy of Finland (FIRI) and the EU (Horizon 2020)
		Reporting as agreed	CSC was involved in 27 EU projects (EUR 11.4 million)
		High-quality applications	
		CSC's website	

<b>Authorities, associations, local communities and other organisations</b>			
Complying with legislation and regulations	Proactive participation in community dialogue and the activities of a variety of organisations	Regular meetings and contacts, such as through working groups and events	We provided expert opinions by, for example, issuing statements on legislative proposals in our industry
Paying taxes		CSC's website	
Maintaining good cooperation		Annual Report and Corporate Governance	We issued open and proactive communications about our operations in, for example, Kajaani:
Providing information to facilitate decision-making	Open dialogue with authorities and decision-makers	Statements	cooperation with representatives of local associations, opening of the datacentre's new container module
Open dialogue and cooperation	Diverse cooperation on development	Bulletins	
Datacenter security and environmental values		Cooperation with local authorities	We organised several visits to the Kajaani Datacenter and the Espoo office
A good employer		Participating in associations' activities	
		Interviews, answering queries	We actively participated in recruitment fairs all across Finland
		Open days	We offered placements to a number of trainees and those working on dissertations and theses
<b>Media</b>			
Open and timely communications	Systematic media monitoring	Bulletins	We published 40 bulletins on topical CSC news
Reaching the right audience	Active contact with media representatives	Proactively considering the interests of the media: interviews, answering queries, media conferences, briefings	
Providing expert opinions		CSC's website	
		Social media channels: Twitter, Facebook, LinkedIn	
<b>General public</b>			
Social responsibility	Following public debate	CSC's website	Focusing on presence and intelligibility
		Social media	

# STATISTICS 2014

**Availability of computing and application servers in 2014  
(including maintenance and unexpected breaks)**

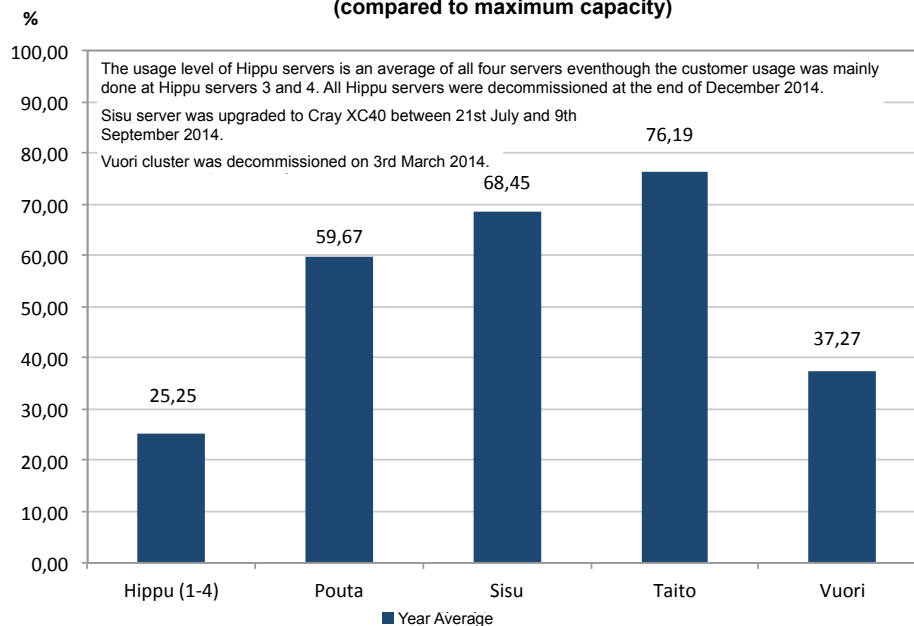


\* Sisu server was upgraded to Cray XC40 between 21st July and 9th September 2014.

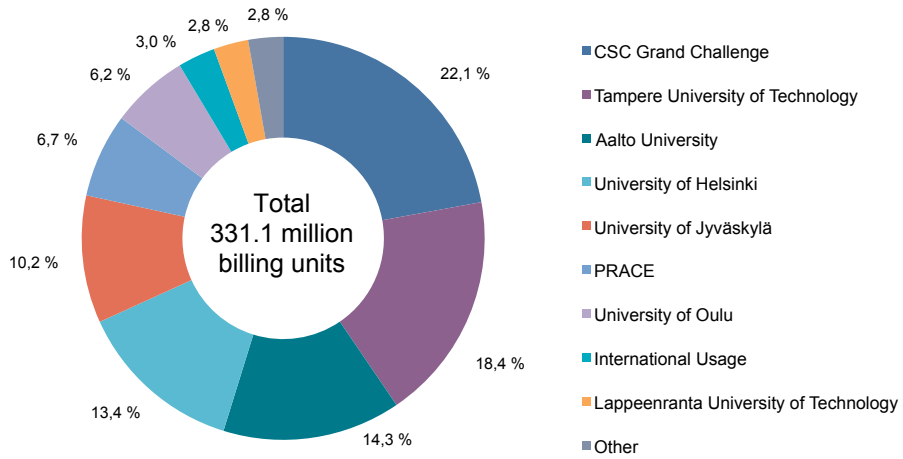
\*\* Vuori cluster was decommissioned on 3rd March 2014.

