

Outotec

# Sustainability Report 2010



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# Outotec and sustainability

Our approach to sustainability is defined in our mission, strategy, principles, corporate responsibility policy and management system documents. Our mission is the 'sustainable use of Earth's natural resources'. In order to achieve this, we intend to incorporate sustainability into all aspects of our operations, from our own business processes to the solutions we develop for our customers. Our strategic intent is to be the leading provider of sustainable minerals and metals processing solutions, and to become an innovative provider of sustainable energy and water processing solutions.

Because of the nature of our business, our most significant contribution to abating climate change is made through providing sustainable technology to our customers, enabling them to run a more environmentally friendly business. In that way, with our innovative solutions, we enable societies' sustainable development.

In 2010 Outotec's Executive Board decided to improve the company's performance and transparency in all aspects of sustainability. Outotec has existed as an independent company since 2006 and this report is the first of its kind in Outotec. The reporting complies with the accounting standards and the reporting guidelines issued by the voluntary Global Reporting Initiative (GRI).



## Outotec in brief

With a mission of sustainable use of Earth's natural resources, Outotec develops technologies and provides sustainable life cycle solutions to its customers, guaranteeing the best return on the customer's investment. The common denominator in Outotec technologies is their ability to maximize recovery, minimize environmental impacts, and conserve energy, natural resources and capital investments. The majority of Outotec's customers operate in the minerals and metals industries, and increasingly in the energy sector, chemical industry and industrial water treatment.

Innovative research at Outotec's in-house R&D facilities and continuous development work together with customers has made the company a leading developer of technology in the minerals processing and metallurgical industry. The company has a strong market position across the entire value chain from ore to metal and intends to strengthen its technology leadership also through acquisitions. In 2010 Outotec acquired the businesses of Larox, Ausmelt, Millteam, and Edmeston.

Outotec's most significant impact on sustainability occurs indirectly through our customers' operations. At present, these organizations are confronted with the dilemma created by the growing need for metals and the environmental impact of their production. As a result, customers are increasingly looking to



improve their energy efficiency and to reduce carbon dioxide (CO<sub>2</sub>) and especially other emissions, as well as water consumption. Outotec believes that with modern technologies and life cycle solutions metals and materials can be produced sustainably.

Outotec, headquartered in Finland, has global operations with sales and service centers in 24 countries and sales to over 80 countries. Outotec Oyj is the parent company and there are over 50 legal entities in the group. Outotec's business is divided in four business areas: Non-ferrous Solutions; Ferrous Solutions; Energy, Light Metals and Environmental Solutions; and Services.

Together with Eesti Energia, Outotec operates a joint venture company developing a cleaner and more efficient production method for refining oil from oil shale. In addition, Outotec is involved in developing energy-efficient and environmentally sound approaches for utilizing logging and sawing wastes through GreenExergy AB, a joint ven-

ture company established together with Skellefteå Kraft.

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

### Non-ferrous Solutions

- Businesses related to processing copper, nickel, zinc, lead, gold, silver and platinum group metals at all stages in the value chain from ore to metal, as well as industrial minerals.

### Ferrous Solutions

- Businesses related to processing iron ores and other ferriferous materials at all stages in the value chain from ore to metal.

### Energy, Light Metals and Environmental Solutions

- Businesses related to sulfuric acid production, off-gas handling, alumina refining, roasting, calcination, biomass processing, oil shale and oil sands processing, as well as industrial water treatment.

