

# EXPERTS THINKING AHEAD

SUSTAINABILITY REPORT 2013



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OUR  
HANDPRINT  
IS LARGER  
THAN OUR  
FOOTPRINT

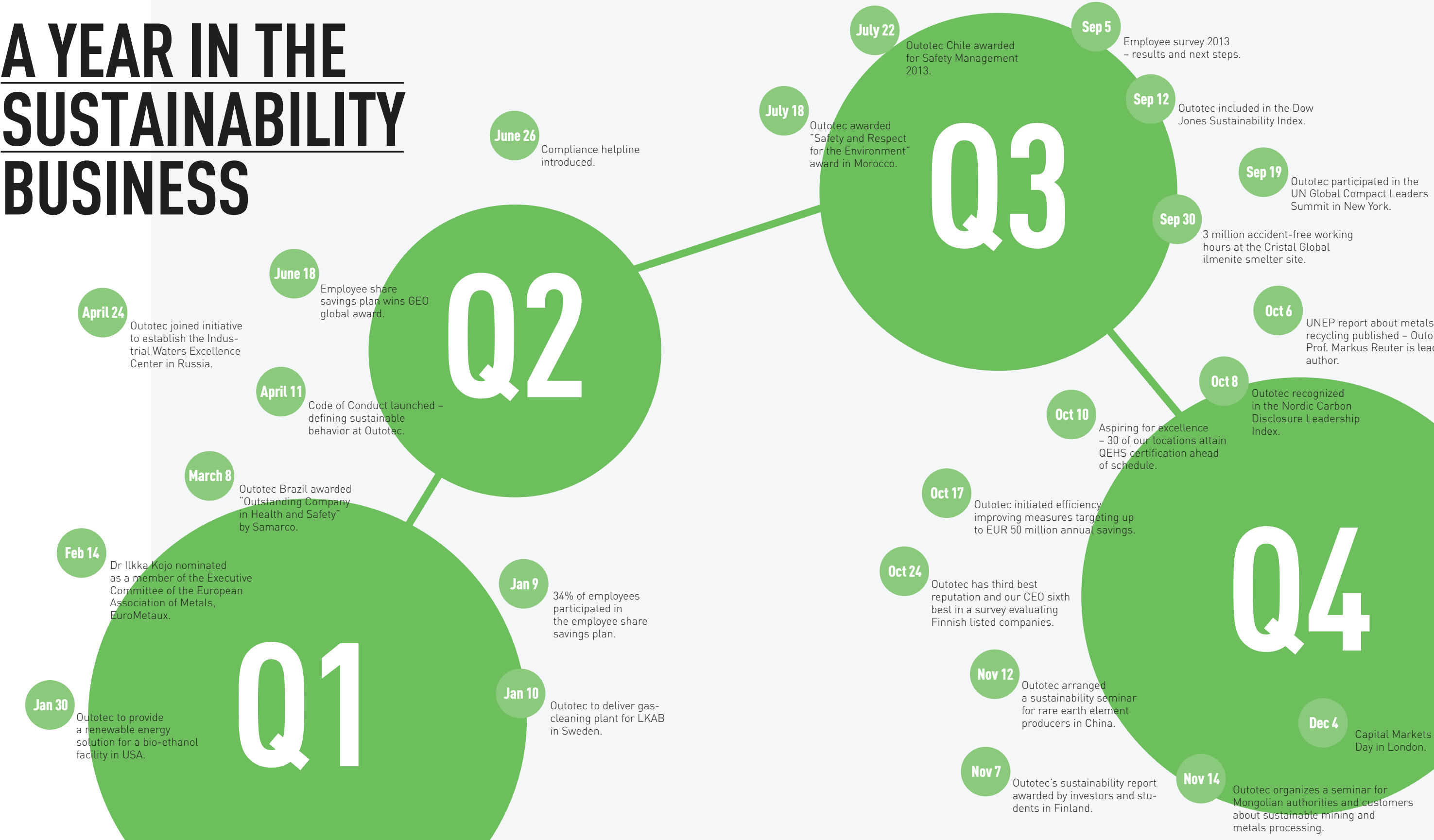


## SUSTAINABILITY REPORT 2013

### EXPERTS THINKING AHEAD

Experts are Outotec's most valuable asset. That's why this report is primarily about our people. Expertise demands thinking. Whether engineering a solution, planning a delivery, or anticipating customer needs... thought is the key. It's what Outotec's people do best, regardless of their role. Ahead of the curve, and looking to the long-term future, Outotec's people consider the entire life cycle. We're future-oriented, and our first priority is making that future a sustainable one.

# A YEAR IN THE SUSTAINABILITY BUSINESS





A wide-angle landscape photograph of a mountain valley. In the foreground, there's a grassy field with patches of snow. A small, dark wooden house with a corrugated metal roof sits on the left. A winding asphalt road curves through the middle ground, leading towards a calm lake. The lake is nestled between steep, rocky mountainsides covered in sparse vegetation and patches of snow. In the background, more mountains are visible under a hazy, overcast sky.

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# OUR APPROACH

Our approach to sustainability is guided by our mission, sustainable use of Earth's natural resources.



# WHAT IS OUTOTEC

METALS  
CAN BE PRODUCED  
SUSTAINABLY

→ Outotec is a technology company that designs and delivers tailored solutions for minerals and metals processing, water treatment, and producing energy from biomass and wastes. There is no other company that can deliver such a wide range of applications: a unique position founded on a century of scientific and operational knowledge. With our mission of ‘Sustainable use of Earth’s natural resources’, Outotec works to guarantee the best return on the customer’s investment with minimal ecological impact.

The benefits of this approach include conferring the license to operate, maximizing recovery, and reducing emissions as well as energy and water consumption.

Outotec’s most significant impact on sustainability occurs indirectly through our customers’ operations. The majority of our customers operate in the minerals and metals industries (83% of sales), and increasingly in the renewable energy sector, chemical industry and industrial water treatment. These companies are looking to improve their energy efficiency and reduce CO<sub>2</sub> and other emissions, as well as water consumption. We believe that with modern technologies and life-cycle solutions, metals and materials can be produced resource-efficiently and sustainably. Innovative research at 18 in-house R&D and competence centers and continuous development work with customers has made us the leading developer of technology in the minerals processing and metallurgical industry.

Outotec has a strong market position across the entire value chain from ore to metal and we also intend to strengthen our technology leadership through acquisitions. In 2013, Outotec acquired Scan-alyse, a software technology company providing services for process equipment condition and performance monitoring.

Outotec, headquartered in Finland, has employees in 27 countries and sales to over 80 countries. As of July 2013, the company structure was changed and operations were clustered into three regions: the Americas, EMEA (Europe, the Middle East and Africa), and APAC (Asia Pacific), providing our customers with full support for project implementation, deliveries and service. The two new business areas, **Minerals Processing** and **Metals, Energy & Water**, are dedicated to developing sustainable technology solutions and life-cycle services. Our service business is included in the figures of the business areas. The change is intended to strengthen Outotec’s market presence and competitiveness of our solutions as well as supporting the rolling out and running of global business processes and tools.

In May 2013, Outotec opened an office in Jakarta, Indonesia. Approximately half of Outotec’s sales are generated in emerging markets.

Outotec has been listed on the NASDAQ OMX Helsinki since October 2006.

Read about Outotec’s legal entities in **Financial Statements 2013, page 64.**

## OUTOTEC’S HANDPRINT

Through providing industry benchmark technologies and life cycle solutions to our customers, we consider ourselves to have a significant positive handprint towards sustainable use of resources. We support our customers in reducing the ecological footprint of their operations.



Summary of key figures	2013	2012	2011
Sales, EUR million	1,911.5	2,087.4	1,385.6
Reported operating profit, EUR million	141.9	184.3	111.9
Research and development expenses, EUR million	48.7	41.6	33.5
Priority applications, pcs	101	70	41
National patents granted, pcs	419	286	326
Number of employees on average	4,927	4,456	3,516
Wages and salaries, EUR million	385.8	362.6	284.4
Total greenhouse gas emissions, tonnes of CO <sub>2</sub> /EUR 1 million sales	15.9	15.2	18.8
Greenhouse gas emissions avoided through the use of Outotec technologies, thousand tonnes of CO <sub>2</sub> -e	5,400	4,600	4,800
Total energy consumption, TJ	156.8	164.9	141.5

Read more about our performance in **Financial Statements 2013** at [www.outotec.com/investors](http://www.outotec.com/investors).

## OUR APPROACH

Our approach to sustainability is guided by our mission: sustainable use of Earth’s natural resources. We want to create value both for our shareholders and the society around us by finding solutions to some of the challenges our modern lifestyle pose towards the planet and the generations to come.

Commitment to sustainability is also our core value. It means that sustainability not only guides what we do, but also how we do it. We want to integrate sustainability not only into all our operations, but also into our thinking and behavior.

Because of the nature of our business, our most significant contribution to abating climate change and other environmental challenges is made through providing sustainable technologies and services to our customers, thus enabling them to run environmentally sound, profitable and socially acceptable businesses. It means that our handprint, the positive effect in terms of sustainability, is bigger than our footprint: the impact of our own operations to the environment is tiny compared to what we can achieve by providing innovative solutions to our customers. This is also how we measure our success. Our long-term target is all about our handprint: we must be able to offer more sustainable technologies and services to our customers with less harmful impact on the environment.

In our everyday life, we are guided by our values, Code of Conduct and our policies. We strive to report openly about our activities and progress as well as the areas that need development. This report is our fourth, and it describes our performance in 2013 while setting targets for 2014 and beyond. The report complies with the accounting standards and voluntary reporting guidelines issued by the Global Reporting Initiative (GRI), and is independently assured.

Read more about our approach to economic, environmental and social sustainability on **page 40.**

# GREAT PEOPLE, GREAT TECHNOLOGIES

→ When I received the news that Outotec was ranked the third most sustainable company in the world on Corporate Knights' Global 100 list, I must admit that I was left a bit puzzled. I know that sustainability is truly in our core and that we have done a lot of work to get such recognitions. Of course I felt very happy and proud. But at the same time I also know that there is a lot to be done. When it comes to sustainability, a company can never be complete or perfect. After a while I realized how great this was: it gives my colleagues and I great motivation to continue our steady work towards becoming even more sustainable!

Like every well-informed person, I am concerned about our global dilemma. Our mission, sustainable use of Earth's natural resources, obliges us to seek solutions to this challenge: our modern way of life and the economic growth it requires must be decoupled from their impact on the environment. The world is demanding that natural resources are used in a more efficient and sustainable manner. Our customers face increasing demands for environmental performance; regulation is getting tighter and they need to be able to meet new standards. The social license to operate is another crucial issue in many countries. For our customers, we want to be the kind of partner that allowing them to comply with current and upcoming requirements while guaranteeing their operations to be sustainable in every sense of the word.

I place my trust in our great people and great technologies. Our green-hearted engineers and all our green collar workers, who aspire for excellence in everything they do. I work hard to ensure that we are the leaders in innovation, so that our offering can be the best in the industry when it comes to resource efficiency, energy efficiency, water usage, minimizing emissions – all in all, reducing the ecological footprint wherever possible, and making our handprint as large as possible.

Our core competences come from the knowledge of our people, and it is therefore important that we attract and retain the best talent in the industry. We rely on our experts and their ability to think ahead. I believe that our values and mission statement have an important role to play, because they give our people a sense of purpose in their work. Since our people are the focus of this year's report, we decided to publish a new long-term target: we want to see 5% improvement in employee engagement and performance enablement indices by 2020.

So what else have we done in 2013? We have systematically developed our policies and processes as well as harmonized our quality management systems and sustainability reporting to improve our performance. One remarkable milestone was when we received the One Outotec integrated QEHS management certification for most of our global locations. To support our commitment to the

United Nations Global Compact initiative and principles on human rights, the environment, labor, and anti-corruption, we introduced our new Code of Conduct, and 40 percent of our employees have already completed the obligatory training. We hoped to achieve a larger audience, but the learning tool launch was unfortunately delayed. The work continues, and we now have a full-time Chief Compliance Officer. We also opened a compliance helpline available both to our employees and to our partners. We more than doubled our target of signed supplier policies. And we also made it to the Dow Jones Sustainability Index for the first time.

Yet, with all our efforts, 2013 was financially challenging for us. The uncertainty in the world economy reduced mining and metal companies' investments. After several years of strong growth, we experienced a slower than anticipated market, and were able to win less business than planned. This forced us to take unpleasant decisions to reduce our workforce as part of the efficiency improvement program, to prepare the company for possibly continuing market slowness and shrinking sales. Despite of the challenging year, I feel that our spirit is strong and we are making progress in building success together as one Outotec. The fact that as much as one third of our employees are also Outotec shareholders through a new employee share savings plan, in the beginning of 2013, shows our people's commitment.

“Outotec was ranked the third most sustainable company on Corporate Knights' Global 100 list.”

**Pertti Korhonen**  
President & CEO, Outotec

When I walk around in our offices, I am constantly face-to-face not only with my colleagues, but also our shareholders. It adds to my personal feeling of responsibility.

I am optimistic about our future. The global megatrends all bring us more opportunities than threats. I believe that when we act and behave with integrity and think about the longer term, taking sustainability into account, we are able to deliver better business performance. In this way, I see sustainability as a vital contributor to shareholder value creation. I feel proud of our handprint.



# MEGATRENDS GIVING US TAILWIND

In 2013, Outotec revisited the strategy we defined in 2010, together with the megatrends impacting our industry. The world seems to be changing even faster than we thought. For example, the urgency in fighting climate change has increased. The most important megatrend for Outotec, however, remains the same: the demand for minerals and metals continues to grow. Overall, these megatrends seem to bring us more opportunities than risks.

→ As the proportion of the world's population living in cities increases, so does the need for vital resources such as metals and water. The growth in the demand for minerals and metals is estimated to be between 4 and 7 percent annually on average. This is mainly based on the assumption that by 2050 there will be three billion new middle-class consumers. This trend, combined with the fact that ore grades are declining, means that more production capacity and more resource-efficient technologies will be needed in future, despite short-term imbalances in the market.

Increasingly the world is demanding that natural resources are used in a more efficient and sustainable manner, i.e. resource productivity has to be increased and circular economy enhanced. At the moment, mankind is overusing

natural resources at the rate of 1.5 times what the planet can sustain. This makes resource efficiency imperative. Better and less polluting processing technology, increased energy and material-efficiency, as well as more recycling and re-processing of tailings and wastes are absolute musts to decouple economic growth and the ecological footprint. The strong demand for metals combined with requirements for resource efficiency drives Outotec's business and provides opportunities for advanced technologies. For example, LKAB in Sweden is building a new Outotec gas-cleaning plant in connection with its iron ore pellet plant to meet the European Union's new higher environmental legislation requirement, which will be in place as of 2016.

Social aspects, such as health, safety and social responsibility for employees,

customers, and society at large are of increasing importance to Outotec's customers' investments. We are in a good position to deliver solid solutions that are safe, environmentally sound and can be accepted and embraced by the local community, ensuring social license to operate for our customers. Financiers (the World Bank for example) are increasingly setting environmental standards for investments into mining operations, which can be higher than local legislation and emission limits. For example, Kansanshi Mining in Zambia selected Outotec technology for its recent sulfuric acid plant in order to meet the World Bank's standards.



Digitalization of the world is a megatrend that provides many opportunities for Outotec to leverage our core capabilities in the solutions we design for the cus-





tomers and capture more value from our unique process technologies. Outotec has strong expertise in analyzers and automation; advanced control software; remote monitoring and diagnostics; and process design modeling, simulation and control, and the company is continuing to develop its offering in this area.

A more volatile macro economy with shorter cycles requires a flexible business model. Outotec has been developing its operating model and improving its scalability since 2010. We continue to diversify our business portfolio from equipment and project deliveries to include more service components and complete life-cycle solutions. Furthermore, the expansion into the renewable energy and water treatment businesses helps us to adjust our capacity according to the cycles of the business.



# MEGATRENDS AND THEIR IMPACT ON OUR BUSINESS

Megatrend	Opportunity for Outotec	Risk for Outotec
<b>URBANIZATION AND THE GROWING MIDDLE CLASS</b> 	<p>The growing demand for minerals and metals requires more processing technologies and creates business opportunities for Outotec.</p> <p>Outotec's technologies enable efficient ore processing and higher yield thanks to advanced process control. There are increased business opportunities when customers replace inefficient processes with new technologies and energy- and water-efficient solutions.</p>	<p>If Outotec fails to develop new technologies or keep its portfolio competitive, it may lose market share. Customers' operations require sufficient amounts of water, coal and other fossil fuels, power and mineral resources. Any changes related to the availability or the price of these commodities has financial implications. The operational costs (energy and water) may become too high for customers and they may need to close down some operations, which could also reduce Outotec's business.</p>
<b>RESOURCE EFFICIENCY IMPERATIVE</b> 	<p>Maximized recovery through advanced processing technologies as well as recycling and processing of tailings and waste are required for efficient use of resources.</p> <p>Outotec's vast knowledge of mineralogy and process technologies, and comprehensive R&amp;D facilities, enable the company to develop new process solutions for low-grade and complex ores. Metals are almost 100% recyclable, and this potential is not yet fully taken advantage of. Outotec can grow its business by selling more solutions for the production of metals from secondary materials, such as electronic waste, metallic scrap, cabling, and battery paste/scrap.</p> <p>Several Outotec technologies are renowned for their energy efficiency and low CO<sub>2</sub> emissions. Through Outotec's technology solutions, the impact of carbon taxes upon our customers are cushioned and their competitiveness secured.</p> <p>Outotec has technologies which lead to significant reductions in fresh water consumption by recycling of process water, and thus decreased water loss. The company is also developing new applications for industrial effluent treatment and cooperating with Kemira in developing solutions for water-intensive industrial applications.</p>	<p>As ore grades decline, ores become more complex and more difficult to process. If Outotec fails to develop new technologies or keep its portfolio competitive, it may lose market share.</p> <p>Mineral and metal processing is very energy-intensive. For example, grinding mills alone take up 10% of Australia's total energy consumption. Price changes prompted by resource scarcity, energy shortages, and changes in consumer attitude and politics imply high financial risks for Outotec's customers and subsequently for Outotec.</p> <p>Overly high energy prices due to carbon taxation and emission trading schemes can cause our clients to lose their competitiveness and cease to operate.</p>

Megatrend	Opportunity for Outotec	Risk for Outotec
<b>DECOUPLING WEALTH AND ECOLOGICAL FOOTPRINT</b> 	<p>Advanced solutions for emission reduction, water treatment and recycling, as well as efficient use of biomass and waste are needed.</p> <p>Outotec's technologies including sealed processes, gas cleaning, efficient sulfur capture and effluent treatment guarantee sustainable operations and long-term profitability. With modern technologies metals and materials can be produced sustainably.</p>	<p>Overly strict laws and regulation can result in unprofitable operations, and if the customer cannot meet these it may lose its license to operate. This would reduce Outotec's opportunities to offer technologies and services to the plant in question.</p> <p>If Outotec fails to design and provide competitive solutions for the customer, it may lose business.</p>
<b>DRIVE FOR SOCIAL SUSTAINABILITY</b> 	<p>Health, safety and social responsibility for employees, customers and the local community are becoming increasingly important. Emerging economies are taking action to secure resource access.</p> <p>Outotec's advanced technology and service solutions ensure social license to operate for its customers. Outotec has a globally integrated QEHS management system and an excellent track record for its safety performance in large customer projects. This helps Outotec to win large projects.</p>	<p>The metals industry annually emits millions of tonnes of SO<sub>2</sub>, which has a significant local impact. Fine particulate matter emissions to air cause health problems. Heavy metals in hazardous dusts and fumes can cause occupational exposure. Eco-toxic substances from metallurgical operations impact air quality, water, and soil.</p> <p>If not gaining social acceptance or complying with regulations, customers may be forced to close down their operations, which may reduce Outotec's business.</p> <p>If environmental regulation tightens to the degree that new mining projects are not allowed or are economically unfeasible, Outotec may lose business.</p>
<b>DIGITALIZATION OF THE WORLD</b> 	<p>Digitalization, automation and systems integration offer new possibilities to capture value with Outotec's unique process technologies. Full automatization of the product life cycle opens up new opportunities for developing sustainable products, systems and services. Digitalization enables low-cost, flexible and highly responsive interactive partnership models.</p>	<p>If Outotec's own development of new advanced software, remote monitoring and diagnostics, and automation systems is not fast enough, Outotec may lose market share.</p>
<b>MORE VOLATILE MACRO ECONOMY</b> 	<p>Outotec is balancing the cyclicity through diversifying its business portfolio, growing the share of service business in its sales and further developing its scalable and adaptive operating model.</p>	<p>If Outotec fails to grow the share of its service business and its energy and water treatment business, it will be vulnerable to the cyclicity of the mining and metals industry.</p> <p>In uncertain market conditions customers may not be able to get financing for their investments, which will reduce Outotec's business. On the other hand, expanding the operation and maintenance service business may impose Outotec to larger risks in terms of health and safety. Conditions, like emerging market currency rates or the availability of financing, may rapidly change and lead customers to postpone orders or cancel projects.</p>



# STRATEGY

WE DIVERSIFY OUR  
PORTFOLIO TO INCLUDE  
MORE SERVICE  
COMPONENTS AND LIFE-  
CYCLE OFFERINGS

Outotec's strategy is focused on enabling sustainable use of Earth's natural resources. This mission defines the purpose of our company along with our core value: being committed to sustainability. These are the two vital elements that should drive sustainability in everything we do and lay the foundation for our strategy.

→ In 2013, we revisited the strategy we defined in 2010. Although the foundation stayed the same, we introduced six strategic programs that we will pursue in the coming years. We provide our customers with sustainable technologies and services that guarantee performance and lifelong benefits, such as the license to operate, reduced energy and water consumption, high recovery, and minimized emissions, thus enabling the best return on the customer's investment.

Outotec's strategy is to combine five types of competences in the solutions offered to customers to maximize value capture. These competences include technology as the foundation of the offering, proprietary equipment, systems integration for a complete process solution design, the capability to deliver even turn-key plants, and life-cycle services supporting the customer over the entire life of their business.

In the area of mineral and metals processing, Outotec has been an industry leader, developing innovative technologies for nearly a century. This expertise has since been successfully applied to many other industries. The company is continu-

ously strengthening its technology portfolio for the entire value chain – from ore to metals – through in-house research and development as well as by acquisitions.

In addition, water is an increasingly scarce resource and its efficient use, along with recycling and purification processes, is a goal of steadily mounting importance. The energy and industrial water treatment industries offer significant growth opportunities for Outotec while boasting high synergy potential and manageable risks. Outotec also continues to diversify its portfolio from the equipment and project business to include more life-cycle offerings consisting of service components.

Six strategic programs were introduced in 2013. The first focuses on customer experience and aims to improve customer-centricity and delivery excellence. The second strengthens our earnings logic to capture more value with Outotec's unique technologies over the life cycle. The third program was made to ensure Outotec's technology leadership, and the fourth to increase cost competitiveness of our products. The fifth program focuses on further developing

common business processes and tools with the 'One Outotec' approach, and the sixth program is dedicated to our people and professional growth.