NOTE: Clusters are considered to be available if the login node and part of the cluster is in use.

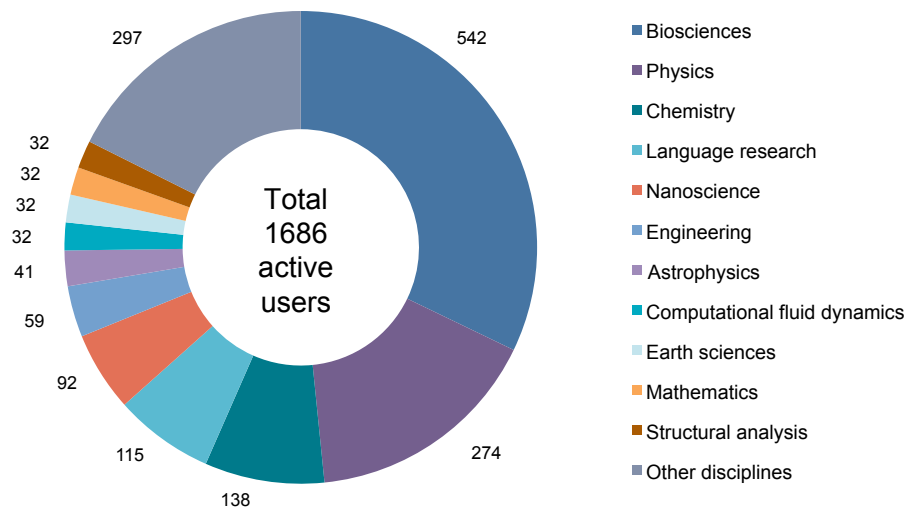
**Usage level of computing and application servers in 2014  
(compared to maximum capacity)**



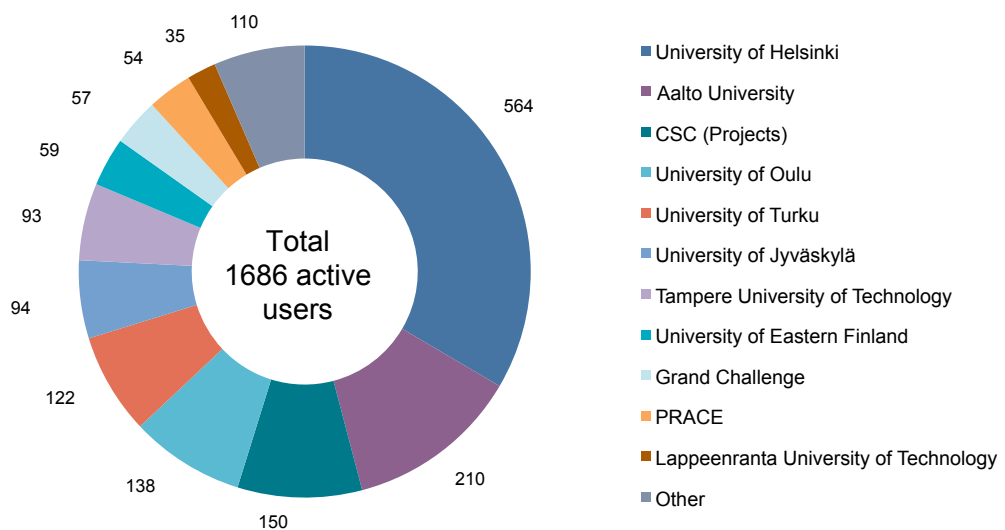
### Computing usage by organization in 2014