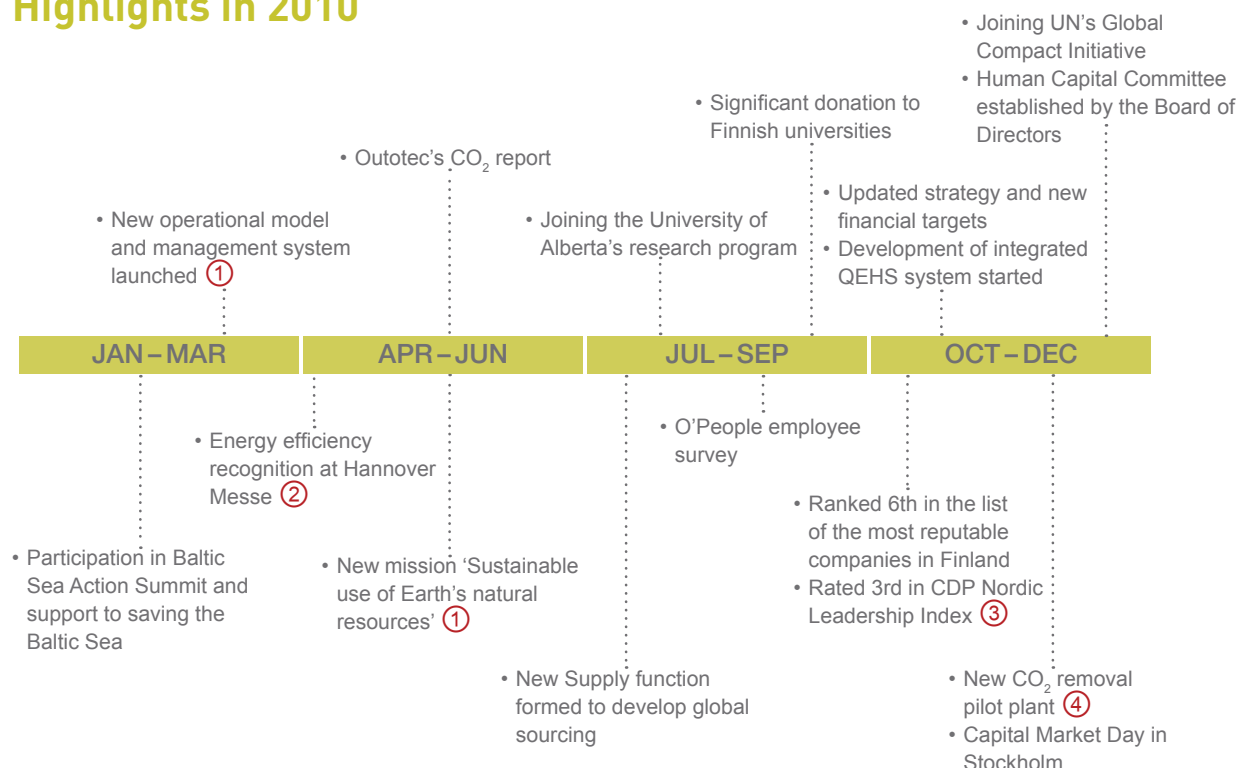
### Services

- Providing life cycle services to Outotec's customers in all business areas.

Summary of key figures	2010	2009
Sales, EUR million	969.6	877.7
Reported operating profit, EUR million	41.6 <small>(from business operations 74.7)</small>	58.6
R&D investments (incl. IPR), EUR million	4.7	4.1
R&D expenses, EUR million	28.5	20.5
Priority applications, pcs	50	56
National patents granted, pcs	287	286
Average number of employees	3,151	2,612
Wages and salaries, EUR million	224.4	159.5
Total greenhouse gas emissions, 1,000 t CO <sub>2</sub> -e	24.4	18.1
GHG emissions avoided through use of Outotec technologies, million t CO <sub>2</sub> -e	4.2	4.1
Total energy consumption, TJ	150.0	101.6

Read more about our organization, products and services as well as financial performance in Outotec's Annual Report 2010.

## Highlights in 2010



① The new operational model was launched in order to align the organizational structure with strategic growth objectives and to improve the cost efficiency of our operations. The new structure also supports the goal to grow our new environmental business and service business, as well as to create closer cooperation within the entire Outotec. 'Sustainable use of Earth's natural resources' was chosen for Outotec's mission after an extensive 'Have your say' dialogue with employees and the management about the company's future direction.

② Brazilian alumina producer Alunorte received the 'Special Recognition' award for its energy efficiency during the Hannover Messe. Alunorte uses Outotec® calcination technology at its refinery. New optimization processes in cyclones improve heat transfer and cut down on pressure losses thus resulting in energy savings and more stable operation.

③ Outotec is ranked the third best Nordic company by Carbon Disclosure Project (CDP) in the Carbon Disclosure Leadership Index, which is a key component of CDP's annual Nordic 200 Report. The Index highlights companies with the most complete and professional approach to corporate governance in respect of climate change disclosure practices. Outotec's score in the CDP ranking was 90/100.

④ Outotec commissioned a new CO<sub>2</sub> removal pilot plant at its R&D center in Germany. The pilot installation allows Outotec to fully demonstrate its proprietary Circofer® process for the direct reduction of fine iron ores based on coal.