In 2013, Outotec introduced new products and technologies, developed its supply base to reduce the share of supply from high-cost countries, and launched a 50-million-euro efficiency-improvement program to improve our cost structure.

A strong brand and reputation will pave the way for Outotec to become the undisputed global leader in sustainable minerals and metals processing solutions, and to firmly establish a presence in the energy and industrial water treatment businesses. This strategy provides the direction for our sustainability work.

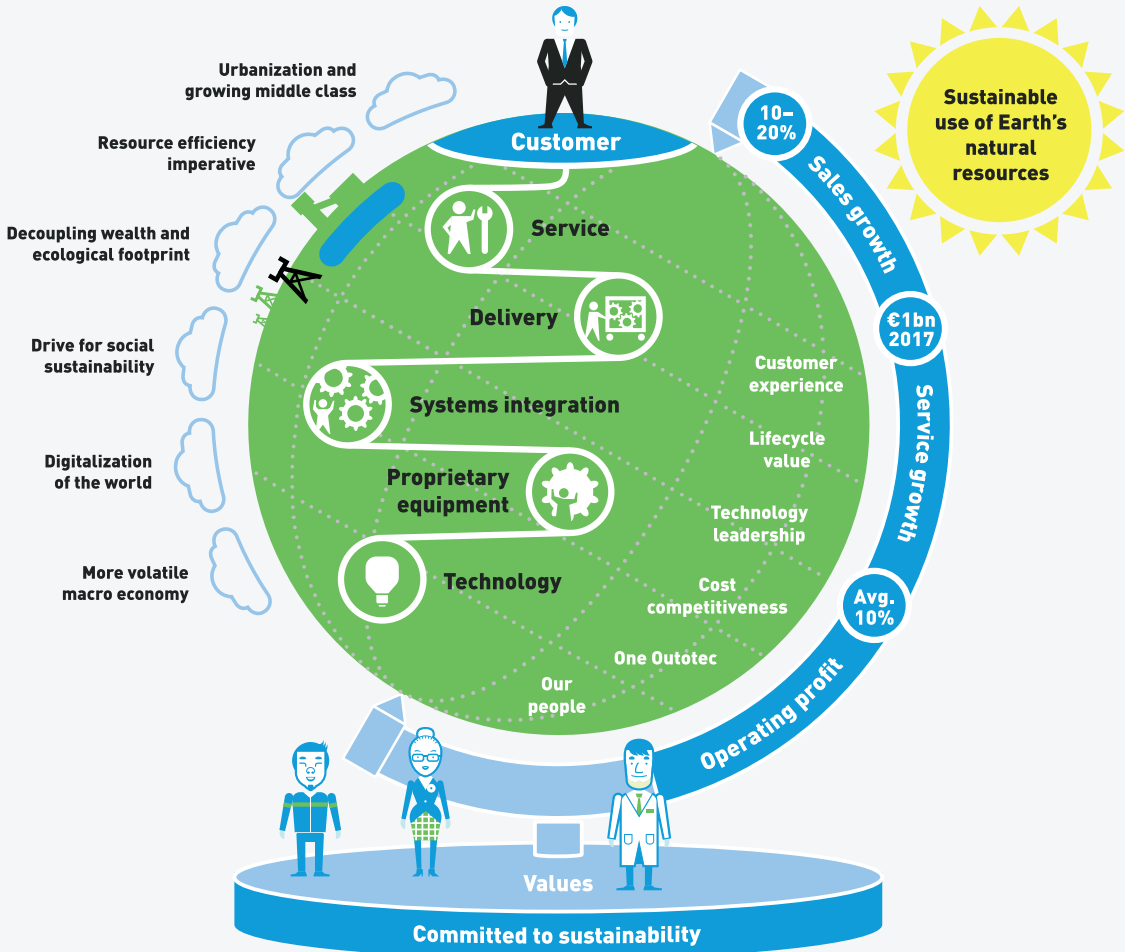
### Sustainability approach in mergers and acquisitions

Acquisitions support Outotec's long-term strategy. We take environmental, economic and social aspects into consideration when assessing potential acquisition targets. In 2013 Outotec made one acquisition, that of Scanalyse. With Scanalyse solutions, equipment lifetime can be lengthened and use of spare parts optimized. This preventive maintenance helps to avoid unplanned situations that might increase energy consumption or emissions and increases the overall sustainability of a plant.

We also carry out environmental due diligence if there are environmental considerations in relation to the acquisition.

Sustainability issues are carefully considered when deciding upon business integration and future business plans.

Outotec has acquired 13 companies since 2010. The integration of acquired companies is carried out according to defined processes, templates and tools. An integration team is nominated for each case and the work is coordinated by the Strategy and M&A function. As Outotec is operating according to the 'One company' principle the businesses are normally integrated into Outotec's operating model and under the Outotec brand.





# BUILDING AN ENGAGING WORKPLACE

Steps were taken in 2013 to make sure people are more visible in Outotec's strategy. Kirsi Nuotto, SVP, Human Resources, and Pia Kåll, SVP, Strategy and M&A, discuss the company's people-oriented culture, and the personnel footprint shifts on the horizon.

## How do people fit in to Outotec's strategy?

**Kirsi:** We are a human capital company in the sense that our business is founded on the know-how of our people and their high-caliber competencies in the technologies that we provide. So in a sense, everything we have is in the heads of our people and therefore it's really important to make sure they feel their expertise is valued. We recognize people as our greatest asset and we try to take good care of them: we really are very people-oriented.

## How does this work in practice?

**Pia:** Well, if you were to join the company, you'd be working with experts in their own field, so you would find yourself surrounded by people who have a very high level of knowledge and are keen to share it with you. It's not like coming to work and sitting on a production line. The work here

is really built around the intellect: how do we build this solution and where do we have the knowledge to do so? How can we improve it together? The whole collaborative way of working is just different than elsewhere.

I can give a practical example, having joined Outotec quite recently. People from across the organization reached out to me immediately with strategy suggestions and ideas, or just to ask my opinion on certain things. So I really found that people were willing to share their thoughts – the concept of developing the company together can be felt quite strongly.

## How has the employee survey developed this year?

**Kirsi:** There's a big difference. It's moved away from "Are you happy or not in this company?" towards clusters of questions that are more apt to measure engagement and how well we enable our people to perform

at their best. So we gain a deeper understanding.

**Pia:** It's not like a satisfaction survey. It's more a question of: "Is what you do meaningful and do we allow you to do it well?" and "Are you engaged and empowered?"

**Kirsi:** Engagement and empowerment are important qualities, and for the first time we're able to have a broader view over these. They then become easier to talk about as a concept and we can benchmark our results against other companies. We can also build our aims around the findings we make; for example, customer-centricity and collaboration have been selected during 2013 as key development targets.

**Pia:** We saw from the survey that people want to collaborate even more and break down the silos within organizational units, making sure that all the knowledge we have flows better. And there's a constant theme of getting closer to our customers and developing our understanding of what they need.

**Kirsi:** When it comes to acting on the results, job rotation is a good example of a practical measure we're undertaking to improve collaboration. It's important to help make managers more comfortable with allowing their people to "go and grow". So

instead of holding on to them – after all, you don't own your employees or team – you should be able to let them try job rotation and understand that you will get another great team member in return!

## How will Outotec's increasing adoption of the operation and maintenance business model affect the company's personnel footprint?

**Kirsi:** Our workforce structure will definitely change due to this, so although we already consider ourselves a truly global company, we'll see the addition of more personnel based in diverse locations and with a variety of different backgrounds, speaking different languages and so on. Operating locally gives a different perspective to the people strategy: we need to communicate our culture to recruits around the world and take more local requirements into consideration as we move forward.

**Pia:** We will be more diversified as a company, that's for sure. We'll be local in every sense of the word, not only selling and delivering globally, but actually becoming a more tangible presence. So yes, of course we need more cultures, more languages, and all the rest. It might be helpful to think of this as more of a need than a challenge.

"People want to collaborate even more and break down the silos within organizational units, making sure that all the knowledge we have flows better."

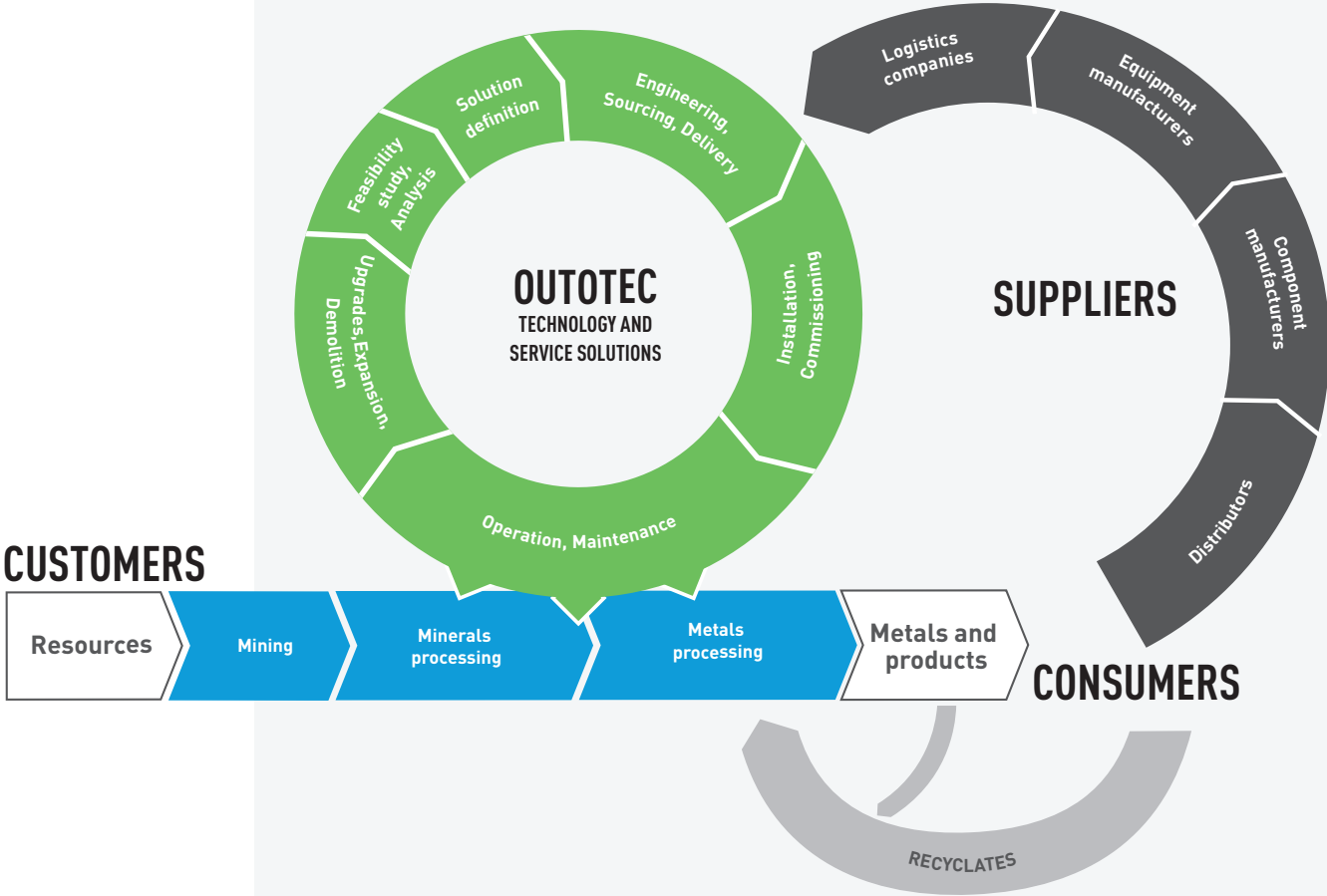
**Pia Kåll**  
SVP, Strategy and M&A

**Kirsi Nuotto**  
SVP, Human Resources



# OUR VALUE CHAIN

METALS VALUE CHAIN



Outotec’s value chain is multidimensional due to the nature of our business. As a technology company Outotec delivers large and complex tailored solutions and services to a relatively small number of customers, and the value chain differs in each delivery.

→ When evaluating Outotec’s operating environment, three main agents can be observed, each having a different value chain, impact and life cycle. First Outotec, developing products and delivering solutions to its customers; secondly Suppliers providing materials, equipment and services for Outotec; and thirdly Customers using Outotec’s products and services. These three value chains are strongly interlinked. In sustainability reporting, Outotec has set its limits such that in addition to the company’s own operations, the impact of products and services in our customers’ operations and the supply chain are partly covered.

As we deliver large and complex tailored solutions and life-cycle services to a relatively small amount of customers, the value chain differs in each delivery. Similarly, the indirect environmental and social impact of Outotec’s activities differ in each customer case, depending on the customer’s raw materials, the technologies and services included in the delivery, local legislation and circumstances, and how the customer makes use of the technology in question.

87 percent our order intake in 2013 can be regarded as environmental goods

and services (EGS). The most significant ecological impact of the solutions provided by Outotec is made in the customer’s operation phase.

The most material aspects for Outotec in terms of sustainability, as defined in the materiality assessment conducted by the management at the end of 2011, are

- Sustainable products and solutions for customers
- Preferred employer
- Community involvement and charity work
- Improving the sustainability of our own operations
- Responsible supply chain

All these aspects are also essential elements in the three value chains described below. The majority (83%) of Outotec’s business relates to minerals and metals processing, and the rest to chemical processing, renewable energy and industrial water treatment. The value chain in chemical processing and energy production is quite different from those of minerals and metals processing. For this reason, the overall value chain graph describes Outotec’s activities in minerals

and metals processing. The value chain of Outotec’s activities in the energy sector is described on page 63.

Consumers are not Outotec’s business partners. However, in the value chain they play an important role, using the products and recycling them, returning materials to secondary processing.

**Read more about our materiality analysis on page 38.**

### Outotec’s handprint larger than its footprint

Outotec’s core competence is in mineral and metal processing, and we have developed applications for renewable energy and industrial water treatment. Our greatest positive impact comes from providing our customers sustainable solutions and services. The most valuable resource for the company in making a positive contribution to the sustainable use of natural resources is our forward-thinking experts.

Outotec operates globally, mainly in offices which are located in 27 countries. The bulk of our operations involve engineering and business management, the



environmental impact of which is relatively small. In addition, Outotec has two research centers, two manufacturing workshops, four assembly shops, a ceramic plate production plant, and several warehouses. The majority (some 90 percent) of our manufacturing is outsourced. Comparing our greenhouse gas emissions (30,423 tonnes CO<sub>2</sub>-e) and those of our supply chain (623,000 tonnes CO<sub>2</sub>-e) to emissions avoided through use of our technologies (5.4 million tonnes CO<sub>2</sub>-e) clearly shows that our handprint is much larger than our footprint.

**Life-cycle assessment of products**

The life-cycle of Outotec's products and services is illustrated in the graph. Starting from in-house R&D and studies, then on to engineering, sourcing and delivery of the products and services. Outotec's activities continue at the customer's site with installation, operation support, maintenance, before showing upgrades and expansion, and finally to the demolition of the plant.

Outotec has conducted a life-cycle assessment (LCA) screening study of the environmental impacts caused by the construction materials of two Outotec products; a sulfuric acid plant and a non-ferrous mine mill circuit. The analyzed product systems mainly consist of basic metals. For example, 1,000 tonnes of steel is used to build a sulfuric acid plant, and nearly 500 tonnes for a grinding mill circuit. Therefore mining processes and metal refining are two important stages in the analyzed systems.

Processes associated with the mining and power industry were identified as the most significant contributors to the overall impacts of our products. In particular, the disposal of mine tailings from metal extraction and energy generation for metal refining were the most significant processes.

Besides products and services, Outotec's positive effects in terms of sustainability come from organizing sustainability seminars for customers, giving presentations at industry events, collaboration with universities and students, and community work.

**Read more about our ecological footprint on page 68.**

**Supply chain**

Outotec's supply chain includes over ten thousand suppliers globally. These represent (but are not limited to) assembly workshops, component manufacturers, distributors, logistics services providers, and construction and engineering companies.

The value chain of an equipment supplier typically includes raw material extraction (quite often metals processing), distribution, manufacturing, assembly, transportation and installation at Outotec's customer's site. Because of the project-based nature of the business, Outotec's suppliers vary a great deal from one year to the next, which makes it difficult to run joint long-term development programs with them.

In 2013 Outotec analyzed the footprint of its supply chain in terms of greenhouse gas emissions. The analysis showed that the biggest sources of CO<sub>2</sub> emissions in Outotec's supply chain were metal products (34 percent of the total). The carbon footprint of our supply chain in 2013, 623,000 tonnes CO<sub>2</sub> in total, is considerably larger than the footprint of Outotec's operations, 30,423 tonnes CO<sub>2</sub>.

**Read more about the impact of our supply chain on page 76.**

**Customers' footprint**

Outotec's customers are major global mining companies and small and medium-sized or local mining companies and

metallurgical companies. Other customers include fertilizer producers, companies in the chemical industry and companies that utilize renewable or alternative energy sources.

Major global mining companies typically operate numerous mines and metallurgical plants and produce multiple metals. Small and medium-sized mining and metallurgical companies are usually focused on a particular metal.

The value chain of Outotec's customers starts from natural resources and includes mining, concentrate production through comminution, flotation and dewatering, metallurgical processing and production of refined metal or metal semi-products and products. The customers may also produce metals from secondary raw materials, in which case the value chain is much shorter. Outotec is not, however, involved in the first phase (mining) or the last phase (production of semi-products and metal products) of the customers' value chain.

The ecological footprint of Outotec's customers operations from natural resources to refined metals and materials is to a certain extent publicly available in the sustainability reports of these companies. However, the data is very massive, complex and seldom comparable. There is no defined method for calculating the footprint of an entire processing plant or setting the boundaries for such a calculation. For example, if product use is included, the lifecycle of a car, for example, will include everything from the mining of metal ores and the energy used to process that into steel, to the crushing of the car and smelting the materials back into useful scrap metal.

We have calculated the carbon footprint of five of our technologies, all of which are industry benchmarks in terms of energy efficiency and low emissions. However, these technologies are only one element when calculating the footprint of the customer's operations.

In 2013, we developed our ability to calculate the environmental footprint of such processes further by using Outotec's own process design data and combining this data with a commercial LCA calculation tool.

**Read more about the impact of our products on page 60.**





OUR PLANET  
AND THE GENERATIONS  
TO COME ARE  
ALSO OUR  
STAKEHOLDERS

# INTERACTION WITH STAKEHOLDERS

Our key stakeholders are customers, current and future employees, shareholders and investors, suppliers and the scientific community. We also cooperate with the media as well as public and non-governmental organizations. In continuous dialogue with our key stakeholders we want to enhance transparency. We also consider our planet and the generations to come as our stakeholders when evaluating whether our offering and operations are future-proof.

**Customers**

Outotec's customers include companies using natural resources as their raw material, such as mineral and metal processing companies as well as producers of industrial minerals, fertilizers, sulfuric acid and energy. We have long relationships with the majority of our customers. As a provider of tailored technological solutions and services, we continuously interact with our customers on various levels during the lifetime of their investment or plant. Personal discussions and site visits are always needed in our business.

We have joint R&D projects with customers in order to develop the best possible solution for their specific needs. In addition to regular business contacts, we organize seminars, user meetings, training, and workshops for customers. To get feedback and information on our customers' expectations, we conduct customer satisfaction surveys and case study interviews. Furthermore, it is industry practice that the experts of both producers and technology suppliers exchange information and experiences, meeting frequently at technical conferences and trade shows around the world.

**Customer feedback**

Outotec launched a new globally harmonized process for monitoring customer relationships and made a pilot customer

survey with the new process in 2013. The survey was carried out with certain customers, market areas and projects to collect customer insights and feedback in a structured manner, analyze it and act upon it by utilizing a common platform. The customers interviewed for the pilot scored highly Outotec's health and safety measures, the environmental benefits of our products and the competence of our service personnel. The lowest scores were related to communication with the customer. The results are being utilized to improve customer relationships as a whole. According to the new process, customer feedback is collected, analyzed and acted upon as part of each delivery.

**Awards in customer work**

In 2013, we received several safety recognitions from our customers. The most extensive safety achievement was the milestone of 3 million accident-free working hours at the Cristal ilmenite smelter site in Saudi Arabia.

Outotec was also awarded the prize of "Outstanding Company in Health and Safety" by Samarco for our pelletizing plant project in Brazil. Outotec scored 99 percent in the performance evaluation of safety items compliance.

The largest phosphate supplier in the world OCP awarded Outotec the first prize for "Safety and Respect for the Environ-

ment" at the Safi site in Morocco, where Outotec screened vanadium catalyst from converters of seven sulfuric acid plants.

Codelco's Andina division in Chile recognized Outotec with the award for Safety Management 2013, which is in recognition of our commitment and achievements in productively controlling hazards and preventing accidents during 2013. The company encouraged Outotec to continue building a strong preventive safety culture.

**Sustainability seminars for customers**

In November 2013, Outotec and China's Nonferrous Metals Industry Association (CNIA) convened a sustainability seminar for the 60 principal Chinese rare earth elements (REE) producers and associated research institutes in Nanchang, China to discuss the environmental challenges of REE production, and possibilities to improve productivity through environmentally sound solutions. China is the largest REE producing nation in the world and finds it necessary to reduce the environmental impact of their production with modern solutions. CNIA and its industry have a long ongoing tradition of collaboration with Outotec.

As part of our collaboration with the Mongolian government to develop mining and metallurgical processing of Mongolian mineral resources, Outotec arranged a seminar in Ulaanbaatar in



November 2013 for Mongolian decision makers in the mining industry. The event attracted some 60 companies and over 100 participants. The topics discussed at the seminar focused on sustainable

use of Mongolian mineral resources, development of mining-related legislation, and the best environmental practices in Finland and the EU.

**Current and future employees**

Outotec's aim is to be an open and equal work community. The company culture encourages everyone to discuss and develop our operations. Regular briefing and interactive events are organized for personnel regarding the company's financial situation, targets, and successes. In addition, various channels are used for discussion and influence, such as the collaborative intranet, Outotec Round Table, and meetings with employee representatives. In 2013, Outotec introduced live internal webcasts where the CEO presents financial results quarterly as well as our strategy with the system providing the possibility (available worldwide) to ask questions. Our global interactive intranet serves day-to-day information sharing.

Sustainability is our core value and is at the heart of all operations at Outotec. In 2013, a global internal campaign called Sustainability Acts, was organized to motivate personnel to constantly ask themselves the important question: "Is this sustainable?" The idea was to fuel sustainability thinking at work and at home, to raise awareness and to share ideas. The campaign community was established in the corporate social media platform with a blog and discussion area where employees were asked to share their best eco-themed decisions and to 'like' those of others. An initiative to





replace plastic cups with ceramic ones in the Belo Horizonte office gathered most 'likes' and won a prize.

Outotec's Young Professionals network helps employees to network across business units, improve professional pride, and share career experiences across the organization. The network arranges activities with a positive atmosphere. In 2013, a few new locations started their network activities, and the intention is to expand the network globally in the coming years.

In 2013, the role of our social media presence was considerably increased. The use of social media has an official status at Outotec and is considered to be an extension to all our communications, marketing, employer branding and recruiting efforts. Social media accounts in Facebook, Twitter, LinkedIn and YouTube have proved to be efficient ways to reach out for new employees (especially those of the younger generation) and share information.