### Users of computing resources by discipline 2014

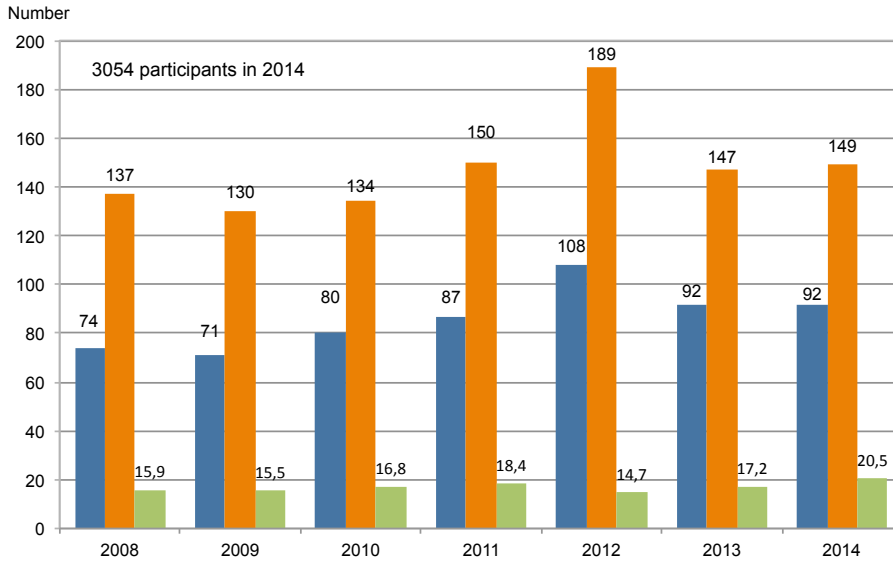


### Users of computing resources by organization 2014

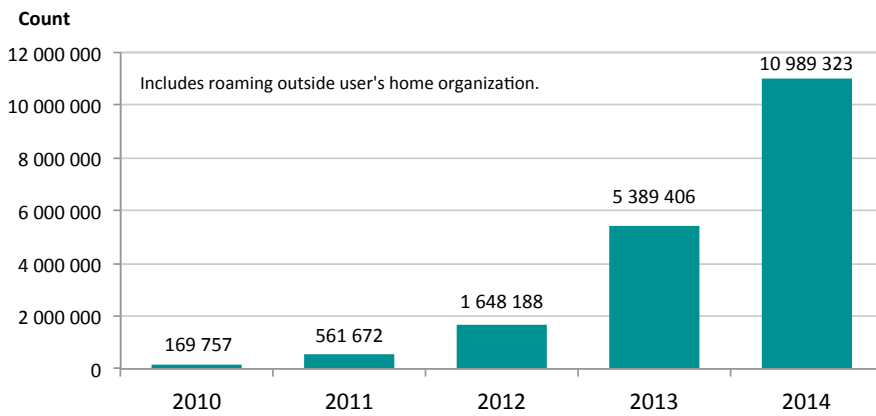




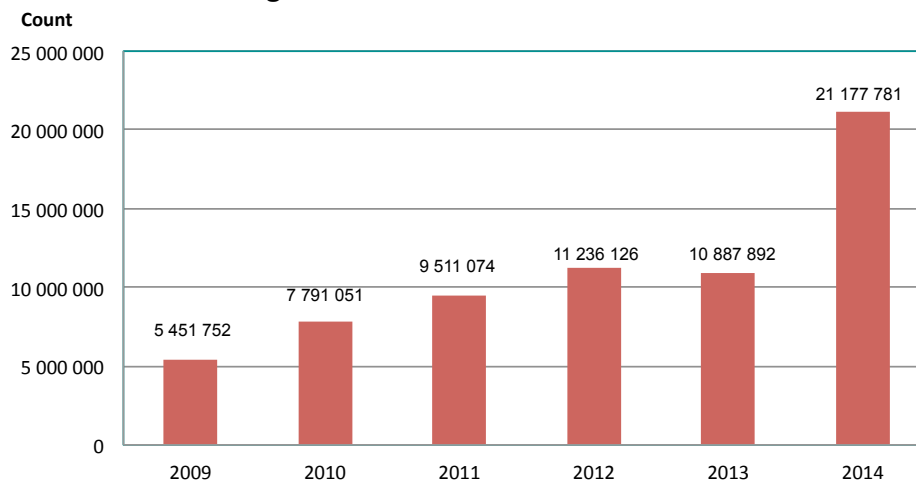
### Courses and events 2008–2014



### Logins to eduroam roaming service 2010–2014

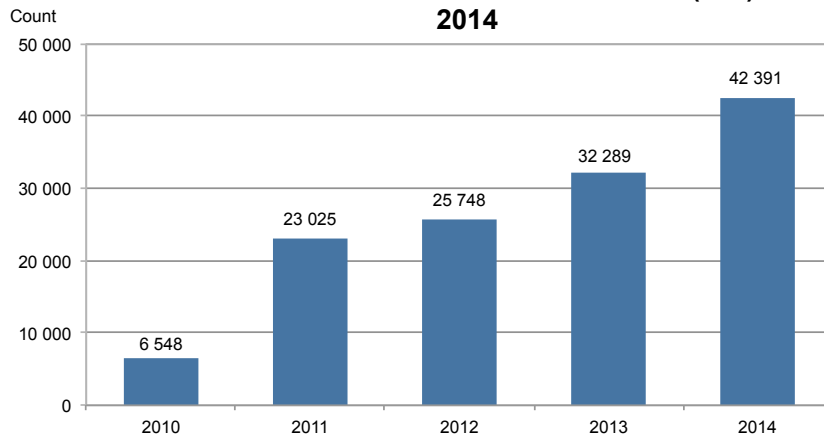


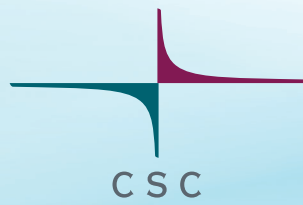
### Logins to Haka services 2009–2014



\* In the beginning of 2014 a new statistics system for Haka logins was taken into use.

### Number of visits to Scientist's User Interface (SUI) 2010–2014





CSC

[WWW.CSC.FI](http://WWW.CSC.FI)