# Our approach

“Of the megatrends facing the mining and metals sector, we consider sustainability the most important.”

## CEO's letter to stakeholders

To take a step back from the world of corporate affairs for a moment, it should be pointed out that as a society, and as responsible inhabitants of planet Earth, we have a dilemma. The fact is that throughout the history of mankind, much of our prosperity, progress and development as a species can be attributed to metals and their usage.

Outotec's most significant impact on sustainability occurs indirectly through our customers' operations. At present, our customers are confronted with the dilemma that exists between the growing need for metals and the environmental impact of producing them.

We believe that this dilemma can be addressed. In fact, its solution is a vital part of our strategy – we see it as our role in the industrial eco-system. With

eco-efficient solutions it is possible to reduce the environmental impact of the industry, while at the same time increasing welfare. Of the megatrends facing the mining and metals sector, we consider sustainability the most important, and we see evidence of this not only in mature markets but also in those in the developing stages. In the world of exhausting natural resources and a new energy paradigm, where oil is expected to run out by 2050 and nuclear power is being abandoned by many countries, there is increasing demand for more advanced, energy-efficient technologies and recycling solutions.

In 2010, we re-stated our mission and defined our strategic priorities. Sustainable use of Earth's natural resources is the mission we believe both

our customers and employees can fully embrace and work toward achieving.

### Our global impact

Climate change, pollution, exhaustion of natural resources and lack of clean water are issues that threaten to affect us all and only fast, decisive action can reverse such trends and enable more sustainable activity in the future.

We address these challenges by providing our customers with sustainable technology solutions to maximize the recovery of valuables and minerals whilst consuming less energy and fewer natural resources at reduced operational cost. Outotec's roots in the metal production sphere, combined with our 100-year pedigree, have allowed us to establish a strong position of mas-

tery over the entire metal value chain. In addition, to stay at the forefront of sustainable solutions we continuously develop our proprietary technologies, pushing them to the next level.

When dealing with all aspects of the industry, from ore to refined metals, you will find Outotec solutions at work, not to mention our work in other areas such as water, energy, and biomass. The technologies we provide can reduce the environmental effects of a number of industrial operations worldwide, hence our strong commitment to making the most of our potentially global impact.

We constantly strive to enable the sustainable use of natural resources. Based on self-evaluation carried out together with an independent consultant, around 72 percent of our order intake

for 2010 was categorized as Environmental Goods and Services under the OECD classification. This shows the depth of our commitment to sustainability. We are a provider of cleaner technologies, products and services geared towards the reduction of environmental risk, pollution, and use of natural resources. This is demonstrably the core of our business.

### Paving the way

We launched a new operational model in April 2010 to align our organizational structure with our growth objectives. Each of our four business areas are focusing on growing and developing their respective businesses globally by providing life cycle solutions to our customers. In particular, our new

Energy, Light Metals and Environmental Solutions business area focuses on developing offerings for bioenergy, water, improved heat recovery, cleaning of process gases and clean technologies for oil shale and oil sands. Marketing, sales and delivery operations in geographical market areas were placed in a global Market Operations organization to strengthen the sales of our company's offerings. The new shared functions are responsible for establishing the operational platforms enabling

improved scalability, flexibility and productivity. Restructuring the organization and adjusting to new ways of co-operating has demanded a lot of work and commitment from our personnel. However, I am convinced that the path we have chosen is the key to our future competitiveness and growth.

We also consolidated our efforts in 2010 and started the process to harmonize our environmental and quality management systems and create an Integrated System for Quality, Environ-

“Around 72% of our order intake for 2010 was categorized as Environmental Goods and Services under the OECD classification.”

mental and Health and Safety Management, based on our business objectives and requirements, internal policies, and international standards. This work will continue in 2011.

In addition, we strengthened our commitment by signing the United Nations Global Compact initiative and making formal our pledge to uphold the principles on human rights, the environment, labor, and anti-corruption. We will continue to lend our support to this and other such causes, pushing for good use of Earth's resources for generations to come.