Sustainability has also been an important theme in social media. During 2013 Outotec followers in Facebook grew from 1,900+ to 2,700+. The number of Twitter followers grew from 700+ followers to 1,300+. Our LinkedIn company page is followed by more than 20,000 users making it a considerable pool of potential employees and a large audience for any company-related information sharing.

Read more about our people on page 48.

Students

Students are our potential future employees and an important stakeholder group with an increasing interest in sustainability and our performance as a responsible employer. Students also represent the next generation of decisionmakers.

To increase recognition and to strengthen our employer image, Outotec has actively sought different forms of collaboration with university students. We organize visits, internships, cooperative work on research, topics and supervision of diploma theses, field trips to production plants, and lectures on various topical issues. Many graduate students have contributed to the development of Outotec's technologies through their M. Sc. and post-graduate research.

In 2013, Outotec awarded ten sustainability prizes at the Central South University in China covering sustainability from technology and design to social responsibility. Outotec also awarded two sustainability awards for best presentation by master's and doctoral students of the South African Institute of Mining and Metallurgy at the Annual MinProc conference in Cape Town. In addition, five prizes were given to the best final year design projects at the University of Melbourne, one for each department in the Engineering School.

Shareholders and investors

Our shareholders and investors show interest in Outotec's capabilities to deliver sustainable technologies, corporate responsibility and governance. In addition to Finnish law, EU directives, corporate governance, and stock exchange rules and regulations, Outotec's governing structures are based on self-regulation, which is embodied in Outotec's corporate governance and policies; our Disclosure Policy gives the framework for financial markets disclosures.

In 2013, Outotec as a company and its top management as individuals were recognized among the investor community in several surveys. According to the annual survey made by Pohjoisranta Burson-Marsteller and Arvopaperi magazine, Outotec's reputation improved significantly in 2013 from tenth best (2012) to third position in the survey evaluating the reputation of 65 listed companies in Finland. The survey, answered by

1,000 private investors, used six different dimensions to measure reputation: corporate culture and leadership, financial excellence, public image, products and services, social responsibility and operational dynamics. Our CEO Pertti Korhonen was ranked sixth on the list of most reputable CEOs in the same survey.

Our CFO Mikko Puolakka was selected 'CFO of the year 2013' by Accenture, Gutta and Talouselämä magazine in Finland. This award recognizes expertise and leadership in finance & control, and this year in particular, the management of risks and change in organizations. In IR Magazine Awards 2013, Outotec was chosen to have the best investor relations in the alternative energy sector. In addition, Vice President, Investor Relations Rita Uotila was awarded the second place in the Best investor relations officer (small & mid-cap) category. The IR Magazine Awards are the leading international awards cherishing leadership and excellence in investor relations.

Broader shareholder base

Outotec's investor base is relatively widely spread geographically and the company's free float is 100 percent. The largest three shareholders account for some 21 percent of the shares. The largest shareholder Solidium Oy has 10.03 percent of Outotec shares. At the end of 2013, Outotec had 29,231 (2012: 15,312) shareholders. Shares held in 12 nominee registers accounted for 33.9 percent (Dec 2012: 46%) and Finnish households held 16.2 percent of all Outotec shares.

There are numerous requests for information from the capital markets regarding the company's business operations, financial performance, corporate governance and environmental and social issues. The aim in communicating with the capital market is to ensure that the market has true and fair information of the company's financial position, operations and future prospects in order to make investment decisions. 16 analysts conducted research on Outotec in 2013.



**Regular dialogue with analysts and investors**

Outotec's IR team has a continuous dialogue with investors and analysts and meets them on a regular basis at quarterly reporting events, investor meetings, road shows, industry seminars, capital market days and annual general meetings. In order to develop our investor relations capabilities further, we conduct annual surveys amongst analysts and investors about their expectations.

In addition to interim reports and annual financial statements, the CEO's Q&A sessions continued to be an important channel to maintain a dialogue in between interim reviews and to comply with fair disclosure. These live webcasts aim to give further clarity on information made public earlier. In order to serve the capital market efficiently, to ensure equal access to company-related information, and to comply with disclosure requirements, the live webcasts are recorded and available on demand for future reference.

Outotec also published a quarterly IR highlights bulletin, which is an information collage of published orders, news and events during the quarter.

As part of the annual Capital Markets Day, webcasted live from London, Outotec's management shed more light on company strategy, business operations, and long-term plans, as well as newly introduced technologies and customer cases.

In April 2013, Outotec organized an analyst and investor excursion to our research center in Pori, Finland and, in September a corresponding visit to our

research center in Frankfurt, Germany. Some 30 analysts and investors participated in the excursions.

**Read more about Outotec as an investment target at [www.outotec.com/investors](http://www.outotec.com/investors).**

**Suppliers**

Outotec's supply chain includes over 10,000 suppliers globally. These represent (but are not limited to) assembly workshops, component manufacturers, distributors, logistics services providers and construction and engineering companies.

Supplier selection is of key importance in Outotec's business. Therefore Outotec is determined to further develop long-term relationships with selected suppliers, and establishing global, common procedures for supplier qualification, quality assurance, continuous monitoring and joint continuous improvement of processes and practices.

Outotec has two policies serving as the basis for collaboration with suppliers.

**Read about the impact of our supply chain on page 76.**

**Scientific community**

We cooperate in technology development with various organizations. As an expert in the European Union's (EU) technical working group and in an environmental working group of the Federation of Finnish Technology Industries, many Outotec representatives participate in the updating of the BREF documents on non-ferrous metals. BREF is a best available technique reference document created

for decision makers involved in the implementation of the pollution prevention and control (IPPC) directive of the EU.

In addition, Outotec has been involved with the work of the International Copper Association's Health, Environment and Sustainable Development Steering Committee, European Technology Platform – Sustainable Minerals Resources High Level Group, among other organizations listed on page 28.

In 2013, Outotec took part in the European Sustainable Phosphorus Conference to speed up the transition towards sustainable phosphorus management and recycling.

Our sustainability expert, Professor Markus A. Reuter was the lead author of the United Nations Environmental Protection (UNEP) "Metal Recycling: Opportunities Limits Infrastructure" report, which was published in 2013 along with a textbook for students. He is also Adjunct Professor at Aalto University (Finland) and actively promotes resource efficiency and metals recycling in his lectures worldwide.

Outotec also began active cooperation with the Central South University (CSU), a comprehensive and nationally key university under the direct administration of China's Ministry of Education. Professor Reuter was awarded a visiting professorship by the University.

**Read more about our commitment to external initiatives on page 28.**

**Local communities and donations**

Outotec aims to be a good corporate citizen in the countries where we operate.

In 2013, Outotec supported UNICEF's Voices of Youth program in Brazil, the Baltic Sea Action Group's initiatives for rehabilitation of the Baltic Sea and helped people affected by the earthquake in Sichuan, China and the typhoon in the Philippines.

Outotec was working on projects in the Philippines in November 2013 at the time of the typhoon. Following this close involvement with the Philippines, Outotec gave a corporate donation to three disaster funds. Outotec's employees have also been personally involved by donating personal funds and working long hours to organize and deliver food and supplies to locals.

Outotec also continued its sponsorship of the Millennium Technology Prize.



**SUSTAINABILITY INDICES**

MEMBER OF  
**Dow Jones Sustainability Indices**  
In Collaboration with RobecoSAM



**The Global 100  
RobecoSAM 2013  
STOXX ® Global ESG Leaders**

COMMITMENT TO EXTERNAL INITIATIVES

Organization	Interest area	Outotec’s engagement
International Copper Association	Increase the awareness and usage of copper by communicating the unique attributes that make this sustainable element an essential contributor to our lives	Member, member of Environment Program Advisory Committee
International Zinc Association	Improvement of zinc production methods	Member
International Chromium Association	Promote sustainable ferrochrome production	Member
International Committee on Ferro Alloys	Promote the holding of International Ferro Alloy Congresses to retain the established high technical standard of the industry	Member
European Association of Metals, Eurometaux	Non-ferrous metals industry in Europe	Member of Executive Committee as of 2013
Federation of European Mineral Programs	Support international education and research	Member
Finnish Environmental Cluster for China (FECC)	Increase the awareness of Finnish environmental solutions in China	Member, consultation
European Industrial Research Management Association	R&D method management and development	Member of the board
Finnish Business and Society	Promote financially, socially, and ecologically sustainable business in Finland	Member of the board as of 2013
Cleantech Finland	Promote clean technologies	Member since 2009
Baltic Sea Action Group	Improve the state of the Baltic Sea	Member since 2009
EU IPPC Bureau TWG evaluating the reference values for BAT on non-ferrous metals	Ensure in cooperation with the Finnish non-ferrous metals industry that the technologies and emission values relating to them are realistic and reachable	An Outotec employee has been a member since 2007
Excellence Finland	Promote sustainable excellence and competitiveness in Finland	Member

Organization	Interest area	Outotec’s engagement
Federation of Finnish Technology Industries	Ensure that the Finnish technology industry has the preconditions for success in the global marketplace	Member of Technology & Business Working Group, member of Association of Finnish Steel and Metal Producers, Chair of Environmental Working Group
Carbon Disclosure Project	Greenhouse gas emissions reduction	Reporting since 2009
United Nations Global Compact	Business sustainability guidelines	Participant since 2010, also active participant of Global Compact’s Nordic Network
Global Reporting Initiative		Outotec sustainability reporting since 2010 according to GRI guidelines
European Technology Platform on Sustainable Mineral Resources	Address the future technological and social challenges in the European minerals industry	High Level Group participant since 2005
Finnish Metals and Engineering Competence Cluster (FIMECC)	Boost cooperation between companies and research institutes	Deputy member of the board
Cluster for Energy and Environment (CLEEN)	Facilitate and coordinate world class industry-driven research in the field of energy and the environment	Chair of the board
The Tapani Järvinen Environmental Technology Fund at the Aalto University School of Science and Technology	Promote the research of environmental technology	Outotec donated the basic capital for the fund in 2010.
Technology Industries of Finland Centennial Foundation Fund for the Association of Finnish Steel and Metal Producers	Give EUR 300,000 annually in grants and scholarships to students and university research groups	Member
International Chamber of Commerce (ICC)	Strengthen commercial ties among nations	Vice Chair of ICC Finland, Member of the Finnish Council
Technology Academy of Finland	Award the Millennium Technology Prize	Partner company, member of Industry Council



# ADDED VALUE FOR STAKEHOLDERS

→ Through solid financial performance, Outotec benefits all company stakeholders. Profitable business enables growth and development of the business as well as the prosperity of owners and employees. Through providing sustainable solutions to our customers, we create jobs and wealth locally in countries where we operate or where our customers' projects are located.

2013 was a challenging year for Outotec. The uncertainty in the world economy together with the devaluation of emerging market currencies were re-

flected in the drop of Outotec's order intake. Due to lower order intake, the sales and consequently the profitability weakened. Despite the challenging market, the demand for Outotec's services increased and both the order intake and sales of the service business grew. In order to be prepared for the continuing slowness of the market, Outotec launched a program to reduce its annual operational costs by up to EUR 50 million by the end of 2014.

Our customers' investment decisions are increasingly driven by environmental and energy-efficiency factors, and the

long-term demand drivers are expected to remain intact.

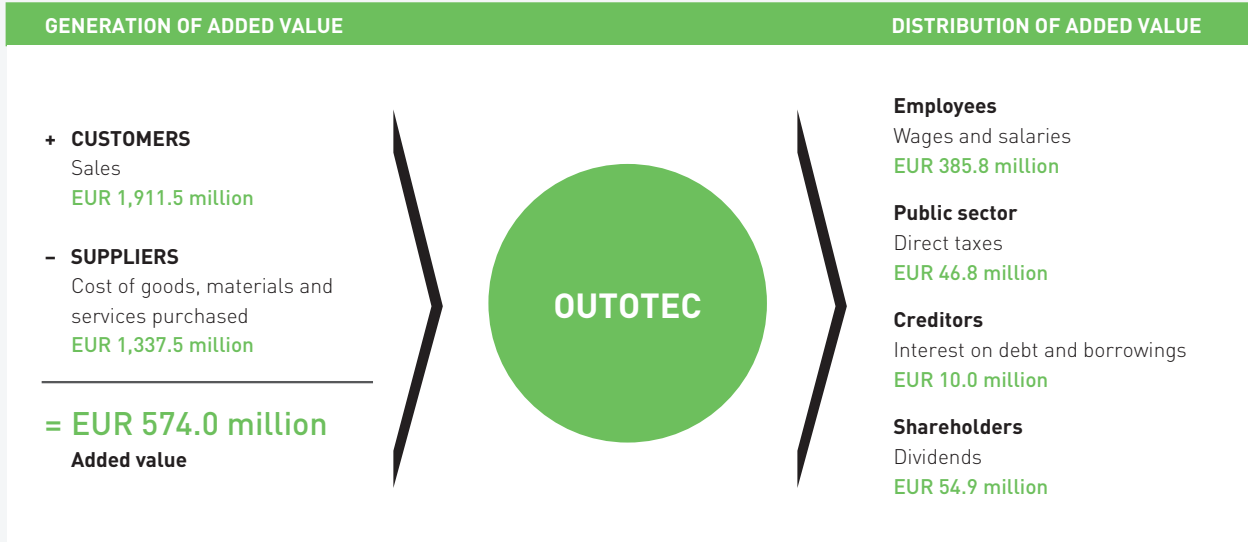
At the end of 2013, Outotec's market capitalization was EUR 1,394 million.

Read our long-term financial targets on page 34.

### Share price development

The value of Outotec's shares decreased 39 percent on the NASDAQ OMX Helsinki in 2013, and the closing price at the end of the year was EUR 7.61 (Dec 31, 2012:

## ADDED VALUE FOR STAKEHOLDERS



EUR 42.37; the share was split in April and a comparable price is 10.59). At the same time, the NASDAQ OMX Helsinki portfolio index, OMX Helsinki CAP, rose by approximately 22 percent.

### Dividends

Outotec's target as defined in the company's dividend policy is to distribute as dividends at least 40 percent of the annual net income of the preceding finan-

cial year per share. Outotec paid EUR 1.20 per share dividend to shareholders, totaling EUR 54.9 million in 2013.

### Donations

Outotec's donations in 2013 amounted to EUR 100,000. The biggest individual donation was made to Baltic Sea Action Group (EUR 52,000). Outotec has also made two donations to help areas suffering from natural disasters: earthquake

relief in Sichuan, China (EUR 15,000), and typhoon relief in the Philippines (EUR 17,000).

Read more about our performance in Financial Statements 2013 at [www.outotec.com/investors](http://www.outotec.com/investors).

## THE RIGHT TAXES IN THE RIGHT PLACES

As a globally operating company, Outotec faces a variety of tax laws and regulations. It is not always an easy environment to navigate, but the principle is clear: we want to pay the right taxes in the right places. We want to be transparent and non-discriminatory in our tax practices. Our Board of Directors has decided on an approach in which no aggressive tax planning is done nor will Outotec have legal entities in the so-called tax havens unless a justified business reason arises. Currently there are none.

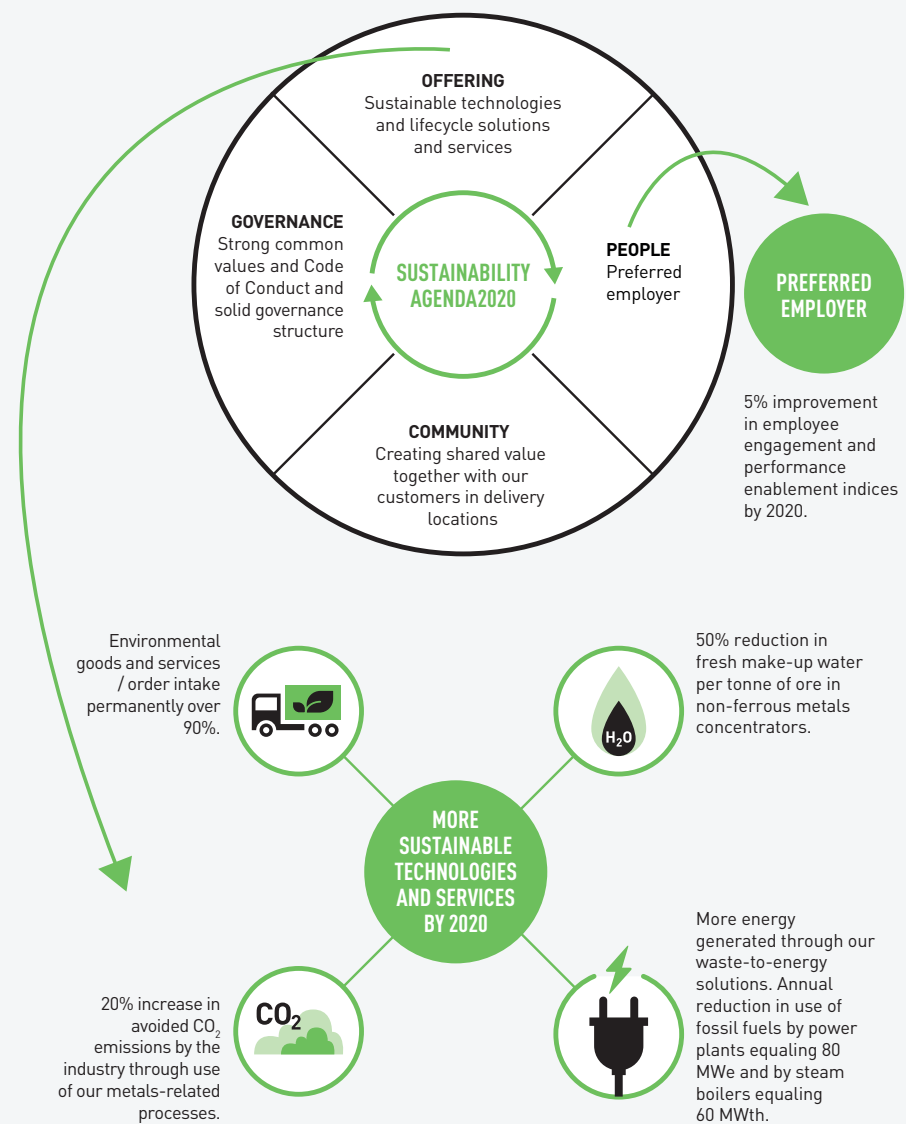
In 2013, Outotec paid a total of EUR 63.1 million in taxes. Our effective tax rate was 30.4%. It tends to vary somewhat depending on the product mix and geographical distribution of our sales. On this page you can see a table describing tax rates in the countries where we operate.

Some stakeholders request total tax transparency on the basis of country. Outotec often delivers big projects, and there may be only one project ongoing in a single country. Revealing country-specific financial information could breach our commitments concerning access to project-specific confidential information. Also, the destination of our sales typically do not correspond with the places in which the work and activities connected to the sales are performed, where value is created and where the income must be reported and paid, based on globally applied tax principles.

In 2013, Finnwatch, a Finnish non-governmental organization, made a study of the taxation of international companies. Finnwatch monitors Finnish companies in developing countries and economies in transition, and is supported by some trade unions as well as environmental and development NGOs. They are interested in the consequences of Finnish companies' operations on human and labor rights, the environment and developmental and social consequences. The study specifically looked at two companies, Outotec being one. We also met with the representatives of Finnwatch to discuss our tax practices. The study report concludes that they found no evidence of aggressive tax planning nor use of tax havens at Outotec. However, the criticism was made that it was difficult to get information about country-specific taxation, since Outotec does not publish financial information on the basis of country. Authorities in some of the countries that were contacted were not able to give the required information either (Zambia, Ghana and South Africa were given as examples). As explained above, we do not believe that country-specific tax information would always give a comprehensive picture of the fairness of the tax distribution.

Country	Effective income tax, %
Australia	30.0
Brazil	33.8
Bulgaria	10.0
Canada	25.8
Chile	35.0
China	25.0
Finland	24.5
Germany	29.2
Ghana	25.0
India	32.4
Indonesia	25.0
Kazakhstan	20.0
Mexico	30.0
Mongolia	10.0
Namibia	33.0
Netherlands	25.0
Norway	28.0
Peru	30.0
Poland	19.0
Russia	20.0
Saudi Arabia	20.0
South Africa	28.0
Sweden	22.0
United Kingdom	23.0
United States	37.9
Zambia	35.0

# SUSTAINABILITY VISION AND TARGETS



Our largest impact on sustainability is created downstream, in our customers' operations. This impact is where we can make a difference with our innovative technologies and solutions. This is also how we set our long-term targets and measure the success of our sustainability work over time.

→ Based on our materiality assessment we have defined the areas where we want to reach the status of a forerunner or where we want to meet our stakeholders' anticipation level. This forms our Sustainability Agenda, with defined goals. This agenda comprises four areas: our offering, our people, our community engagement and our governance. Our vision is to take major steps forward in all four areas.

**Our Agenda 2020**

As a technology company, our technologies and R&D take a central role, and represent the key means of reducing the environmental impact of our customers' operations. For this reason, our technologies are also at the core of our sustainability work. We promise our customers that we will provide them with even more sustainable technologies and services by 2020. They can thus reduce their footprint through our positive contribution.

Technology is not born - it must be created. We are dependent on our people, our experts thinking ahead. We want to make Outotec the most desired place to work in our industry and keep great talent with us. This means, for example, that we need to offer opportunities for continuous professional growth via job and task rotation. The key driver for many experts today is the feeling of fulfillment. Therefore we want to strive for a working culture which empowers our people. All employees must have a sense of engagement and enablement.

Our own operations take place mainly in offices around the world. Interacting with local communities is usually relatively uncomplicated. The objectives in our community agenda are two-fold: first, we want to engage in strategic partnerships

with NGOs or donate to charitable projects that aim to improve sustainable development and/or quality of life. So far we have had multiannual co-operation with the Baltic Sea Action Group, where we can also be an active contributor through our technologies. Secondly, we want to support local projects in connection with major solution deliveries to our customers. These community projects are based on the needs of the local community in the project delivery location in question, and they are defined in a dialogue with the local community. We aim at completing these community projects jointly with our customers, with joint financing. The projects are also selected taking Outotec's know-how into account in order for us to integrate voluntary work into the projects - both during and outside working hours. All community projects must bring measurable long-term benefits to the local community.

Governance is often considered to be a matter of mere compliance. However, we believe that it makes a big difference how sustainability is managed and governed. We have a clear hierarchy of ethics guidance and decision-making in sustainability issues. Everything we do is first and foremost based on our mission and values. Our everyday work is guided by our Code of Conduct and detailed policies. We are currently developing our governance to make it a more interactive process.

**Read more about our governance on page 40.**

**What gets measured, gets managed**

To drive our sustainability work, we have defined clear and transparent targets for

ourselves, both long-term and annual targets based on our short-term priorities. A major improvement in target-setting took place in 2013, when we for the first time set a long-term sustainability target. We started with the area, in which we can have the largest impact: our technologies. We promise our stakeholders to develop even more sustainable technologies and services by 2020 as described in the graph on page 32. The base line year for these long-term technology-related targets is 2012.

The second long-term target was formulated at the end of 2013 regarding our People Agenda, which is the other area considered most relevant to our business. As an enabling and engaging culture is a key differentiating factor for Outotec, we aim at five percent improvement in employee engagement and performance enablement indices by 2020 in employee surveys compared to the 2013 results. In 2013, Outotec's employee engagement index was 69 percent and performance enablement index 67 percent.

We consider engagement to be a combination of perceptions that have a positive impact on behavior. These perceptions include satisfaction, commitment, pride, loyalty, a strong sense of personal responsibility, and a willingness to be an advocate for the organization. Another key element is performance enablement, which focuses on customer service and quality, involvement, training and teamwork. It predicts customer satisfaction and business performance (e.g. sales growth, market share, productivity, and profitability). These elements are measured at least every second year in our employee survey.



LONG-TERM TARGETS FOR 2020

● Achieved
 ● Partially achieved
 ○ Not achieved

Long-term target		Performance in 2013		GRI indicator
Economic and governance	<b>Financial performance:</b> To grow faster than the market resulting in compound average annual sales growth of 10–20%. <ul style="list-style-type: none"> <li>To grow the sales of services to an annual level of EUR 1 billion by the end of 2017.</li> <li>Annual operating profit margin from business operations to be (on average) 10% over the cycle.</li> <li>To maintain a strong balance sheet to provide operational flexibility and enable acquisitions.</li> </ul>	●	<ul style="list-style-type: none"> <li>Sales decreased by 8% from 2012.</li> <li>Service sales grew by 6% to EUR 505.9 million.</li> <li>Operating profit margin was 8.5%.</li> </ul>	EC1
	<b>EGS % of order intake:</b> the percentage of EGS in order intake over 90%.	●	The share of EGS in 2013 order intake was 87%, which is on track but not an improvement from 2012's 89% .	EN6
Environmental	<b>CO<sub>2</sub> emissions avoided:</b> over 5% annual increase in the amount of avoided CO <sub>2</sub> emissions through the use of Outotec's metals-related technologies and solutions.	●	5.4 million tonnes of CO <sub>2</sub> emissions avoided in 2013, an increase of 17% from 2012.	EN18
	<b>Waste-to-energy solutions:</b> to generate more energy through our waste-to-energy solutions. The targeted annual reduction in the use of fossil fuels is comparable (on average) to 80 MWe power plants and 60 MWth steam boilers.	●	Once the waste-to-energy projects in Switzerland and Turkey will be completed in 2014 and 2015 the annual reduction will be 28.5 MWe and 4.5 MWth.	EN18
	<b>Water treatment:</b> 50% reduction in fresh make-up water per tonne of ore in non-ferrous metals concentrators. This is a clear task for technology development and innovation.	●	Internal and external development projects to improve the total water management have been started. We recruited new experts in this area.	EN26
Social	<b>Employee engagement (NEW as of 2014):</b> 5% improvement in employee engagement and performance enablement indices by 2020 compared with 2013.		Engagement index 69% and performance enablement index 67%.	4.16

ANNUAL TARGETS FOR 2014

● Achieved
 ● Partially achieved
 ○ Not achieved

Annual target for 2013		Performance in 2013		Annual target for 2014	GRI indicator
Economic and governance	<b>Code of Conduct implementation:</b> e-learning solution created and 80% of personnel trained.	●	The Code of Conduct e-learning was assigned to 3,441 people. By the end of 2013, 40% of those (1,332 persons) had completed the course. The e-learning platform in Germany was delayed and German employees could not complete the course in 2013.	80% of personnel trained. All unable to take the e-learning should receive class-room training instead.	S03
	<b>Suppliers:</b> 300 major suppliers have committed to new Supplier Policy.	●	786 suppliers (approx. 90%) of major suppliers had been committed to Outotec's Supplier Policy by the end of 2013.	95% of major suppliers committed to Outotec's Supplier Policy.	EC6, HR2
	<b>Improve sustainability governance model:</b> strengthen sustainability focus on all levels and improve integration throughout the organization.	●	Some of the company's sustainability targets are included in the personal incentives of the Executive Board members responsible for corporate responsibility and technology.	Done. Continues as normal business.	4.5

Annual target for 2013		Performance in 2013		Annual target for 2014	GRI indicator
Economic and governance	<b>Sustainable acquisitions:</b> continue growth through sustainable acquisitions based on M&A target assessment criteria. More than 50% of our acquisitions must increase sustainability offering or improve sustainability agenda.	●	Outotec made one acquisition, Scanalyse. With Scanalyse process equipment condition monitoring equipment lifetime can be lengthened and the use of spare parts optimized, which increases the sustainability of a plant.	Done. Continues as normal business practice.	EC1
	<b>Management systems:</b> EHS module implementation continues to cover all locations in 2013. ISO 14001 and OHSAS 18001 certification for 18 new locations.	●	In October 2013 we received One Outotec multi-site matrix certification including ISO 9001, ISO 14001 (21 locations), BS: OHSAS 18001 (22 locations) and Safety Construction Certificate (SCC) for most of our global locations.	Done. We now have a globally harmonized QEHS management system and it is sustained as normal business practice.	EN6
Environmental	<b>Reduction in CO<sub>2</sub> emissions in traveling:</b> 5% decrease in tonnes of CO <sub>2</sub> flight emissions per million EUR sales annually through increases in virtual ways of working.	○	6% increase in tonnes of CO <sub>2</sub> flight emissions per million EUR sales even though actual flight emissions were reduced. Flight emissions decreased by 3% year on year; however, sales decreased by 8%.	Continues.	EN18
				<b>Environment (NEW):</b> waste sorting best practices to be extended to 20 locations.	EN22
Social	<b>Further develop the employer image:</b> localized employee value proposition in five key countries. 20% increase in number of followers and localized content in social media.	●	Employee value proposition workshops were held in selected locations. The number of followers increased in all channels, with a 150 % increase in LinkedIn. Localized content also increased.	<b>Building reach and engagement in social media:</b> joining new local social media channels in China.	4.16
	<b>Performance development dialogues (PDD):</b> all employees have had PDDs according to defined policy.	●	Target was achieved.	Continues as normal business practice.	LA12
	<b>Improving life balance and sustainable leadership:</b> global guidelines for remote working and flexible working time to be published. Sustainable leadership implemented through performance evaluation concept and training.	●	Global guidelines not yet published, but they are available in Finland, Australia and North America. Performance evaluation concept will be piloted in 2014. Several leadership training programs were implemented.	Guidelines will be published in 2014. Will then continue as normal business practice.	EN18, LA11
	<b>Technology and Plant Safety Management (TPSM):</b> TPSM is included in all major new technology and plant delivery contracts globally	●	TPSM was included in 70% of major new orders.	Continues.	PR1
				<b>Health and safety (NEW):</b> Lost time injuries and serious incidents will be investigated, and 80% of the agreed actions will be executed within two months.	LA7



## OUR WAY OF WORKING

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# OUR WAY OF WORKING

Delivering sustainable products and solutions for customers is Outotec's most important task. That's why competent and motivated people are essential to our success.



# MATERIALITY ANALYSIS

WHAT MATTERS MOST MUST BE DEFINED

Outotec’s management discussed, analyzed and defined the most important sustainability aspects for the company and the ambition levels related to them in a workshop facilitated by an external partner.

→ In the materiality assessment in 2011, our CEO, heads of global functions and representatives of each business area discussed and analyzed the aspects that are most material to Outotec’s business. Sustainability trends and stakeholder feedback were also taken into account when defining the most important sustainability issues and, subsequently, the chosen GRI indicators. The ambition level for each material issue was defined and a dedicated person responsible for developing performance was nominated. Relevant key performance indicators were chosen based on the workshop results.

The materiality assessment revealed that development of the company’s technology solutions is clearly the most important sustainability factor for Outotec. The significance of providing eco-efficient

solutions is underlined by comparing the amount of CO<sub>2</sub> emissions annually avoided through the use of Outotec’s goods and services, 5,400,000 tonnes CO<sub>2</sub>-e (2012: 4,600,000), and those deriving from Outotec’s own operations, 30,423 tonnes CO<sub>2</sub>-e (2012: 31,755) and supply chain, 623,000 tonnes CO<sub>2</sub>-e.

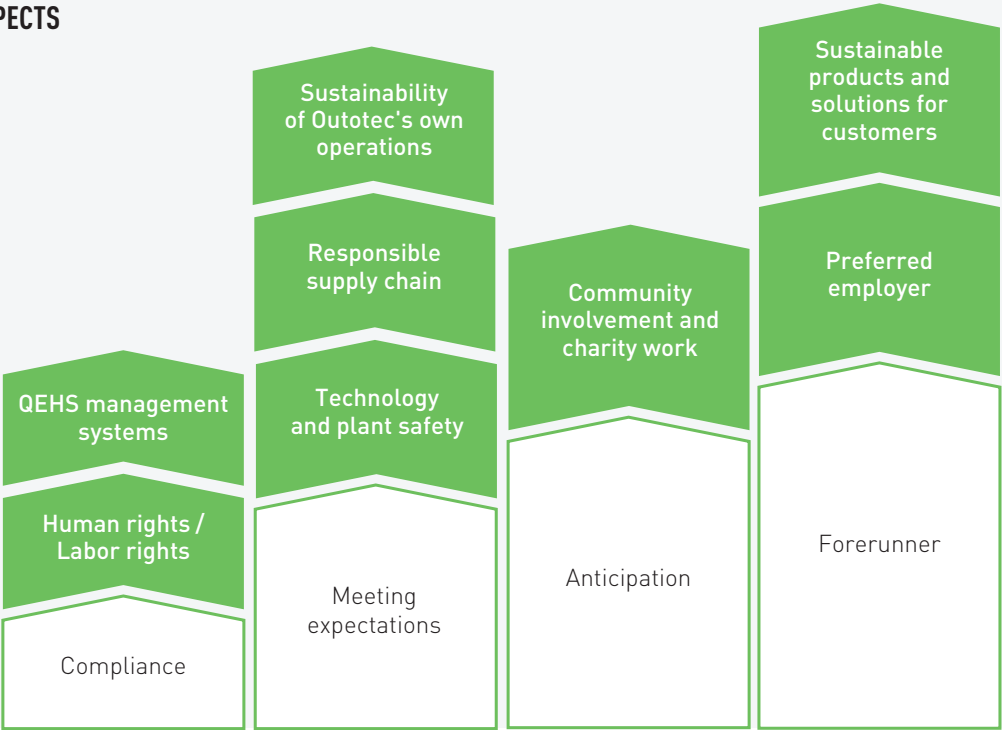
Becoming a preferred employer was regarded as highly important for Outotec’s future success. This materiality aspect is linked to economic performance, market presence, indirect economic impacts, labor/management relations, health, safety and training aspects. Community involvement and charity work including employee engagement were identified as areas for further development.

Improving the sustainability of Outotec’s own operations, supply chain management, and technology and plant safety management were also identified as important targets to meet the expectations of customers, employees and other stakeholders.

Continuous development of Outotec’s quality, environment, health and safety (QEHS) management systems ranks high on the company’s sustainability agenda. Read more about our QEHS performance on page 54.

Corresponding to these concerns and ambition levels, the appropriate GRI indicators were chosen and targets for improvement determined. In 2014, Outotec plans to conduct a new materiality analysis with our stakeholders involved in the process.

## OUTOTEC’S MOST MATERIAL ASPECTS



# DEVELOPING SOLID GOVERNANCE

SUSTAINABILITY  
IS INCORPORATED  
INTO ALL ASPECTS OF  
OUR BUSINESS

We have been developing a solid governance structure to ensure that our operations are guided by good governance, effective risk management, adequate controls and the internal audit principles supporting them. In this report we describe our approach to economic, environmental and social responsibility as well as the governance and management of sustainability at Outotec. The company's corporate governance is discussed in more detail in our Corporate Governance Statement at [www.outotec.com/cg](http://www.outotec.com/cg).

## Economic responsibility

Outotec is committed to increasing shareholder value. The company delivers on this commitment by developing and maintaining competitive and profitable operations based on ethical business practices. Outotec constantly applies principles of good corporate governance and transparent accounting.

Outotec's operations have economic impact upon the local, national, and global communities in which the company operates. We contribute to community well-being by paying taxes in those countries where we operate and through direct and indirect employment, as well as other forms of community involvement.

The world's industrial production is increasingly concentrated in Asia to serve the area's rapidly growing large local markets and supply world markets as a manufacturing powerhouse. Thus,

the majority of new metals production capacity is being constructed in the developing markets. Outotec is strengthening its presence and local operations in these markets, and aims to support sustainable development within them.

An essential part of Outotec's growth strategy is to complement the company's portfolio of sustainable products and services through acquisitions.

Read our long-term financial targets on page 34 and added value for stakeholders on page 30.

## Environmental responsibility

Although improving the sustainability of Outotec's operations is important for the company, the development and delivery of energy-efficient and environmental-ly sound solutions for our customers has

far more significance for Outotec.

The major impact of Outotec on the environment is indirect and unfolds through our customers. Our primary sustainability challenge is therefore to help minimize any negative effects our customers' operations may have. This includes assisting them with reducing their impact on the surrounding environment and aiding them in the reuse and recycling of resources involved in their processes.

In its own operations, Outotec is committed to adhering to the principles of sustainable development, pollution prevention and sound environmental management. The management's commitment to continuous improvement of our environmental performance is visible in our target setting and results. The impact on the environment is monitored by identifying and evaluating the environmental aspects of offices, research

centers, manufacturing workshops, construction sites and industrial plants. The aspects related to significant impacts are considered when we set our environmental objectives and annual targets. When selecting new office premises, the environmental criteria are taken into account. For example, our new facilities in Espoo, Finland, fulfill LEED® Gold requirements (LEED = Leadership in Energy and Environmental Design).

Our waste management system caters for the collection, sorting, storage and disposal of waste in our premises. We try to optimize materials usage to avoid waste. Everyone working for Outotec is requested to separate waste for sorted collection. Where hazardous waste (e.g. radioactive, flammable, explosive, toxic, corrosive, bio-hazardous) or other substances are being considered for disposal, the local legal requirements (or customer's requirements at construction sites) must be considered together with the use of specialized contractors for the disposal.

We intend to achieve our targets with minimum input of energy and materials and therefore the consumption of electricity, heating and water are recorded annually. At the research centers, electric power and natural gas consumption for test purposes is recorded monthly.

In 2013 Outotec appointed a manager of Global Environment and Sustainability to coordinate this work.

In line with our Donation Policy, we support initiatives that enhance sustainable development. In recent years, we have actively participated in the Baltic Sea Action Group's program for rehabilitation of the Baltic Sea.

Read about our ecological footprint on page 68 and targets on page 34.

## Social responsibility

### Society

Outotec contributes to community well-being by paying taxes, providing jobs directly and indirectly, and cooper-

ating with educational institutions. We also participate in local initiatives to increase welfare in the countries where we operate.

According to our Donations Policy we can engage in two types of activities. Firstly, we can give donations to global charitable projects that aim to improve sustainable development and/or quality of life. Outotec does not give donations to individuals, political parties or pressure groups, religious organizations or any organizations showing or encouraging any type of prejudice (for example racial, sexual or religious).

Secondly, we have a Community Agenda, which is aimed at supporting local projects in connection with major deliveries to our customers. These community projects are based on the needs of the local community in a project delivery location, and they are defined in a dialogue with the local community. We aim at completing the community projects jointly with our customer, with joint financing. The projects are also selected taking Outotec's own know-how into account and by utilizing it to the furthest possible extent.

Furthermore, we want to integrate voluntary work into community projects - both during and off working hours. All Community Agenda projects must bring measurable benefits to the local community.

### Human rights and labor practices

Outotec has signed the United Nations Global Compact initiative and committed to its principles of human rights, environment, labor, and anti-corruption. By joining the Global Compact initiative Outotec has expressed its intent to further advance sustainability and social responsibility in its business practices.

We do not provide goods or services that we know will be used to carry out human rights abuses and we support the realization of basic human rights globally. We will not use any form of compulsory, forced or child labor and we expect the same from our agents, suppliers,

contractors and other business partners. We work towards effective abolition of the use of compulsory, forced or child labor globally and respect the rights of indigenous people. There were no incidents reported in 2013 regarding human rights abuses.

### Mutual trust and respect at the workplace

We value diversity and varied cultures at the workplace, and follow the principle of equal opportunities. Employees are selected and treated on the basis of their abilities and merits. Every individual is equally entitled to enjoy fair treatment, respect and common courtesy without discrimination and regardless of his/her ethnic origin, nationality, religion, political views, sex, sexual orientation or age. We do not tolerate any form of harassment or behavior that can be considered offensive, intimidating, discriminating or insulting.

We are committed to a working environment with mutual trust and respect, and where everyone feels responsible for Outotec's performance and good reputation. Various communication, influencing and discussion channels are in use at Outotec, including a collaborative intranet site. Outotec respects the freedom of association and the right to collective bargaining.

Outotec's South African subsidiary has a 'Level 5 contributor' rating in Broad-Based Black Economic Empowerment (BBBEE), which means that Outotec customers can recognize 80 percent of their spend on Outotec products as BBBEE Preferential Procurement. The program has been initiated by the South African government to distribute wealth across the society.

### Supply chain management

Global supply chain management has been defined as a key strategic pillar for Outotec, and therefore supply is a strategic function and a highly prioritized development area. This function manages the supplier base through sourcing category management and leads and de-



OUR PEOPLE  
CAN RAISE CONCERNS  
THROUGH A NEW  
COMPLIANCE  
HELPLINE

velops sourcing activities for customer deliveries, executed by locally-based purchasing. Outotec's supply chain management covers both Outotec's own operations and those of our suppliers'.

Outotec has two policies serving as the basis for collaboration with suppliers. Our Supply Policy defines how supply activities in the company shall be steered, how supply quality shall be built, and guidelines for all people involved in supply-related activities. The Supplier Policy is publicly available and all Outotec suppliers are expected to comply with it. This policy defines the high-level requirements for Outotec suppliers and sets principles on ethical conduct, compliance with laws and regulations, the environment, health and safety, labor, intellectual property and improper benefits.

In Outotec's customer projects, local subcontractors are also required to be trained specialists. Therefore the risk profile regarding human rights violations is relatively low. We will continue to develop our supply chain management and supplier selection procedures further.

**Compliance with regulations and laws**

Outotec endorses ethical business practices and complies with national and international laws and regulations. Outotec

has a Product Compliance management process to ensure that the plants and products engineered and delivered by the company worldwide are reliable and meet all applied safety standards during all phases of the product life cycle.

In 2013 Outotec appointed a Chief Compliance Officer and introduced a compliance helpline for employees to help raise any concerns regarding ethical or compliant behavior. The helpline is also available on our website for all stakeholders. All compliance concerns raised at Outotec are reviewed in accordance with an established process. The Chief Compliance Officer reports, in matters related to compliance, directly to the board's audit and risk committee.

In 2013, Outotec did not encounter any competition-law or corruption-related suspicions. Outotec did not have to pay any fines and was not exposed to any non-monetary sanctions for non-compliance with these laws and regulations or any environmental laws. Nor did any issues emerge concerning the rights of indigenous people.

**Internal control and auditing**

Internal control and audits are a fundamental part of Outotec's corporate governance and management systems. Internal audit monitors that the company's operations are efficiently managed and profitable, risk management is at sufficient level and the information provided for external and internal purposes is accurate. The internal audit function reports administratively to the CFO and, in matters related to the internal audit, reports directly to the Board's audit and risk committee and the CEO.

Outotec's internal and external audit processes take into account eventual corruption suspicions and fraudulent acts that may occur. Legal seminars and virtual trainings are held on a regular basis to train employees in anti-corruption policies and procedures for the

purpose of preventing misconduct and crimes. In 2013, specific audits were conducted in the Supply function and its processes, vendor and customer master data maintenance as well as in the integration of the acquired business, Energy Products of Idaho.

**Monetary incentives related to sustainability**

Employees working with sustainability and environmental issues have personal targets set in their annual bonus plans. This mainly pertains to environmental and sustainability managers. Inventors working with new, patentable solutions also receive monetary rewards for their inventions. Furthermore, Outotec rewards all employees for making proposals that improve the sustainability of the company's internal processes.

The majority of our technology-development projects focus on raw material and energy-efficiency improvements and thus emission reductions. Water-efficiency is also often a driver for our research, and customers expect Outotec to develop new technologies that result in energy and cost savings.

**Board work**

The Board of Directors of Outotec consists of seven members, six of whom are independent. Eija Ailasmaa, who is the Vice Chairman of the board of Solidium Oy (Outotec's largest shareholder), is defined as dependent of the owner and independent of the company. Two of the board members are female.

The duties, composition and committees of the board as well as the board work in 2013 are described in our Corporate Governance Statement. The Board of Directors assesses its performance annually. In 2013, the Board's special focus was on Outotec's long-term strategy, organizational structure and scalability as well as addressing the industry challenges of global macroeconomic environment.

The remuneration of Board members is described in our Corporate Governance Statement on page 11. There is no linkage between the compensation for board members and Outotec's social or environmental performance.

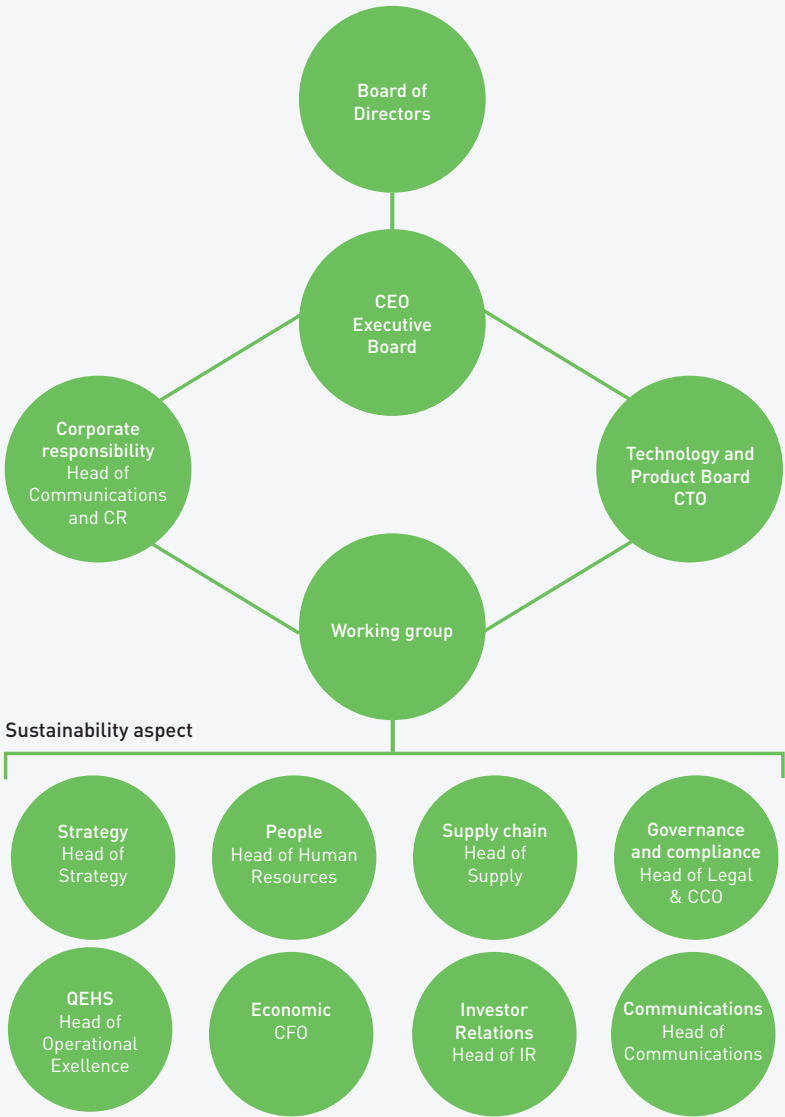
**Sustainability governance and management**

Governance is often considered to be a matter of mere compliance. However, we believe that it makes a big difference to how sustainability is managed and governed. We have a clear hierarchy of ethics guidance and decision-making in sustainability issues. Everything we do is first and foremost based on our mission and values. Our everyday work is guided by our Code of Conduct and the detailed company policies and guidelines defined in the Outotec Management System. We are currently developing our governance into a more interactive process.

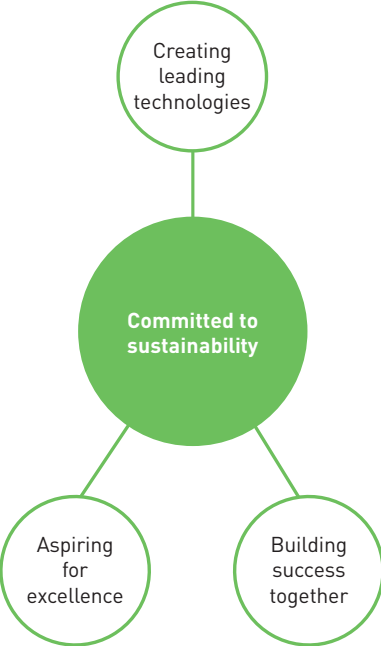
At Outotec, the Executive Board is responsible for our sustainability agenda. The Executive Board approves the sustainability strategy, targets and reporting. Our Head of Communications & Corporate Responsibility, a member of the Executive Board, has overall responsibility for coordination and development. The responsibility for the sustainability of our products and services lies with the Technology and Product Board chaired by the CEO. Decisions made, actions, and commitments are reported to the Board of Directors. Sustainability is integrated into all relevant organizational functions, such as human resources, supply, legal, health and safety etc. In addition, there is a sustainability working group that meets several times a year.

Read more on our governance at [www.outotec.com/cg](http://www.outotec.com/cg).

**DECISION MAKING IN SUSTAINABILITY ISSUES**



# VALUES AND CODE OF CONDUCT



→ At the core of Outotec's values is our commitment to sustainability. For us, sustainability means a good balance between social, economic and environmental responsibility. We want to behave in a sustainable manner in all our relationships, whether internal or external. As we are growing larger and more multicultural as an organization, we must ensure that we not only rely on manuals and policies, but on a strong ethical culture built on our common values. We want to encourage everyone at Outotec to consider their actions through one simple question: "Is this sustainable?"

In addition to our core value of sustainability, we have three value statements:

- 1) Creating Leading Technologies.** This means creating technology breakthroughs and leading the way, seeing change and complexity as opportunity, leveraging our expertise, encouraging innovation and rethinking as well as leading in sustainable technology.
- 2) Building Success Together.** This means pursuing our mission, building long-term sustainable customer and supplier relationships, trust and respect, celebrating success together, taking care of life balance, leveraging diversity, and acting with courage.

**3) Aspiring for Excellence.** This means continuous improvement every day, setting the bar high, challenging the status quo, growing and renewing ourselves as individuals, staying humble and adaptive to learn, finding out what good looks like and flourishing in what we do.

Our Executive Board members held local workshops where these values were explained and a local dialogue was launched. Almost all Outotec locations were covered in 2012 and 2013. The first deployment phase concentrated on our mission and core value. The second phase in 2013 concentrated on the other three values.

Building on our values, we adopted in 2012 a comprehensive Code of Conduct which gives our people ethical guidance on many issues. This Code of Conduct has been approved by the Board of Directors. The Code of Conduct was translated into seven languages in 2013 and communicated to the employees. Approximately 40 percent of employees globally participated in virtual training through e-learning. We were aiming at a higher coverage, but had some technical problems in launching the virtual learning, delaying the process. The trainings will continue in 2014.

In 2013, Outotec organized also virtual training for the employees on anti-corruption, competition law and intellectual property rights. Approximately 50 percent of the employees completed these trainings (anti-corruption 2,511; competition law 2,424 and intellectual property rights 2,376 employees).

Employees are encouraged to contact their supervisors or Chief Compliance Officer if they suspect misconduct or non-compliance. A helpline was also established in 2013 for employees and there is a form on the company's public website where other stakeholders can also raise concerns. All compliance concerns raised at Outotec are reviewed in accordance with an established process.

In 2013, Outotec's Chief Compliance Officer started blogging to enable ethical dialogue within the company. In many of the areas covered by the Code of Conduct, we have separate, more detailed policies in place.

**Read more about the targets related to our Code of Conduct on page 34.**

**Read our Code of Conduct at [www.outotec.com/sustainability](http://www.outotec.com/sustainability).**





# COMPLIANCE ACROSS THE BOARD

ETHICAL  
WORKING  
PRACTICES ARE  
OF INCREASING  
IMPORTANCE



“I could never have imagined how well people would respond to the compliance initiatives and how active the participation would be.”

**Sami Lindström**  
Chief Compliance Officer

Compliance issues have never been more important than today, which is why several key initiatives are pointing the way forward for Outotec employees. Sami Lindström, Chief Compliance Officer, and Nina Kiviranta, General Counsel, took time out to look at the progress made so far.

→ **Why have compliance issues and ethical working practices become of increasing importance to Outotec in recent years?**

**Sami:** In one sense, this reflects pressure from the investor community. Nowadays most investors have come to understand that a company that works ethically represents a good long-term investment. Sustainable business practices from an organization that can be relied on means better return as time goes on.

**Nina:** It's true: no stock-listed company can exist in this climate without programs in place covering compliance and ethical practices. It's pretty much a must for major companies these days.

**Sami:** And then of course if you look at Outotec's recent growth and the flow of new people, a more pressing need arrived to have shared processes. We needed to create a shared understanding of the demands we make of our employees and the standards we uphold. This is what we've tried to achieve.

**Nina:** If you think about it, here in the corporate office at least we are rather westernized people. We think that standards that are perhaps clear to us are also clear to everybody else, regardless of where they are in the world. But I think that the most challenging aspect of this work is the fact that we work in some countries where these types of compliance issues are not so black and white to everyone.

Countries, for example where the way of doing business can be a little more relaxed: it's just how things are done there. Our programs address this challenge very well now: the associated risks are countered with firm rules.

**Introducing the code of conduct was a major update. How did people respond internally?**

**Sami:** It's been incredibly positive. I could never have imagined how well people would respond and how active the participation would be.

**In the training sessions I lead, I go through as many as 25 example cases. This might be the best pedagogical way of making people aware of these challenges and problems. Most of them relate to actual examples from the past, albeit with modified names for the places and people.**

**Nina:** People relate best to those things that they can imagine in real life.

**Sami:** They think of themselves actually being there, in those situations.

**Nina:** And then think: that could happen to me.

**Sami:** Exactly, so they really approach these real cases as exercises in a personal way, discovering how the code could affect certain situations in their own work. And in doing those tasks, it's been great to see how people were participating – as well as challenging and questioning things – and listening to the code's mes-

sages with real enthusiasm. It exceeded all my expectations. We also deployed e-learning modules on the code of conduct, as well as on anti-corruption and competition, and the participation rates have already been excellent.

**Have you seen any other signs indicating that compliance issues are really taking root at Outotec?**

**Sami:** Well one very good indication would be our new compliance helpline. It was introduced in the summer on our intranet and public website pages, and it's basically a way for anyone to send us a message, either asking a question or reporting any suspicions they have that our policies are being broken somehow.

It turned out to be a hugely valuable idea, as it's been taken into very active use by employees. I receive several messages a week, and they are mostly questions to do with correct behavior, for example on topics like corporate gifts. Now you might say these are minor issues, and they often are, but the great thing is to see that people know that the code is out there and that they can depend on it to guide them. To me this really tells us a lot about the widespread enthusiasm for compliance and discussion of ethical issues.

**Nina:** The way this is all communicated is very important too. I mean as an employee you might be afraid of things you don't fully understand, that there is a legal

code and some kind of helpline. But as Sami explains to the people he trains, what it really means is that you're secure in your own work.

The code is there to protect you in the sense that you can put your concerns forward or ask questions about the policies. It doesn't have to be anything all that serious.

**What are the next steps in terms of ethical practices as the organization moves forward?**

**Sami:** Well, now that the code is implemented and we have resources in place like the trainings, the e-learning, and printed copies for all employees, we move into a phase in which we need to keep these issues active in people's minds, and make sure the message is widely understood as we go forward.

**Nina:** Initiatives like your compliance blog...

**Sami:** Yes, on the intranet. I've been writing an article on a monthly basis covering some hot topics, which could be of interest to the majority of our employees and give a compliance standpoint. It's called Compliance Binoculars. So far I've covered jurisdictional issues around corruption, the general integrity of the company and corporate unity and its related challenges. People have engaged with it quite well. So yes, initiatives like this, making sure that issues like those raised in the code are always present in our thinking.

# PEOPLE

WE WANT  
TO CREATE A CULTURE  
OF ENABLEMENT AND  
ENGAGEMENT

Our success depends on competent and motivated people, and our business is founded on their know-how in the technologies that we provide. We work hard towards achieving an enabling and engaging culture at our workplaces worldwide.

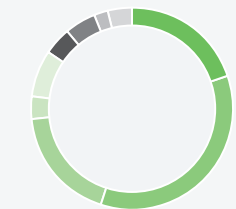
→ At the end of 2013, Outotec had 4,855 employees. The number increased by 50 from the previous year due to an acquisition and growth of the service business. Temporary personnel accounted for eight percent of this total. In addition, Outotec had 495 full-time equivalent contracted professionals working in project execution and services. Outotec has employees on all continents; nearly half of them are based in Europe.

The past year was challenging for Outotec people as the uncertainty in the world economy weakened our order intake, sales and profitability. Outotec launched an efficiency improvement program, which also resulted in personnel reduction. A total of 260 jobs were terminated mainly in Chile, Finland and Australia through redundancies, retirements and discontinuing of fixed-term contracts. In addition, employees were temporarily laid off at the Turula works in Finland. At the same time, we recruited over 300 new employees for the service business and project implementation.

Outotec offered monetary support, depending on the length of the employment, as well as training programs and coaching to support re-employment and entrepreneurship for those persons made redundant.

In addition to cost-saving measures initiated in October 2013, the restructuring of our businesses and global functions impacted upon our people.

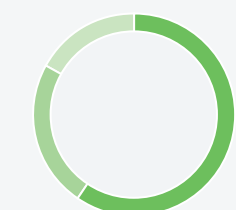
## PERSONNEL BY AGE RANGE



- <25, 29%
- 26-30, 18%
- 31-35, 12%
- 36-40, 15%
- 41-45, 11%
- 46-50, 8%
- 51-55, 8%
- 56-60, 8%
- >60, 21%

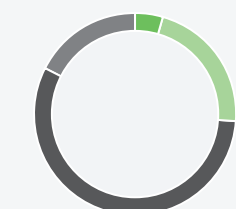
2013: n = 4,851 (coverage: 99.9%)

## PERSONNEL BY REGION



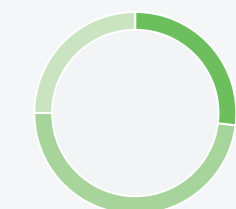
- EMEA (including CIS) 59.6%
- Americas 23.6%
- APAC 16.9%

## EMPLOYEES BY CATEGORY



- Senior management 4.7%
- Middle management 21.7%
- Specialists 56.4%
- Blue-collar workers 17.3%

## EDUCATIONAL BACKGROUND



- Primary and lower secondary level 27%
- Upper secondary level and lower university degree 48%
- Higher university degree and postgraduate 25%

2013: n = 2,769 (coverage: 57%)

Employees	2013	2012	2011	GRI indicator
Number of employees at year end	4,855	4,805	3,883	LA1
Number of employees on average	4,927	4,456	3,516	LA1
Temporary, % of the total number	8	9	9	LA1
Number of full-time equivalent contracted professionals	495	660	620	LA1
Share of women in employees, %*	19.6	19.2	20	LA2
Share of women in management, %**	12.1	15.7	14	LA2, LA13
Wages and salaries paid, EUR million	385.8	362.6	284.4	EC1
Average age of employees	40.9	40.7	40.7	LA2

\* 2013: n = 4,853 (coverage: 99.96%)

\*\*2013: n = 1,178 (employees in management based on Outotec grading)

Employees by region	Dec 31, 2013	Dec 31,2012	Dec 31, 2011
EMEA	2,891	2,642	2,327
Americas	1,144	1,400	972
APAC	820	763	584
Total	4,855	4,805	3,883

Employee turnover rate	2013	2013	2012	2012	2011	2011	GRI indicator
	#	%	#	%	#	%	
by age group							LA2
<25	71	29	22	8	15	8	
26-30	112	18	54	9	40	7	
31-35	106	12	62	10	43	8	
36-40	106	15	50	9	29	6	
41-45	69	11	44	9	23	5	
46-50	47	8	24	6	20	5	
51-55	40	8	38	12	7	2	
56-60	30	8	23	8	18	6	
>60	73	21	47	21	9	4	
Total*	654	13	364	10	204	6	
by gender							LA2
Women	114	12	102	11.3	45	6.1	
Men	558	14	310	8.1	195	6.5	
by region							LA2
Finland	65	4	69	5	51	4	
Germany	28	5	32	6	16	3	
Rest of Europe	29	7	28	10	12	4	
The Americas	414	36	174	12	83	9	
Australia	77	14	46	9	18	5	
Rest of the world	55	9	63	11	60	13	

\* The reason for the difference in the total number in the category 'employee turnover rate by age group' is restricted age data from one reporting unit.

The low share of women may reflect the typically high share of men in the mining and metallurgical industry historically. There were no reported incidents of any type of discrimination in 2013.



# PROFESSIONAL GROWTH

→ Our goal with talent management and professional growth is to enable our employees to reach their full potential.

Our focus is to drive continuous learning and leadership development to ensure professional growth. We follow the 70/20/10 concept; 70 percent of emphasis is on on-the-job learning, 20 percent on learning from others, and 10 percent on formal training programs.

In 2013 we focused globally on our top leaders, mentoring and change management, whether this was related to organizational changes, new programs or new ways of working. We have created a talent maturity model for developing our people. When knowing our talents we can address the needs of our people with the right tools and interventions.

Almost 80 percent of our employees responded to our newly-revised employee engagement survey. Through this channel of communication and engagement we were able to demonstrate both successes and challenges. Our people observed and gave feedback on how their leaders behaved in line with company values. We were able to assess the quality of our communications and measure the impact of the current development opportunities.

As employee engagement and performance enablement are our priority drivers and seen as a key differentiating factor, we will continue to challenge ourselves in the longer term with these key targets which are linked to our survey results (read more about our targets on page 33). Based on the results of the 2013 survey, Outotec’s employee engagement index was 69 percent, which is at the same level as the international standard, and the performance ena-

blement index was 67 percent, slightly below the standard (73 percent). Two global themes were identified for further development: collaboration and customer centricity. Action planning on these started in 2013 and the work will continue in 2014 both globally and locally.

### On-the-job learning

Job rotation continued to be high on the agenda and it was also one of the guiding principles in designing our new operating model that came into effect on July 1, 2013. In addition, during 2013 Outotec had almost 300 persons on international project assignments, for an average length of 5.2 months. There were over 70 expatriates in 17 countries, an important indication of Outotec’s investment in on-the-job learning and knowledge sharing around the globe.

### Learning from others

Mentoring is also used to transfer tacit knowledge from more experienced specialists to newcomers or less experienced employees. In 2013 we had 16 mentoring pairs in Finland, 10 pairs in Brazil and a small program in Sweden. We launched a “train the trainer” program in India and North America to help them raise awareness and plan to prepare for their own key mentoring programs for 2014.

Active coaching for the Executive Board and senior leaders continued on individual and team levels all over the world. In addition, we continued with monthly leadership reflections and learning went out collectively to a set community of over 100 leaders for refreshing ideas on concepts of leadership.

### Training programs

Learning Point, Outotec’s global learning platform focused on internal technology and product training, was launched in the beginning of 2013. Learning Point includes technology self-studies and instructor-led technical trainings varying from introductions and core trainings to advanced trainings. Several virtual training programs were offered to our employees. The programs focused on anti-corruption and Code of Conduct. New courses are being developed constantly.

Our Sales Master Class enables Outotec sales and service professionals working in the customer frontline to develop advanced sales and behavioral skills. We have been laying the foundation for value-based selling and raising sales capabilities for the last two years. In 2013 we had 15 workshops with 183 participants around the world. Through tracking return on investment we were able to identify circa EUR 11 million deals won by adapting to the Sales Master Class approach.

In addition, 40 leaders took part in a Strategic Marketing Excellence program organized with IMD. Our Future Leaders program ran for a third successive year, bringing together 48 top leaders to ensure that we have leadership capabilities to meet future challenges. On-going learning groups have been practicing coaching in projects covering major strategic topics. In addition, there were some local leadership development programs and coachings as well as language, and ICT trainings.

In 2013, we provided safety training for our employees and subcontractors working on our projects, which increased

our training hours. In recent years we have also held seminars about prevention of heart diseases and other occupational health issues for the employees.

### Performance development

Whilst over 95 percent of Outotec employees had performance development dialogues (PDD) in 2013, we recognize there is still a challenge in addressing

quality targets and quality discussions. This will be a key area of focus in 2014. We will also pilot a new concept on performance evaluation that ensures our rewards reflect the right behaviors aligned to our culture. It will evaluate overall achievements in one’s role (what) and values (how) separately, and in 2015 it will link to the performance development dialogue process for all employees.

Training	2013	2012	2011	GRI indicator
<b>All types of vocational training and instruction</b>				LA10
Number of employees	<b>2,704</b>	2,990	1,288	
Hours	<b>67,750</b>	60,184	32,948	
<b>Paid educational leave provided by the reporting organization for its employees</b>				LA10
Number of employees	<b>744</b>	563	318	
Hours	<b>33,162</b>	21,506	4,240	
<b>Training or education pursued externally and paid for in whole or in part by the reporting organization</b>				LA10
Number of employees	<b>1,395</b>	2,277	1,237	
Hours	<b>40,200</b>	28,187	16,569	
<b>Training on specific topics such as health and safety</b>				LA10
Hours	<b>124,695</b>	49,700	9,955	
<b>Training on human rights issues</b>				LA10
Number of employees	<b>1,039</b>	3,019	n/a	
Hours	<b>1,168</b>	1,509		

Benefits provided by Outotec	Full-time employees covered, %	Temporary employees covered, %	GRI indicator
Life insurance	82	46	LA3
Health care	80	53	LA3
Disability/invalidity coverage	100	72	LA3
Maternity/paternity leave	97	78	LA3
Retirement provision	63	22	LA3

2013: n= 4,228

Read more about compensation at [www.outotec.com/cg](http://www.outotec.com/cg).

# LABOR PRACTICES



Fair and motivating compensation is essential for Outotec’s success. All employees are covered by an annual bonus system to encourage performance and personal development.

→ The Outotec Round Table is a discussion forum for personnel representatives and management on matters concerning the whole company. It is based on the European Works Council directive 94/95 EU, Article 6 and covers all employees in the EU countries as well as Norway and Switzerland. The Outotec Round Table was held twice in 2013. Topics discussed included strategy, acquisitions, rewarding, organizational change, and internal development programs. 23 personnel representatives participated in the meetings.

In addition to these meetings, Outotec Council, a sub-committee of Outotec Round Table, had meetings regularly once per quarter and whenever necessary. Outotec Council is the operative body to ensure the smooth administration of the Outotec Round Table. It consists of personnel and management representatives. This forum was used as an additional discussion and information sharing channel with employee representatives.

Read more about our labor practices on page 41.

### Compensation

Fair and motivating compensation plays an essential part in Outotec’s success. It is also in shareholders’ interests to have competent and motivated employees working in line with Outotec’s targets and strategy. For a technology company such as Outotec, it is very important to be able to recruit and retain world-class professionals, as they are a key asset that helps to create the company’s intellectual property. Fair and motivating compensation is achieved through pay

that is in line with the requirements of the job and the performance and competences of the employee.

According to Outotec’s compensation policy the total compensation should closely align the interests of Outotec, its shareholders and all employees. A significant proportion of total compensation should be based on the company’s performance in the short and long term and on each employee’s individual performance. In order to attract and retain highly competent professionals, the total compensation package of employees with key competence and a high level of individual performance should be competitive compared to relevant labor market compensation.

All Outotec employees are covered by an annual bonus system to encourage performance and personal development.

The bonus is paid to those employees only who have been employed by the company for at least six months during the accounting period, or if a person has been hired during the accounting period, the minimum employment time is four months. In addition, the employee needs to be employed by Outotec at the time of bonus payment.

Incentive bonuses are determined on the basis of attainment of the company’s financial targets, as well as targets set for the employees or departments concerned. As a general rule, the total bonus percentage ranges from 10 to 60 percent of the employee’s annual salary, depending on the position of the employee. The incentive bonus program covers almost all Outotec personnel. In addition, the board may decide to set some project-related bonuses.

Health and safety	2013	2012	2011	GRI indicator
Non-fatal injury arising from or in the course of work	54	26	48	LA7
Fatal injury arising from or in the course of work	2	0	0	LA7
Lost time injury rate (LTIR) (number/200,000 working hours)	0.39	0.40	1.62	LA7
Occupational diseases	1	0	0	LA7
Occupational disease rate (number/200,000 working hours)	0.01	0	0	LA7
Lost days because of an occupational accident or disease	307	285	408	LA7
Lost day rate (number/200,000 working hours)	2.13	4.35	13.76	LA7
Absentee rate, %	0.80	1.96	2.61	LA7

2013: n = 13,821 (our own employees and subcontractors on project sites); a significant increase from 2012 (n= 5,873)



The total compensation in 2013 consisted of:

- 1) Base salary
- 2) Short-term incentives
  - Global annual bonus system, or project bonus
- 3) Long-term incentives
  - Share-based Incentive Program for key employees
  - Share Savings Plan for all employees
- 4) Rewards for innovation
- 5) Ad-hoc rewarding for extraordinary achievements
- 6) Pension and life insurance benefits

Outotec launched an employee share savings plan in January 2013 for the company's employees globally. Altogether 1,513 employees in 22 countries (approximately 34 percent of the employees eligible to participate) saved a proportion of their salary to buy Outotec shares. In return, Outotec will reward the participants with free shares in the future. The participation rate was over 50 percent in Finland, Sweden and five other countries. Participation in the share savings plan is entirely voluntary.

In addition, 172 key employees became part of the company's share-based incentive program in 2013.

Outotec has several pension plans in various countries. These plans are mainly classified as defined contribution pension plans. Other post-employment benefits relate to retirement medical arrangements in Germany.

Other labor practices

51 percent (2012: 54 percent) of employees are covered by collective bargaining agreements. Binding collective agreements are followed in each country where they are applicable to Outotec employees. The minimum notice periods regarding significant operational changes depend on locations and national legislation, and therefore differ significantly. Notice periods range from 2 to 8 weeks up to one year.

Health and safety topics are not covered in formal agreements with trade unions. Health and safety issues are covered by statutory regulations in different laws, and there is therefore no need for separate agreements.

When Outotec starts a new operation in a country, normally an expatriate is sent to integrate the new operation to Outotec. The target is, however, that senior management is hired locally. Currently 77 percent of Outotec's entities have a local manager.

Health and safety

An important milestone was reached in 2013 with the harmonization of Outotec's QEHS management systems. Our global QEHS team has been working persistently for the past three years to develop and implement a harmonized QEHS management system including QEHS policy, procedures, work instructions and training material aligned with the 'One Outotec' approach. In November 2013, TÜV Rheinland Cert granted us 'One Outotec' multi-site matrix certification including ISO 9001 (Quality management), ISO 14001 (Environmental management), BS:OHSAS 18001 (Occupational Health and Safety management) and Safety Construction Certificate (SCC) for all our main locations.

The scope of health and safety reporting was significantly extended: from 5,873 employees and subcontractors working on projects in 2012 to nearly 13,821 in 2013, as more subcontractors on construction sites were included.

In 2013, two fatal accidents occurred to our subcontractors, one in an office building under construction and one on a project construction site. Both cases have been investigated and corrective actions have been taken. We collect data from near-miss cases and continue to further develop our Health and Safety Management System to prevent any accidents. We also have set a new target related to health and safety, see page 35.

Outotec has a medical and security services agreement with the global service provider International SOS to ensure

the security and well-being of its employees. It covers all Outotec employees and service providers for emergencies that occur during business trips. Through its Medical Alerts and Travel Security Online service available 24/7 our employees are also informed about diseases and other health, safety and security issues.

Safety is an important aspect of Outotec's field operations at customer sites. Outotec's project manager is responsible for the company and its sub-contractors' site activities and follows the management of environmental issues, safety, systematic practices, and cleanliness. All Outotec's project and service specialists follow the customer's safety regulations on site. From the occupational safety standpoint, the greatest risks are associated with work assignments in countries that have little awareness of safety issues and a weak occupational safety culture. In these countries, Outotec employees are instructed to follow the company's own occupational safety principles.

Outotec provides safety training for employees whose work involves or will involve participating in site operations related to plants, equipment, or services delivered by Outotec to its customers. The objective is to induct employees in hazard identification, risk assessment and required control actions to prevent any harm and to improve practical collaboration between the customer and supplier organizations on shared sites.

Outotec received several safety awards from customers in 2013. For example, Codelco Chile recognized Outotec with the "Safety Management – 2013" award on the delivery of online analyzers to its Andina operations for successfully controlling hazards and preventing accidents in production, thus helping to build a strong preventive safety culture.

Read also about product safety on page 74.

Employee categories, gender balance and age structure	2013	2012	2011	GRI indicator
Total number of employees in each employee category*				LA13
Senior management	209	126	135	
Middle management	969	429	496	
Specialists	2,520	2,074	1,959	
Blue-collar workers	774	842	516	
Senior management, %**				LA13
Women	13	10	11	
Men	87	90	89	
< 30 years old	0	0	0	
30–50 years	54	61	68	
> 50 years old	46	39	32	
Middle management, %**				LA13
Women	12	19	12	
Men	88	81	88	
< 30 years old	1	4	3	
30–50 years	64	69	68	
> 50 years old	35	27	29	
Specialists, %**				LA13
Women	27	24	27	
Men	73	76	73	
< 30 years old	19	15	21	
30–50 years	59	61	57	
> 50 years old	22	24	22	
Blue-collar workers, %**				LA13
Women	3	3	4	
Men	97	97	96	
< 30 years old	31	31	22	
30–50 years	50	49	49	
> 50 years old	19	20	29	
Board of Directors, %				LA13
Women	29	14	14	
Men	71	86	86	
< 30 years old	0	0	0	
30–50 years	0	29	29	
> 50 years old	100	71	71	

\* Grading of all employees not completed yet (n = 4,472; coverage = 92%).

\*\* Data coverage 80% because of local restriction of data reporting.

# O'SHARE AND SHARE ALIKE

EVERY  
THIRD EMPLOYEE  
OWNS OUTOTEC  
SHARES

Launched in 2013, Outotec's O'Share program was born of the recognition that competent and motivated personnel are central to the company's success. We needed a reward system that would motivate our people, helping the company to build success together with its employees. The concept would have to reward employees in particular for their long-term commitment to the company, sticking with the team through thick and thin.

→ O'Share, an easy-to-manage share savings plan available to Outotec personnel globally, represented the best answer to these challenges, enabling our employees to benefit directly from the growth and success they help to build together.

Participation in the program is entirely voluntary, and involves personnel using a chosen amount of salary each month (between 2 and 5 per cent) to purchase Outotec shares. In return for their commitment, employees receive free shares after three years, provided that they keep the shares they have

purchased in this way and that they remain employed by Outotec.

O'Share is offered to our employees in countries where there are no legal, taxation or administrative restraints. For these reasons, O'Share is not offered in Russia, Kazakhstan or Saudi Arabia.

While the idea of rewarding employees with the opportunity to purchase shares isn't a new one, O'Share is actually one of the first programs of its kind in Finland.

Tiia Lindroos, Human Resources Officer, who played a key role in the process, explains: "Developing a reward-

ing system that would enable us to build success together was strongly supported by Outotec's management, as it is closely linked to our values."

The international nature of Outotec's operations made achieving consistency across various territories - each with their own remuneratory regulations - an interesting task. "We defined effective communication as one of the key drivers of success in the implementation of O'Share. For instance, we translated all communication materials and established an 'Owners' site' in six languages, and organized face-to-face info meet-

ings for employees in all our major locations. We left no stones unturned in terms of communication."

After several months of refining the details, the program was up and running as of January 2013. Tiia and her colleagues in HR have already been able to see the great results of their efforts. "In the 2013 sign-up drive, with the program's introduction, we saw a record high rate of 34 percent across the company globally. In Finland and five other countries the participation rate was over 50 percent," says Tiia. "And in 2014, despite the challenging situation

of having realized efficiency measures amongst our employee base, we still saw an adoption rate of 33 percent." However, the most meaningful results are, of course, for the future to reveal: increased motivation at work and improved employee retention.

With benchmarks showing that even 20 percent employee participation marks a strong result, O'Share has evidently been a very attractive

prospect for our employees, demonstrating that they value the company both in financial terms and as a great place to work.

O'Share also won Global Equity Organization's GEO Award in the category of "Best Plan Effectiveness". GEO is a global non-profit organization supporting share-based incentives. The judges' decision was based on Outotec's versatile high-quality communi-

cation; the high participation rate and the effort used in implementation, taking into account our company's relatively small size.

"I am happy about this global recognition for our program and being awarded amongst the top global companies such as Facebook, Google and Pfizer," says Pekka Hukkanen, Head of Rewarding at Outotec.



"Developing a rewarding system that would enable us to build success together was strongly supported by Outotec's management, as it is closely linked to our values."

**Tiia Lindroos**  
Human Resources Officer



## OUR IMPACT

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# OUR IMPACT

We develop technologies that enable sustainable use of natural resources and keep our global society as healthy as possible. Reduced energy and water consumption as well as effective use of raw materials not only reduce environmental impact but also improve profitability.



# MORE SUSTAINABLE TECHNOLOGIES

Outotec develops and delivers solutions which utilize resources efficiently, reduce energy and water consumption, produce less waste and emissions, and minimize the plant’s lifetime ecological impact and operating costs. Through our vast experience and in-house research centers, we have the ability to test and scale up processes for varied and increasingly complex raw materials, as well as develop new processes and tailor solutions for their processing.

→ We have a strong portfolio of world-class technologies for the entire value chain of processing ore to refined metals. Each of Outotec’s technological developments has the potential to reduce the environmental impact of a large number of industrial operations worldwide.

However, even if customers are using Outotec’s best available technologies in mineral and metal processing, they may have improper operational practices or less sustainable technologies in use at the same time. Therefore Outotec may indirectly be involved in environmental damage, contamination of soil or water, or public health effects through its customers’ operations. Because industry investments have a lifetime of decades, Outotec also provides machinery, spare parts and services to old industrial plants that may, despite modernization initiatives, have a significant negative impact on the environment and human health.

To minimize the industry’s negative impact, Outotec offers solutions for sustainable mine backfilling and tailings treatment, modernization, and long-term operation and maintenance services. Significant impact on a plant’s sustainability can be achieved through life cycle services and technological improvements. For example, Outotec can operate and maintain a plant on the customer’s behalf, guaranteeing that it will run smoothly, safely, and efficiently at all times.

Though metals and minerals, once extracted, have a very long usage life cycle and are often close to 100 percent recyclable, their production is often linked to negative impact on the environment. As a provider of technologies and services for these industries, we see our role as an essential contributor to change for the better. As part of the varied solutions we offer, we aim to address the main

sustainability challenges facing our customers. Through hundreds of successful projects, we have made a significant global impact by creating new revenue streams, reducing our customers’ environmental footprints, and increasing well-being in local communities.

The key target on our long-term sustainability agenda is more sustainable technologies and services by 2020.

**Environmental Goods and Services in order intake permanently over 90%**

In the long-term, we aim to keep the share of environmental goods and services (EGS under OECD definitions) in our order intake permanently above 90 percent. This means that we always seek to sell our latest and best available technology to customers.

In 2013, we updated our self-assessment methodology to determine

the share of EGS in our order intake, and the methodology was assessed by an external auditor. This methodology takes into account more accurately the share of the services in orders. According to our self assessment, as much as 87 percent (2012: 89 percent) of our order intake qualifies as EGS. These products and services measure, prevent, limit, minimize or correct environmental damage to water, air and soil, as well as problems related to waste, noise and eco-systems. EGS represent pollution management, resource management and, particularly so in Outotec’s case, cleaner technologies reduce environmental risk and minimize pollution and resource usage.

For example, Outotec’s sulfuric acid plant, when used to produce acid from a smelter, is clearly EGS technology, but in the case of an acid plant burning elemental sulfur, it is defined as ‘maybe EGS’ and the final category depends on the latest features of acid production technology being used in the particular project.

**20% increase in avoided CO<sub>2</sub> emissions through use of Outotec metals-related processes**

In metallurgical processing, energy is the most significant cost item and the main reason for CO<sub>2</sub> emissions. For example, energy accounts for around 70 percent of costs in aluminum production, and 50 percent of total operating costs of concentrators attached to mines. The total energy consumption in a process from bauxite to metal products through the electrolysis of aluminum oxide (Al<sub>2</sub>O<sub>3</sub>), which must first be mined from bauxite ore and then refined using the Bayer process, is approximately 18,000 kWh per tonne of metal.

Producing aluminum from recycled scrap requires only five percent of the energy used to make virgin aluminum. The recycling process involves simply re-melting the metal and uses only about 10 percent of the equipment that an aluminum processing facility employs [source: The Aluminum Association].

Outotec designs sealed processes that utilize the energy contained within raw materials. The annual emissions avoided by the metallurgical industry through use of five Outotec technologies amounted to 5.4 million tonnes of CO<sub>2</sub> equivalency (CO<sub>2</sub>-e) in 2013 (2012: 4.6 million tonnes). These five technologies are ferrochrome process, copper flash smelting, alumina calcination, ceramic filters, and CO-generation in the ferrochrome process. Outotec’s CO filter enables the use of process gas in direct electricity generation.

Our long-term target is to achieve a 20 percent increase in the amount of avoided CO<sub>2</sub> emissions through the use of Outotec metals-related processes by 2020. The reported increased 2013 value compared with the 4.6 million tonnes reported for 2012 is mainly due to the increased production in the plants using Outotec technologies. The changes in the country-specific electricity grid CO<sub>2</sub>/kWh also have some influence on the generated savings.

**50% reduction in fresh make-up water in non-ferrous metals concentrators**

In many mining regions such as Chile and Australia, the quality and quantity of water pose problems, as companies’ water demands can result in conflicts with local communities that depend on the same resources. Furthermore, mining and mineral work is often carried out in parts of the world that are rich in natural resources, yet particularly environmentally sensitive.

Outotec’s offering in this field includes, for example, paste plant technology for mineral concentrators and effluent treatment solutions. The company is developing water treatment solutions for the industry as one of its strategic focus areas. However, the proportion of these solutions in our sales is still relatively small. Our long-term target is to achieve 50 percent reduction in fresh make-up water per tonne of ore in non-ferrous metals concentrators through Outotec technologies and solutions.

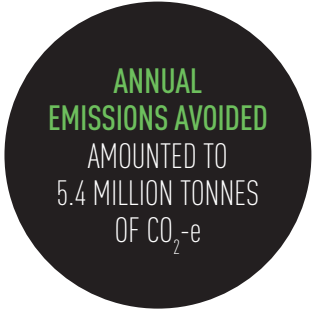
**More energy generated through Outotec waste-to-energy solutions**

To abate climate change, substituting fossil energy sources with renewable ones is crucial. Outotec’s long-term target is to achieve an annual reduction in use of fossil fuels by power plants equaling 80 MWe and by steam boilers equaling 60 MWth.

For example, in the St. Petersburg region in Russia alone, more than twenty million chickens, pigs and cattle annually produce over 600,000 tonnes of nutrient-rich litter and manure. This waste biomass is a source of energy and nutrients if appropriately managed. Nutrient run-off from large-scale animal farms has become among the main threats of pollution for the sea and for groundwater reservoirs. In addition, harmful atmospheric emissions are derived from improperly managed manure.

Sewage sludge – when adequately processed – comprises another important source of phosphorus and energy. We offer waste-to-energy systems that can treat over 200 different biomass fuels – from waste wood up to lignin sludge from bio-ethanol production.

In addition, we have developed an efficient solution to exploit the energy and nutrient potential of a certain part of farmyard waste and sewage sludge. The solution combines Outotec’s fluidized-bed-based biomass incineration technology and the ASH DEC process to recover phosphate from the ash that remains as a by-product when incinerating municipal sewage sludge, manure and chicken litter and residues.





# TECHNOLOGIES FOR ENERGY PRODUCTION

With conventional energy sources shrinking, renewable energy and unconventional fossil fuel sources are being developed. We offer waste-to-energy systems for over 200 different biomass fuels and resource-efficient solutions when and where oil shale reserves are being utilized.

→ Oil shale is a mineral rock which contains a carbon-rich component called kerogen, which decomposes at high temperature and the absence of oxygen, liberating vapor, which can be condensed to generate liquid fuels. It is a strategic resource, a lot of countries with limited access to other energy resources are keen to develop the industry as an alternative for crude oil. The oil shale resources are huge - estimations range from 3 to 9 times higher than the proven conventional oil reserves.

Oil shale processing creates jobs in the entire supply chain from raw material mining through the refining of petrol, diesel and lubrication oils and extending to the distribution of these final products. It usually has a significant regional employment and otherwise positive economic impact, in some cases contributing to the national economy of the country.

### Our applications for oil shale processing

Outotec is involved in the oil shale business through providing its know-how in sustainable minerals processing and high-temperature processing of materials in a controlled way. Outotec has partnered with Global Oil Shale company in the beneficiation of oil shale and with

Eesti Energia to provide its material handling, drying, heat recovery and circulating fluidized bed technologies and expertise to the so called Enefit process.

There are two principle methods to recover oil from oil shale: 1) mining using sustainable technologies and treatment of oil shale in a refinery type of operation, and 2) in situ recovery of oil from oil shale by heating the material below the surface (by allowing part of the oil shale to burn) and then pumping the released oil to the surface. Outotec is not involved in the latter method and neither are we in shale gas business. Shale gas is a gaseous fuel which has been produced by fracking of mineral rocks mostly consisting of shale.

### The Enefit process

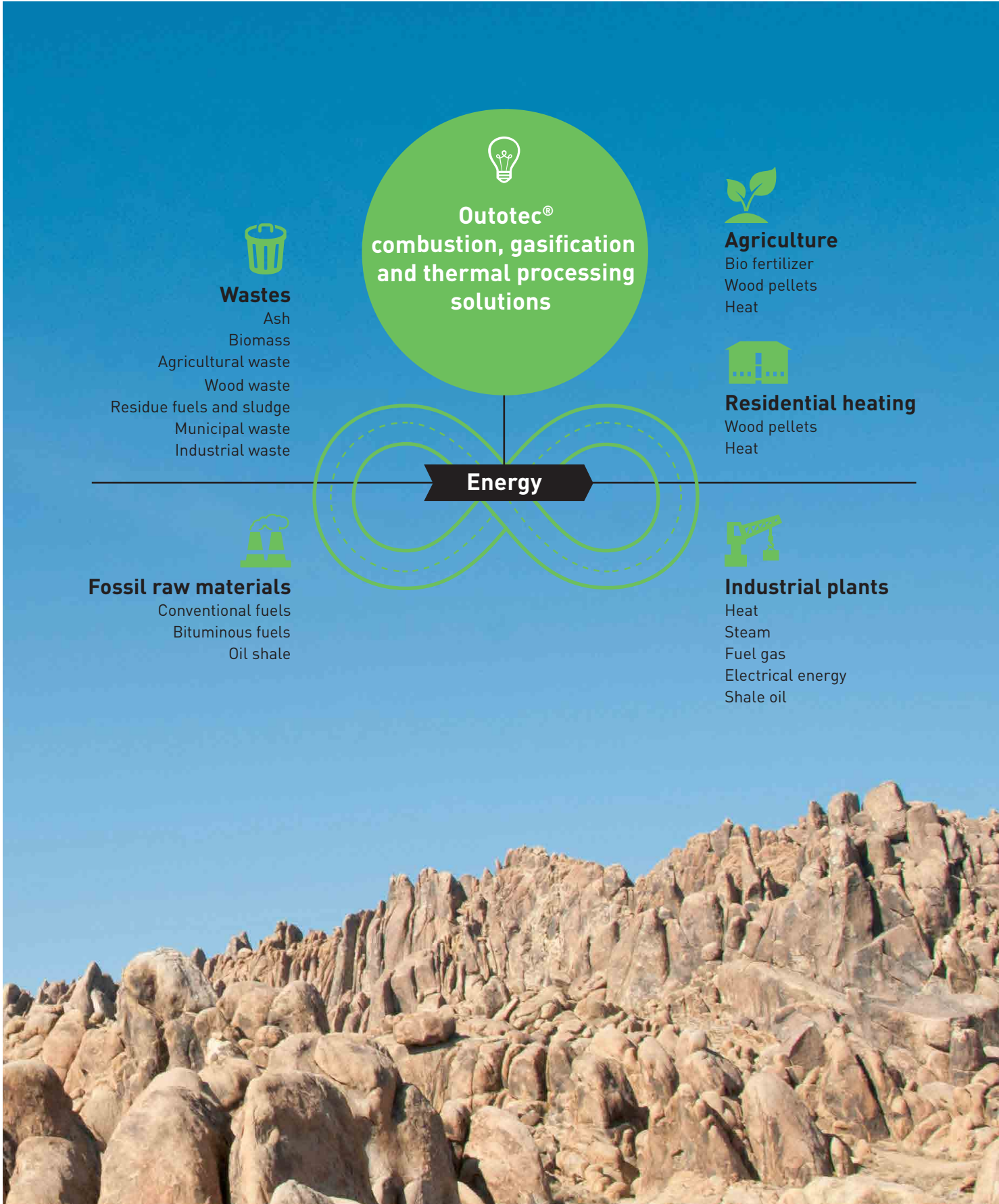
Large amounts of solid material, such as raw material and ash, have to be handled and processed when producing shale oil. Enefit, known as a solid-heat-carrier process, requires the handling and combustion of several hundred tonnes of hot material per hour and the handling of large amounts of ash. Outotec's circulating fluidized bed reactor and experience in handling solids were superior for this purpose. This was the reason why Eesti Energia partnered with Outotec when building an oil shale processing plant in Narva, Estonia.

The processing starts with drying the surface mined oil shale, which is then pyrolyzed. The vapor evaporating in pyrolysis at about 570°C is condensed to shale oil. The residue from the pyrolysis is combusted in a circulating fluidized bed reactor to produce heat and power. Hot solids from the combustion step are used to heat up the oil shale to the required process temperature and the off-gas is used for drying the wet oil shale.

The Enefit process is very energy efficient: its energy-efficiency factor is around 80 percent. The cleaned off-gas from combustion meets all European emission standards. Besides water consumed in mining, the process consumes only a small amount of water.

A pilot plant was commissioned by the joint venture Enefit Outotec Technology in Outotec's R&D Center in Frankfurt in 2013 to test the Enefit shale oil production process with different types of oil shale, collect data for adapting the process, and produce test batches of shale oil for further analysis.

Read more about our technologies at [www.outotec.com](http://www.outotec.com).





# R&D AND INNOVATION

702  
PATENT FAMILIES,  
6,147 PATENTS

→ Outotec’s success is based on a strong portfolio of world-class technologies, robust expertise and innovative personnel. In R&D, Outotec focuses on technology development to increase resource efficiency by, for example, reducing energy and water consumption and the environmental impact of our products and services. Key areas of expertise are physical separation, metallurgy of solid-state materials, chemistry including pyro- and hydrometallurgy, as well as gas handling technologies.

Outotec has over 700 patent families and over 6,140 national patents and applications. Our competence centers and in-house research centers, state-of-the-art laboratories, and test facilities have enabled dozens of Outotec technologies to become industry standards in sustainability. The company also has extensive knowledge of material technology, plant and equipment engineering, equipment and process automation, and the implementation of large international projects.

To stay at the forefront of sustainable solutions, Outotec continuously improves and develops its proprietary technologies for the entire value chain from ore to metals and complements its in-house R&D with acquisitions and partnerships. Furthermore, the company actively strives to explore new applications for its existing technologies. Among other sectors, energy and industrial water treatment, in particular, offer significant and attractive growth opportunities. Both of these sectors require solutions for utilizing raw materials in a resource efficient and environmentally sound way. For some time now, energy costs and stringent legislation have led industrial companies to seek out energy and water efficient technologies. Water is an increasingly scarce resource, and its efficient use, along with recycling and purification processes, is a goal of steadily mounting importance in the customer industry.

The growth opportunities offered by energy and industrial water treatment are

attractive as they show high synergy potential and manageable risks. Outotec’s energy business includes offerings for biomaterial based energy production, improved heat recovery, and more clean applications for oil shale and oil sands processing. Naturally, both of the company’s business areas focus on energy and water efficiency, emission reduction and waste management in their product development.

In addition to in-house R&D, Outotec develops sustainable solutions in partnership with other companies and cooperates with universities, research institutes, and customers in R&D. For example, by utilizing its expertise in solid-water separation technologies, Outotec cooperates with Kemira to improve the oil recovery and water efficiency of oil sands extraction. Since 2010, Outotec has participated in a five-year industrial research program of the University of Alberta intended to foster sustainable water use in Canadian oil sands extraction.

In 2013, Outotec joined the initiative to establish the Industrial Waters Excellence Center (IWEC) in Russia in co-operation with OAO Severstal, Kemira and Lahti Region Development LADEC, with the aim of reducing emissions of environmentally harmful substances to the Baltic Sea. IWEC plans to present new water technologies and solutions to Russian industries to reduce the environmental burden and provide better economic performance at lower costs.

Outotec won the 2013 Rio Tinto Eureka Prize for Commercialization of Innovation with Outotec® MillMapper and Outotec® CrusherMapper technologies. MillMapper and CrusherMapper are globally patented technologies and are the first in the world to measure, model, and manage liners in grinding mills and crushers.

R&D and innovation	2013	2012	2011	GRI indicator
R&D expenditure, EUR million	48.7	41.6	33.5	EN6, EN26
R&D expenditure, % of sales	2.6	2.0	2.4	EN6
R&D grants, EUR million	2.6	1.8	2.1	EC4
Amount of new patent applications filed	101	70	41	
New national or regional patents granted	419	286	326	
Amount of patent families	702	630	583	
Proportion of environmental goods and services in order intake, %	87	89	87	EN6

Read more about our technology targets on page 34.





# HANDS-ON LEARNING

STUDENTS  
MAY EVEN PREPARE  
THEIR THESIS  
WITHIN ONE OF OUR  
PROJECTS



Kirstin Schneider  
Intern

→ As a technology company active in varied markets such as mineral and metal processing, energy and water – and adding value to our customers by equally varied means – Outotec can be said to be operating in quite a complex and multifaceted series of businesses.

Communicating all the various strands of these activities to a newcomer to the industries we serve can be challenging. For students, however, perhaps the most significant of our stakeholder groups who may find themselves in this position, a beneficial way to enter Outotec's world and become more familiar with its workings is to join the company as an intern or even prepare their bachelor or master's thesis with-

**"We normally have five to ten master theses students in Frankfurt and, of course, we always aim to keep the best of them on afterwards."**

Andreas Spies  
Senior Manager, R&D

in one of our projects. This is possible in the field of research and development, as well as in other functions like project engineering.

"Doing an internship and preparing a thesis in experimental research and development offers some extra challenges and opportunities" says Andreas Spies, Senior Manager, R&D at Outotec's research center in Frankfurt. "When working at the university, a student's focus is mainly on theory, allowing one to study an academic problem in depth, but bypassing the many practical complications which only emerge 'on the job'."

At the Frankfurt center – as well as in Pori, where internships are also undergone – students are paired with an Outotec R&D engineer to supervise their work. It is the responsibility of the supervisor to define the student's task in such a way that they are capable of performing the required actions while generating results that are both personally encouraging and of practical use to the company.

Another instructive element of these internships, Spies explains, is the social dimension: "You are depending on the timely contributions of other people of various disciplines and qualification levels like engineers, mechanics, electricians, chemical assis-

tants and so on. It hopefully educates the participants to set up a work plan that allows them the time to perform and synchronize concurrent tasks."

Of course, it isn't always straightforward, Spies admits. "Hands-on work with experimental R&D means being confronted with all kinds of practical problems. It makes you familiar with real world issues, and strengthens your problem-solving capabilities."

If this sounds a little nerve wracking, just think of the rewarding feeling of success, and pride in a lesson well learned: "We normally have five to ten master theses students in Frankfurt, which is a large number when you consider that the research center has a total staff of 25. And, of course, we always aim to keep the best students on afterwards."

## The student perspective

Kirstin Schneider took part in an internship at Frankfurt for a period of five months: a required practical component of her degree in Chemical Technologies at the University of Applied Sciences in Darmstadt. Working with Outotec engineer Dr. Holger Werning, her project centred on the recycling of plastics. Upon concluding her internship, she went on to write her bachelor thesis at Outotec.

## What was the topic of your thesis?

The aim was to gain profound process knowledge for a new feedstock recycling plant. In the pyrolytic process I was researching, plastic and polystyrene wastes are catalytically degraded using zeolites.

## What did your research work at Outotec involve?

My work was to conduct experiments in the laboratory in Frankfurt. The experimental station was a modified Fischer-Assay to degrade the plastic wastes. The product is a pyrolysis oil and gas.

## Who was your mentor at Outotec and what was their role?

While I worked at Outotec, my contact person Dr. Werning helped me when I had questions. We also defined the experimental parameters together.

## Did you feel like you had the opportunity to contribute to the company's operations?

Purely from a practical point of view, the duration of one experiment within this project was an entire day, so it was essential for the company that someone has the time to run the experiments. Plus the results of my experiments were certainly useful for the company.



# ECOLOGICAL FOOTPRINT OF OUR OPERATIONS

→ Outotec operates globally, mainly in offices which are located in 27 countries. We have two research centers in Finland and Germany, two manufacturing workshops in Finland, assembly shops in Brazil, Canada, China, and the USA, a ceramic plate production plant in Finland, and several warehouses. However, 90 percent of Outotec’s manufacturing is outsourced.

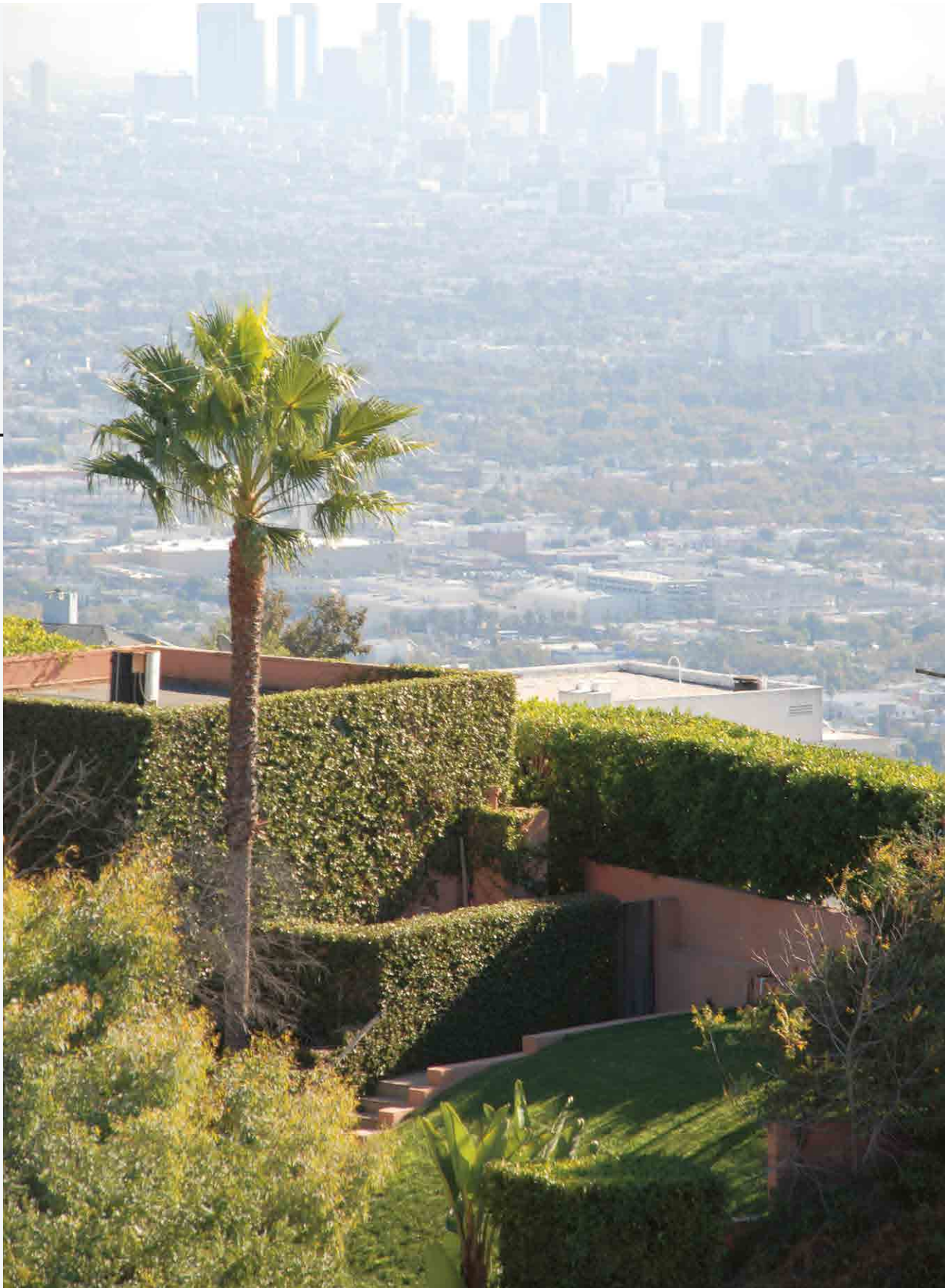
The bulk of Outotec’s operations involve engineering and business management, the environmental impact of

which is relatively small and is managed through our QEHS management system. At our workshops in Turula and Lappeenranta and research center in Pori we are committed to the Federation of Finnish Technology Industries’ energy efficiency program.

From our manufacturing and R&D activities no significant spills were reported in 2013. At one project site there were minor spills, which did not affect human health, land, vegetation, water bodies, or ground water.

Energy consumption, TJ	2013	2012	2011	GRI indicator
Direct energy consumption:	38.0	38.2	22.2	EN3
Propane gas	11.4	15.7	8.7	
Light fuel oil	0.4	0.6	0.5	
Coal, coke, semi coke	4.1	2.0	0.4	
Natural gas	15.0	13.0	6.7	
Diesel and gasoline	7.1	6.9	5.9	
Indirect energy consumption:	118.8	126.7	119.3	EN4
Electricity* (incl. cooling)	70.1	72.9	67.0	
District heating	47.5	52.6	50.3	
Steam	1.2	1.2	2.0	
Total energy consumption	156.8	164.9	141.5	EN3, EN4

\* MWh converted to TJ: 19,467 MWh (2013), 20,244 MWh (2012), 18,605 MWh (2011).





Greenhouse gas emissions, tonnes of CO <sub>2</sub> -e	2013	2012	2011	GRI indicator
Scope 1 emissions (own fuel combustion, company cars)	3,910	4,190	2,841	EN16
Scope 2 emissions (purchased heat and electricity)	9,160	9,409	8,323	EN16
Scope 3 emissions (air travel and commuting)	1) 17,353* 2) 32,235*	18,156	14,861	EN17
Flight emissions, tonnes of CO <sub>2</sub> /EUR 1 million sales	8.0**	7.6	9.5	EN17
Total greenhouse gas emissions, tonnes of CO <sub>2</sub> /EUR 1 million sales	15.9	15.2	18.8	EN16
Total greenhouse gas emissions	30,423	31,755	26,025	EN16
Greenhouse gas emissions avoided through the use of Outotec technologies	5,400,000	4,600,000	4,800,000	EN18

\* During 2013 Outotec changed its travel agency, which also included a change in the methodology of calculating flight emissions. Number 1) shows emissions from air travel and commuting according to the old calculation methodology and 2) according to the new methodology. Both figures are presented to guarantee comparability. The old methodology was based on the average cabin seating whereas the new one also takes into account cabin classes. The new CO<sub>2</sub>e calculations are based on the guidelines produced by DEFRA/DECC's GHG Conversion Factors.

\*\* Flight emissions decreased by 3% year on year; however, sales decreased by 8%.

Materials used, tonnes	2013	2012	2011	GRI indicator
Paper	94.7	131.3	90.8	EN1
Steel	9,300	6,946.9 New: 8,919	n/a	EN1
Ceramics	121	300	n/a	EN1
Cardboard packaging	11.4	9.9	6.6	EN1
Plastic packaging	7.6	2.0	0.5	EN1
Metal packaging	1.0	1.5	0.4	EN1
Wood packaging	851.5	986.2	371.4	EN1

Waste, tonnes	2013	2012	2011	GRI indicator
Waste recycled	1,522.8	2,311.5	1,949.7	EN22
Landfill waste and incinerated waste	1,250.7	1,682.4	1,086.5	EN22
Hazardous waste	242.5	28.6	23.5	EN22, EN24
Total waste	3,016.0	4,022.5	3,059.7	EN22
Paper recycled	146.0	164.4	98.3	EN22

Outotec is planning a new water technology center in Lappeenranta and found contaminated land from earlier operations of an old laundry on our site. This land had to be removed, which increased the amount of our hazardous waste.

In 2013 Outotec's total energy consumption decreased 5 percent compared to 2012. The acquisition of Scanalyse software technology company did not contribute to any changes in scope 1 and 2 greenhouse gas (GHG) emissions.

GHG emissions from air travel are the biggest single source of Outotec's emissions. Our current video conferencing service was gradually upgraded across the company and training sessions were organized. In 2013, the number of installed systems was increased to 53. In addition to video conferencing, Sametime, teleconferences and Skype are used for internal meetings (there are no user statistics on our use of Sametime and Skype).

Flights to visit our customers are an integral part of Outotec's business, by which means we contribute indirectly to avoiding emissions through the use of our technology solutions and services. The positive impact of Outotec's business travels can be best illustrated by comparing our annual greenhouse gas emissions in 2013 (30,423 tonnes CO<sub>2</sub>-e) with the emissions avoided through our goods and services (5,400,000 tonnes CO<sub>2</sub>-e).

Outotec has paid careful attention to the use of responsible air carriers and

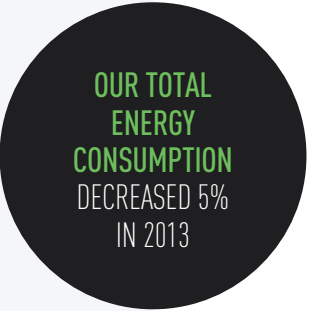
hotels. 90 percent of the flights used by our employees are operated by Finnair, Lufthansa, and other Star Alliance members. Lufthansa and Finnair, for instance, use relatively new fleets. When Outotec makes agreements with hotels, hotels with a social responsibility policy and system in place are preferred.

Data on steel consumption in Outotec workshops has been included in our environmental data reporting since 2012. Energy Products of Idaho, which was acquired by Outotec at the end of 2011, is included in the steel consumption figures, which means that the 2012 figure was restated.

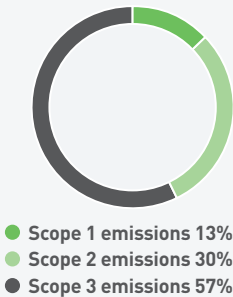
We manufacture high tech ceramics in Turku, Finland, for use in Outotec filters. This unit used 121 tonnes of ceramics in 2013.

Outotec's Finnish workshops in Lappeenranta, Turula (since 2012) and Turku annually report the amount of packaging they use to the Environmental Register of Packaging PYR Ltd. In 2013, Pori research center was included in the reporting, too.

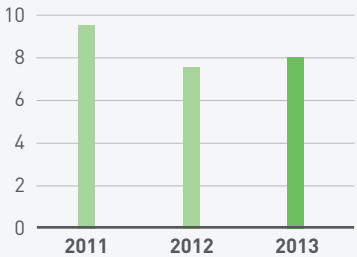
A small amount of hazardous waste is formed in the final surface treatment of filter presses in the Lappeenranta



SCOPE 1, 2 AND 3 EMISSIONS



FLIGHT EMISSIONS, TONNES OF CO<sub>2</sub>/MILLION EURO SALES



Water consumption, m³/year	2013	2012	2011	GRI indicator
Drinking water	53,945	69,300	55,997	EN8
River water for cooling	49,949	20,727	23,457	EN8
Total water usage	103,894	90,027	79,454	EN8

Energy consumption and emissions in Finnish units	2013	2012	2011	GRI indicator
Pori research center and Turula works				
Energy consumption, TJ	43.1	44.7	40.3	EN3, EN4
Energy saved due to efficiency improvements, TJ (compared to base year)	4.8	3.2	7.6	EN5, EN7
Emissions, tonnes CO <sub>2</sub> -e	2,900	3,010	2,703	EN16
Lappeenranta works				
Energy consumption, TJ	17.9	21.2	20.1	EN3, EN4
Energy saved due to efficiency improvements, TJ (compared to base year)	2.2	-	-	EN5, EN7
Emissions, tonnes CO <sub>2</sub> -e	1,200	1,423	1,346	EN16
Turku works				
Energy consumption, TJ	13.8	24.9	16.8	EN3, EN4
Energy saved due to efficiency improvements, TJ (compared to base year)	3.0	-	-	EN5, EN7
Emissions, tonnes CO <sub>2</sub> -e	923	1,668	1,126	EN16

Company cars in Finland	2013	2012	2011	GRI indicator
Company car emissions, g CO <sub>2</sub> -e/km	132	149	162	EN16
Reduction from 2008, %	31	22	15	

Volatile organic compounds (VOCs) emissions from paint shops	2013	2012	2011	GRI indicator
VOCs emissions, tonnes	15.6	10.3	n/a	EN20

works. Outotec is planning a new water technology center in Lappeenranta and found contaminated land from earlier operations of an old laundry on our site. This land had to be removed, which increased the amount of our hazardous waste. In addition, oily waste from lubricants used in the Turula works is hazardous. The hazardous waste is sent for treatment into local hazardous waste treatment facilities.

Water is purchased locally from municipal water suppliers, and waste water is sent to municipal waste water systems. Because our workshops are mainly assembly shops, no process water is discharged. Outotec’s research center in Pori uses river water for cooling purposes in their test facilities. After use, the water is channeled back to the river. We also follow the water consumption at our premises.

During 2013 a leakage from a drainage well was discovered in our Lappeenranta works. The incident is under investigation with Lappeenranta city’s environmental authorities.

Outotec’s Lappeenranta site (2012) and Turku site (2013) were included in the Federation of Finnish Technology Industries’ energy efficiency agreements. We have local or unit-specific targets for the energy efficiency of operations. The Pori research center and the Turula works in Finland are committed to the Federation of Finnish Technology Industries’ energy efficiency agreements 2008-2016 and plan to save 9 percent in energy consumption compared to the baseline year, 2006. Outotec’s Lappeen-

ranta site was included in these agreements in 2012, showing its commitment to reducing energy consumption.

In the course of data quality improvement, a data gap was revealed in reporting of annual driven kilometers. Therefore, future reporting on company cars in grams of CO<sub>2</sub> emission per km driven will follow car manufacturers’ reported CO<sub>2</sub> emissions. Previously reported g CO<sub>2</sub>-e/km figures were re-calculated.

Outotec updated its company car policy in 2012. With this policy, employees are incentivized when they take a car with less than 120 g/km CO<sub>2</sub> emissions. This is one reason why g CO<sub>2</sub> /km and the total emissions decreased in 2013 from the previous year. Out of 185 company cars in Finland 90 consume less than 120 g CO<sub>2</sub>/km.

Outotec’s target in Finland was to reduce company cars’ g/km CO<sub>2</sub> emissions by 18 percent by 2013 compared with the base year 2008. This target was achieved as company cars’ g/km CO<sub>2</sub> emissions were reduced by 31 percent. Both the commitment to energy efficiency agreements and the company car targets are voluntary.

Due to improvements in environmental data reporting, we are now able to calculate volatile organic compound (VOC) emissions from our paint shops based on annual paint consumption.

Read our targets related to environmental performance on page 34.



OUR TARGET IS ZERO  
HARM TO PEOPLE,  
PROPERTY AND  
THE ENVIRONMENT

# PRODUCT SAFETY

→ Outotec has a product compliance management process that is mandatory in all units to ensure that all products engineered and delivered by the company meet all applied safety standards during each phase of their life cycle. By following the process as well as HAZOP and SIL methods (internationally known methods to analyze risks for personnel and environment within process plants), we ensure that we deliver a safe product which doesn't cause any harm to human beings or the environment.

The equipment delivered by Outotec fulfills safety-related industrial standards such as ISO 12100, IEC 62061 for the safety of machinery and all required European directives such as 1997/23/EG, 2009/105/EG, 2006/42/EG, 94/9/EG (ATEX), 2004/108/EG, 2006/95/EG, and IEC 61508, IEC 61511 for process plants.

Detection of hazards such as explosion, fire, and lightning followed by examination of HAZOP according to IEC 61882 and SIL-Allocation Assessments are mandatory at Outotec.

We inform our customers about the impact of our products and services (e.g. their energy consumption, emissions, metal recovery, and water usage) and safety according to industry standards. We also provide training services to our customers.

In industrial processes, safety is an integral part of our operational manuals. Outotec manuals cover the entire life cycle of the delivery, follow the new IEC 82079-1 standard, and contain information on transport, installation, operation, maintenance and decommissioning. In addition, we offer maintenance as a service package to our customers.

During 2013, a large training program involved more than 130 Outotec managers to underline the importance of product compliance and increase the knowledge of the relevant laws and requirements as well as declaration of conformity with them. The usage of our safety software increased at all locations with engineering activities and project implementation.



# IMPACT OF OUR SUPPLY CHAIN

→ Some 90 percent of Outotec’s manufacturing is sourced from external suppliers. Therefore supplier selection is of key importance in Outotec’s business. Outotec gives performance guarantees for the plants and processes we deliver to our customers. Naturally, Outotec is responsible for the equipment and materials supplied as well as engineering, construction and service work provided by our suppliers and subcontractors. Outotec is determined to develop long-term relationships with selected suppliers, as well as establishing global, common procedures for supplier qualification, quality assurance, continuous monitoring and joint continuous improvement of processes and practices.

Outotec’s supply chain includes over ten thousand of suppliers globally. These represent (but are not limited to) assembly workshops, component manufacturers, distributors, logistics services providers, and construction and engineering companies.

In 2013, Outotec spent approximately EUR 980 million (2012: EUR 1,150 million) on customer-deliveries-related purchasing. The amount was smaller than the previous year because of decreased order intake and sales in a weakened market situation. The majority of purchasing, approximately 72 percent (2012: 79 percent) took place in the EMEA re-

gion (Europe, Middle East, Africa). Suppliers in the APAC region have increased from 2012 whereas suppliers in Americas have respectively decreased.

Outotec’s Supplier Policy covers ethical conduct, compliance with laws and regulations, environmental, health and safety performance, labor relations (e.g. no child or forced labor), respecting intellectual property, improper benefits, conflicts of interest, and management of sub-suppliers. Outotec expects its suppliers to comply with this policy in their dealings with Outotec, their own employees, suppliers, and with other third parties. Furthermore, they are expected to ensure compliance with Outotec policy, identify deviations, manage corrective actions, provide transparency of these actions and communicate in a systematic manner.

We set ourselves a target for 2013 that 300 of our major suppliers will have committed to our Supplier Policy. We succeeded in surpassing the target: 786 suppliers (approximately 90 percent of major suppliers) were committed to Outotec’s policy by the end of 2013.

Approximately 10 percent of Outotec’s manufacturing and assembly takes place in the company’s two manufacturing workshops and a ceramic plate production plant in Finland and in assembly shops located in Brazil, China, USA and

Canada. These moderately sized operations all have QEHS management system in place, and they manage proper sorting and further handling of their wastes. No considerable risk related to the use of child, forced, or compulsory labor has been identified.

We have assessed the sustainability risks of the supply chain in 2012 in internal workshops. The main risks identified were bribery and kickbacks, occupational safety, protecting information and reporting misconduct. With regard to environmental issues, material toxicity and chemicals ranked highest.

**GHG emissions of our supply chain**

In 2013, we analyzed the footprint of our supply chain in terms of greenhouse gas emissions. The footprint was calculated based on money spent by Outotec and using the supply chain emission factors as defined by the Department for Environment, Food and Rural Affairs of the UK (DEFRA). The analysis showed that the biggest sources of CO<sub>2</sub> emissions in Outotec’s supply chain were metal products (34 percent of the total).

The carbon footprint of our supply chain, 623,000 tonnes CO<sub>2</sub> is considerably larger than the footprint of Outotec’s operations, 30,423 tonnes CO<sub>2</sub>.

## CASE: TEKNIKUM

Teknikum is a specialist in rubber and polyurethane products. Together with Outotec, they have developed many products for protection against wear and corrosion. The cooperation has been ongoing for decades, but has recently been extended with joint development of a product for the flotation process. Juha Martikainen, Teknikum’s Managing Director, answered a few questions to detail their take on sustainability.

**How does Teknikum approach sustainability?**

“The most important issues for us are water and energy consumption in our production. Our production phases can be quite labor-intensive so work safety is important too. We also use chemicals and therefore need to keep a close eye on the relevant requirements there. All in all, our processes were approved according to the ISO 14001 standard about 10 years ago and we have made continuous improvements since.”

**Has your cooperation with Outotec somehow changed your approach?**

“Outotec has audited us as a supplier and given feedback on development areas following this but there have not been any major issues, which may be one reason they continue to prefer us as a partner. Of course, we did highlight some issues after these audits: for example, work safety and material development to extend materials’ lifetimes, but nothing of major concern. In general, we believe that our priority list for sustainability issues is very similar to Outotec’s.”

**How do you ensure the sustainability of your own supply chain?**

“We have developed very similar supplier criteria to those which Outotec applies to us, and we make sure that our suppliers fulfill these requirements. We’ve also tried to reduce the number of suppliers we work with, concentrating our dealings on those who demonstrate compliance with our standards.”

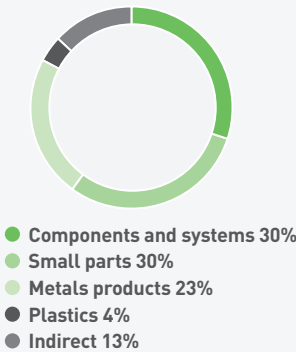
**How do you plan to further improve the sustainability of your operations?**

“We have an extensive action plan for sustainable development. For example, we closely follow production safety, studying our near misses in order to avoid accidents. We also, as I mentioned, develop the materials in our products to extend product lifetimes further and conserve resources. Our supplier audits and selection processes are also ongoing means of development in this area.”

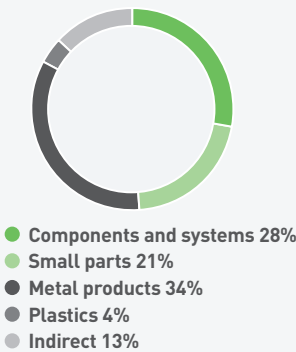
Read about our supply chain management on page 26.  
Read about our targets related to suppliers on page 35.



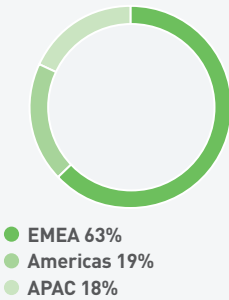
SUPPLY SPEND BY CATEGORY



CO<sub>2</sub> EMISSIONS BY SUPPLY CATEGORY



SUPPLY BY REGION





GRI

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# GRI

Outotec’s sustainability reporting observes the Global Reporting Initiative (GRI) G3 sustainability reporting guidelines and the UN Global Compact Principles.

# ABOUT THE REPORT

**Report scope and profile**

This report covers the company’s sustainability performance in the 2013 calendar year. Outotec reports its performance and targets annually. This report is prepared according to the Global Reporting Initiative (GRI) G3 sustainability reporting guidelines and the UN Global Compact principles. If you are interested in specific issues relating to corporate responsibility, we recommend that you check the GRI and UN Global Compact reporting index, where all the indicators regarding responsibility practices are listed together with links to the pages on which they are addressed.

Outotec reports on the core indicators of most relevance to its operations and stakeholders. The selected core indicators are of importance at the corporate level and are based on those proposed by the GRI guidelines.

We fully report on our own operations and partly include information on our delivery projects, use of our technology, and our supply chain. The report boundary includes all our major operations. Our aim is to expand information collection and include site operations, construction, and commissioning work carried out at our customers’ sites. In 2013, CO<sub>2</sub>-e emissions from Outotec’s supply chain were calculated for the first time.

**Data collection**

Outotec introduced its environmental data reporting system in 2009. The data is based on Outotec’s financial reporting system, ‘Hyperion Financial Management’ (HFM), where each business unit reports its environmental figures. After data collection, the reported figures were retrieved from the HFM system and Microsoft Excel was deployed to carry out

calculations. In 2013, Outotec acquired one new business, Scanalyse, which is included in the data reported.

For the collection of social performance data, a global master data based on SAP Human Capital Management was applied. It includes accurate data on Outotec employees globally and covers all business units. In 2013, we received more accurate numbers about training, as several virtual training programs were included in our performance dialogue tool. In addition, we have a global health and safety reporting system for setting and following common targets in all our operations. It also provides qualified metrics.

The data of this report covers Outotec globally. In 2013, the scope of health and safety reporting was extended and subcontractors on construction sites were included for the first time. The employee

data reported covers basic information of all employees, however, some details such as labor benefits are asked separately.

We have a validation check in the reporting tool that highlights changes of over 20 percent compared to the previous years and asks for verification of the data controller.

We continue to report on GRI B+ level. The developments concerning the new G4 guidelines are followed closely.

Performance data on environmental aspects have been collected from major business units for electricity, heating, owned or leased company cars, flight emissions, water, paper, recycled waste, and landfill waste. In addition, the combustion of fuels in company-owned combustion sources (scope 1 emissions) and hazardous waste occurring in our research centers, manufacturing workshops, and ceramic plate production plant

are included in the report. The sources of owned fuel combustion are identified through separate annual environmental data reports. When required, e-mail correspondence was used to collect the information from the business units.

Environmental data was available for our most important and largest business units. The smallest offices were not able to report environmental data, because they are located in larger office premises together with other companies. They pay a monthly lump sum to the office providers, and therefore it is not possible to identify electricity, heat, or water consumption. For this group, an average number was calculated based on the available data.

Economic performance data is based on data collection through our ERP and management reporting systems. The figures used in Outotec’s consolidated financial statements have been prepared

according to the International Financial Reporting Standard. In addition, some data has been collected manually from MS Excel sheets.

We have applied GRI’s “Guidance on Defining Report Content” when preparing the report.

Outotec’s most material sustainability issues were defined in a management workshop facilitated by an external partner in 2011. Sustainability trends and feedback from stakeholders were taken into account when defining the materiality and, subsequently, the chosen GRI indicators. Identified material aspects created the basis for our sustainability management and reporting. This report was reviewed and approved by Outotec Executive Board in March 2014. We have identified our investors, customers, current and future employees, and suppliers as the main users of this report.



GLOBAL REPORTING INITIATIVE INDEX AND UN GLOBAL COMPACT

Based on its own assessment, Outotec has self-declared this report to comply with the GRI application level B+. The application level has been checked by a third party, Ecobio Ltd.

	GRI Content	Reference page	Reported	Global Compact principles
	Standard Disclosure			
1	Strategy and analysis			
1.1	CEO’s statement	CEO’s message, p. 8	Fully	
1.2	Key impacts, risks, and opportunities	Materiality analysis, p. 38 Megatrends, risks and opportunities, p. 10 Sustainability vision and targets, p. 32	Fully	
2	Organizational profile			
2.1	Name of the organization	What is Outotec, p. 6	Fully	
2.2	Primary brands, products, and/or services	What is Outotec, p. 6	Fully	
2.3	Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures	What is Outotec, p. 6	Fully	
2.4	Location of organization’s headquarters	What is Outotec, p. 6	Fully	
2.5	Number of countries where the organization operates	What is Outotec, p. 6	Fully	
2.6	Nature of ownership and legal form	What is Outotec, p. 6	Fully	
2.7	Markets served	What is Outotec, p. 6	Fully	
2.8	Scale of the reporting organization	What is Outotec, p. 6	Fully	
2.9	Significant changes during the reporting period regarding size, structure, or ownership	What is Outotec, p. 6	Fully	
2.10	Awards received in the reporting period	A year in the sustainability business, p. 2 Interaction with stakeholders, p. 22	Fully	
3	Report parameters			
3.1–3.4	Report profile	About the report, p. 80 Contact information, p. 88	Fully	
3.5	Process for defining report content	Materiality analysis, p. 38 Interaction with stakeholders, p. 22	Fully	
3.6	Boundary of the report	About the report, p. 80	Fully	
3.7	State any specific limitations on the scope or boundary of the report	About the report, p. 80	Fully	
3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities	About the report, p. 80	Fully	
3.9	Data measurement techniques and the bases of calculations	Data collection, p. 80	Fully	
3.10	Explanation of re-statements	What is Outotec, p. 6	Fully	
3.11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods	What is Outotec, p. 6 About the report, p. 80	Fully	
3.12	Table identifying the location of the Standard Disclosures in the report	GRI Index and UN Global Compact, p. 82	Fully	
3.13	Assurance	Independent assurance, p. 86	Fully	
4	Governance, commitments, and engagement			
4.1–4.10	Governance	Developing solid governance, p. 40 Megatrends, risks and opportunities, p. 10	Fully	1–10
4.11–4.13	Commitments to external initiatives	Commitment to external initiatives, p. 28 Megatrends, risks and opportunities, p. 10	Fully	1–10
4.14–4.17	Stakeholder engagement	People, p. 48 Interaction with stakeholders, p. 22	Fully	

	GRI Content	Reference page	Reported	Global Compact principles
	ECONOMIC PERFORMANCE INDICATORS			
	Management approach to economic responsibility	Economic responsibility, p. 40	Fully	1,4,6,7
EC1	Direct economic value generated and distributed	Added value for stakeholders, p. 30	Fully	
EC2	Financial implications and other risks and opportunities for the organization’s activities due to climate change	Megatrends, risks and opportunities, p. 10	Fully	7
EC3	Employee benefit obligations	Labor practices, p. 53	Partly	
EC4	Significant financial assistance received from government	R&D and innovation, p. 64	Fully	
EC6	Spending on local suppliers	Impact of our supply chain, p. 77	Partly	
EC7	Procedures for local hiring	Other labor practices, p. 54	Fully	6
EC8	Development and impact of infrastructure investments and services provided primarily for public benefit	Commitment to external initiatives, p. 28	Fully	
EC9	Understanding and describing significant indirect economic impacts	Added value for stakeholders, p. 30 Economic responsibility, p. 40	Partly	
	ENVIRONMENTAL PERFORMANCE INDICATORS			
	Management approach to environmental responsibility	Environmental responsibility, p.40 Ecological footprint, p. 68	Fully	7,8,9
EN1	Materials used	Ecological footprint, p. 70	Partly	8
EN3–5	Energy consumption and energy saved	Ecological footprint, p. 68 and 72	Fully	8,9
EN6	Initiatives to provide energy-efficient or renewable energy-based products and services	Technologies for energy production, p. 62 R&D and innovation, p. 64	Partly	8,9
EN7	Initiatives to reduce indirect energy consumption and the reductions achieved	Ecological footprint, p. 72-73	Partly	8,9
EN8	Water withdrawal	Ecological footprint, p. 72	Fully	8
EN11	Location and size of land holdings in areas of high biodiversity		Not relevant	8
EN12	Description of significant impact of activities, products, and services on biodiversity		Not reported	8
EN16–17	Greenhouse gas emissions	Ecological footprint, p. 70	Fully	8
EN18	Initiatives to reduce greenhouse gas emissions	Ecological footprint, p. 71-73 Sustainability vision and targets, p. 33	Fully	7,8,9
EN19	Emissions of ozone-depleting substances by weight		Not relevant	8
EN20	NOx, SOx, and other significant air emissions	Ecological footprint, p. 73	Partly	8
EN21	Water discharge		Not relevant	8
EN22	Waste by type and disposal method	Ecological footprint, p. 70	Fully	8
EN23	Total number and volume of significant spills	Ecological footprint, p. 69	Partly (NEW)	8
EN24	Hazardous waste	Ecological footprint, p. 71	Fully	8
EN26	Initiatives to mitigate environmental impacts of products	Sustainability vision and targets, p. 33 More sustainable technologies, p. 60 R&D and innovation, p. 64 Product safety, p. 74	Partly	7,8,9
EN27	Percentage of products sold and their packaging materials that are reclaimed by category		Not reported	8,9
EN28	Compliance with environmental laws	Compliance with regulations and laws, p. 42	Fully	8

GRI Content		Reference page	Reported	Global Compact principles
SOCIAL PERFORMANCE INDICATORS				
Labor practices and decent work				
Management approach to labor practices and decent work		Social responsibility, p. 41 Labor practices, p. 53	Fully	1,3,6
LA1	Total workforce by employment type, employment contract, and region	People, p. 49	Fully	
LA2	Total number and rate of employee turnover by age group, gender, and region	People, p. 48	Fully	6
LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees	People, p. 51	Fully	
LA4	Percentage of employees covered by collective bargaining agreements	Other labor practices, p. 54	Fully	1,3
LA5	Minimum notice period(s) regarding significant operational changes	Other labor practices, p. 54	Partly	3
LA7	Rates of injury, occupational diseases, lost days and absenteeism, and total number of work-related fatalities by region	Health and safety, p. 53-54	Fully	1
LA8	Education, training and prevention programs regarding serious diseases	Professional growth, p. 51	Partly	1
LA9	Health and safety topics covered in formal agreements with trade unions	Health and safety, p. 54	Partly	1
LA10	Average hours of training per year per employee category	Professional growth, p. 51	Partly	
LA11	Programs for skills management and lifelong learning	Professional growth, p. 51	Fully	
LA12	Percentage of employees receiving regular performance and career development reviews	Professional growth, p. 51	Fully	
LA13	Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity	People, p. 55	Fully	1,6
LA14	Ratio of basic salary of men to women by employee category		Not reported	1,6
Human rights				
Management approach to human rights		Social responsibility, p. 41 Values and Code of Conduct, p. 44	Fully	1,2,3,4,5,6
HR1	Investment agreements with human rights clauses or that have undergone human rights screening		Not reported	1,2,3,4,5,6
HR2	Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken	Impact of our supply chain, p. 76	Partly	1,2,3,4,5,6
HR3	Employee training on policies and procedures concerning human rights relevant to operations	Values and Code of Conduct, p. 44 Labor practices, p. 51	Fully	1,2,3,4,5,6
HR4	Total number of incidents of discrimination and actions taken	People, p. 49	Fully	1,2,6
HR5	Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk		Not reported	1,2,3
HR6	Operations identified as having significant risk for incidents of child labor	Human rights and labor practices, p. 41	Fully	1,2,5
HR7	Operations identified as having significant risk for incidents of forced or compulsory labor	Human rights and labor practices, p. 41	Fully	1,2,4
HR9	Total number of incidents of violations involving rights of indigenous people and actions taken	Human rights and labor practices, p. 41	Fully	1,2

GRI Content		Reference page	Reported	Global Compact principles
Society				
Management approach to society		Social responsibility, p. 41	Fully	10
S01	Nature, scope, and effectiveness of any programs and practices that asses and manage the impacts of operations on communities	Commitment to external initiatives, p. 28 Impact of our supply chain, p. 76	Fully	
S02	Percentage and total number of business units analyzed for risks related to corruption	Developing solid governance, p. 42	Partly	10
S03	Percentage of employees trained in organization's anti-corruption policies and procedures	Values and Code of Conduct, p. 44	Fully	10
S04	Actions taken in response to incidents of corruption	Developing solid governance, p. 42	Fully	10
S05	Public policy positions and participation in public policy development	Interaction with stakeholders, p. 26-28	Fully	1–10
S06	Total value of financial and in-kind contributions to political parties, politicians, and related institutions	Developing solid governance, p. 41	Fully	10
S07	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Compliance with regulations and laws, p. 42	Fully	
S08	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	Compliance with regulations and laws, p. 42	Fully	
Product responsibility				
Management approach to product responsibility		Social responsibility, p. 41 More sustainable technologies, p. 60 Product safety, p. 74	Fully	1–8
PR1	Health and safety impacts of products and services	Product safety, p. 74	Fully	1
PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services	Product safety, p. 74	Partly	1
PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information	Product safety, p. 74	Partly	8
PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling	Compliance with regulations and laws, p. 42	Fully	8
PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction	Interaction with stakeholders, p. 22	Fully	
PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications		Not reported	
PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	Compliance with regulations and laws, p. 42	Fully	



# INDEPENDENT ASSURANCE REPORT

**To the Management of Outotec Oyj**  
Insinööritoimisto Ecobio Oy (hereafter Ecobio) has been commissioned by Outotec Oyj (hereafter Outotec) to perform a limited third party assurance engagement regarding the content of Outotec's Sustainability Report for 2013.

**Outotec's Responsibility**  
Outotec was responsible for the collection, preparation and presentation of the information in the Sustainability Report (hereafter Sustainability Information) according to the Sustainability Reporting Guidelines (version 3.0) set up by the Global Reporting Initiative (GRI). Ecobio, as an independent assessor was not involved in the data gathering and preparation of the Sustainability Information, apart from the Independent Assurance. The Management of Outotec has approved the information provided in the Sustainability Report.

**Practitioner's Responsibility**  
Ecobio's responsibility was to present a conclusion on the Sustainability Information subject to the assurance performed by Ecobio.  
The scope of work included assurance of completeness and correctness of information presented by Outotec in the Sustainability Report 2013. The assurance engagement was limited to the non-financial performance data disclosed in the Sustainability Report for the reporting period of January 1<sup>st</sup> 2013 to December 31<sup>st</sup> 2013.  
The Sustainability Information assured covered the Standard Disclosures, including the reported Environmental and Social Performance Indicators. In addition, the level of the consistency of the Economic Performance Indicators reported was checked against the GRI G3 Sustainability Reporting Guidelines.

Ecobio disclaims any liability or responsibility for any third party decision based upon this assurance report.

**Methodology**  
Ecobio based the assurance process on the following guidelines and standards: the Global Reporting Initiative (GRI) G3 Sustainability Reporting Guidelines 3.0, the International Standard on Assurance En-gagements 3000 (ISAE3000) and Outotec's internal reporting guidelines. The assurance process was performed utilizing Ecobio's internally developed GRI assurance tool, covering the principles, standard disclosures and indicators of the GRI G3 Guidelines. All Standard Disclosures were assessed individually.  
Concerning limited assurance engagement the evidence-gathering procedures are more limited than for a reasonable assurance engagement, and

therefore less assurance is obtained. This assurance engagement was conducted from January to March 2014. The assurance process included:

- Interviewing employees responsible for data collection and reporting at Outotec's group level.
- Evaluating procedures for gathering, analyzing, and aggregating quantitative data for the Sustainability Report 2013 as well as performing cross-checks on a sample basis concerning the reported sustainability data.
- Checking the internal guidelines of the data collection.
- Checking the sufficiency of the documentation of the data gathering process.
- Checking the consistency of the Sustainability Report 2013 compared to the GRI G3 Sustainability Reporting Guidelines.

**Conclusions**  
Based on the work described in this report, nothing has come to our attention that would cause us to believe that the information presented in Outotec's Sustainability Report 2013 is not fairly stated, in all material respects, or that it would not comply with the Reporting Criteria stated before.  
Outotec claims that an Application Level of B+ is achieved. We assessed the scope of Sustainability Information provided by Outotec for each Standard Disclosure and evaluated that an Application Level of B+ is achieved.

**Observations and Recommendations**  
Based on our limited assurance engagement we provide the following observations and recommendations related to GRI Sustainability Reporting principles.

These observations and recommendations do not affect the conclusions presented earlier.

- In general, the report is comprehensive, well-structured and claims are reported in a reasonable fashion.
- Due to improved data gathering processes, Outotec has been able to extend the number of indicators reported. It is, however, recommended for future reporting periods to further improve the accuracy and completeness of the data provided.
- Outotec has made vast efforts to include supplier performance and project execution within the reporting boundary, which can be seen as a major improvement to comprehensively evaluate the company's impact on sustainability issues. For consistency it is recommended to further develop the implementation of the reporting boundary to the disclosed information.
- To improve transparency, it is recommended for Outotec to further develop reporting on possible failures or drawbacks in the report content. By including non-successful issues the balance of future reports will be enhanced, e.g. the importance of legal compliance and product issues could be discussed more in detail in future reports.
- To improve consistency in data gathering and compilation, it is recommended to further elaborate the documentation of the work processes and the internal guidelines for data gathering to take into account all aspects of the report content. By improving the documentation the accuracy and completeness of future reports will be enhanced.

**Practitioner's Independence and qualifications**  
Ecobio is an independent consulting company that specializes in environmental, health and safety management with over 20 years of history. Ecobio provides corporate sustainability and environmental consultancy services, combined with training, modelling, research and planning, for companies in the infrastructure, industry and service sectors. Ecobio's assessors are skilled and experienced within non-financial assurance and has good knowledge of industry related sustainability issues.  
As an independent consultancy, Ecobio has no financial dependencies on Outotec beyond the scope of this engagement. Ecobio has conducted this assurance independently, and there has been no conflict of interest.

Helsinki, 10<sup>th</sup> of March 2014  
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## FROM THE GROUND UP

Outotec’s customers in the minerals and metals processing, renewable energy production and industrial water treatment industries need technologies that allow them to make the best possible use of increasingly limited raw materials.

By making prudent choices today, we can ensure the prosperous growth of businesses and societies worldwide, while preserving the planet for the benefit of future generations. This is our mission: sustainable use of Earth’s natural resources.

This is where we see modern society. Let’s not forget that Outotec’s solutions make all this possible. Our technologies provide the backbone of our customers’ operations, and the full life-cycle support we provide ensures the best return on their investments.

We are technology partner to the world’s major resources companies. Their facilities are where you’ll find our varied offering at work. They in turn supply the materials that underpin the infrastructure of our lives.

We all understand by now that natural resources of all kinds require more efficient, environmentally friendly treatment. We answer this challenge by developing breakthrough technologies which utilize natural resources and raw materials efficiently. They also recycle materials and reduce energy and water consumption, waste, and emissions, while optimizing a plant’s lifetime operating costs.

All this is underpinned by decades of experience as well as constant innovation at our in-house R&D centers. Our people and their expertise, not to mention their commitment and drive, are what make all this possible.

The planet’s inner layers are the source of the metals and minerals that represent Outotec’s heritage. Our experts now look beyond the use phase of a variety of resources, also including water and biomass, to examine their entire life cycles. Deep process knowledge of these raw materials – the building blocks of our lives – is our most important asset.



For the whole story,  
please visit our  
YouTube channel.





Outotec provides leading technologies and services for the sustainable use of Earth's natural resources. As the global leader in minerals and metals processing technology, we have developed many breakthrough technologies over the decades for our customers in metals and mining industry. We also provide innovative solutions for industrial water treatment, the utilization of alternative energy sources and the chemical industry. Outotec shares are listed on NASDAQ OMX Helsinki. **[www.outotec.com](http://www.outotec.com)**