**Pertti Korhonen**  
President & CEO, Outotec



## Strategy

Our most significant impacts on the environment occur indirectly through our customers' operations. Our strategy for 2010–2015 builds on providing sustainable life cycle solutions which fully utilize Outotec's technology and service offering and guarantee performance and lifelong benefits to customers. These benefits include license to operate, reduced energy and water consumption, high recovery, and minimum emissions. In addition to strengthening our technology portfolio for the entire value chain – from ore to metals – through own research and development as well as by acquisitions, our strategy focuses on expansion to adjacent industries such as the energy industry and industrial water treatment. We also aim at strengthening further our presence in emerging markets and improving our productivity and scalability. This strategy provides the direction for Outotec's sustainability work.

In the area of mineral and metal 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. We continue to actively seek new applications for our technologies. Rising energy costs and stringent legislation have guided users to seek out energy efficient solutions for many years. 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.

Energy and industrial water treatment are just two examples of adjacent areas which require efficient and environmentally sound use of scarce raw materials. These industries show significant growth opportunities for Outotec while offering high synergy potential and manageable risks.

As well as the pressure to improve production efficiency from an environmental sustainability perspective, the financial impact of sustainability in the metals and minerals industry is also of growing relevance. Goldman Sachs estimates that, assuming a working emissions trading scheme is in place pricing carbon at USD 60/ton of CO<sub>2</sub>, 15 percent of the total cash flow of global companies will be transferred from companies with high emissions to those with low emissions<sup>i</sup>. This trend will be seen specifically in carbon intensive industries, such as those of Outotec's customers<sup>ii</sup>. While this poses a sig-

nificant threat for these customers, it also provides immense possibilities for Outotec to successfully market its technologies. According to GS Sustain, Goldman Sachs's sustainability-focused research body, mining as well as the steel and aluminum industries present significant opportunities for differentiation through effective management of climate change pressures<sup>iii</sup>.

In light of the trends mentioned above, Outotec's strategic goals for

Outotec has worked on over 2,000 projects worldwide. The majority of the world's iron ore pellets, half of the world's primary copper and a third of the nickel from sulfide ores are produced using Outotec processes. Furthermore, over 600 sulfuric acid plants installed with the help of our expertise account for more than a third of the world's sulfuric acid capacity.

**“We strive to become the undisputed global leader in sustainable minerals and metals processing solutions and to firmly establish our presence in the energy and water businesses.”**

2011–2015 are to become an integrated global company, to develop a strong company culture, and to improve cost-efficiency and scalability. Supported by a strong brand and reputation, the company aims to cover all relevant geographic markets with its full offering and 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.

### Notes:

<sup>i</sup> GS Sustain, May 21 2009: Change is coming: A framework for climate change – a defining issue of the 21st century, p.6.

<sup>ii</sup> GS Sustain, May 21 2009: Change is coming: A framework for climate change – a defining issue of the 21st century, p.6 and 8.

<sup>iii</sup> GS Sustain, May 21 2009: Change is coming: A framework for climate change – a defining issue of the 21st century, p.10.

## Materiality assessment

Outotec's most important sustainability issues were defined in a management workshop in 2010. The participants included the CEO and heads of shared functions such as strategy, technology, communications, investor relations, and business infrastructure. Feedback from stakeholders was taken into account when evaluating the most important sustainability issues and, subsequently, the chosen GRI indicators.

The relevant sustainability-related Key Performance Indicators (KPIs) were chosen based on the workshop results. The materiality assessment

revealed that development and improvement of the company's technology solutions is clearly the most important sustainability issue for Outotec. The significance of providing eco-efficient solutions is underlined by comparing the amount of CO<sub>2</sub> emissions annually avoided through use of Outotec's goods and services (4.2 million tonnes CO<sub>2</sub>-e) and the amount of greenhouse gas emissions from Outotec's operations (approximately 25,000 tonnes CO<sub>2</sub>-e).

Improving customer environmental performance and customer satisfaction were also regarded as significant. With

respect to Outotec's employees, health, safety and employee well-being were ranked among the matters of highest concern. Efficient management of the company with clear principles (e.g. corporate governance, business ethics and anti-corruption) was regarded important.

Improving the sustainability of Outotec's operations was also identified as an important target. Employee motivation and satisfaction, the ecological footprint and water use of Outotec's operations were determined material sustainability issues in the assessment.

Various Outotec stakeholders, such as investors, analysts, and NGOs, have a special interest in sound corporate management. Corresponding to these concerns the appropriate GRI indicators were chosen and targets for improvements determined.

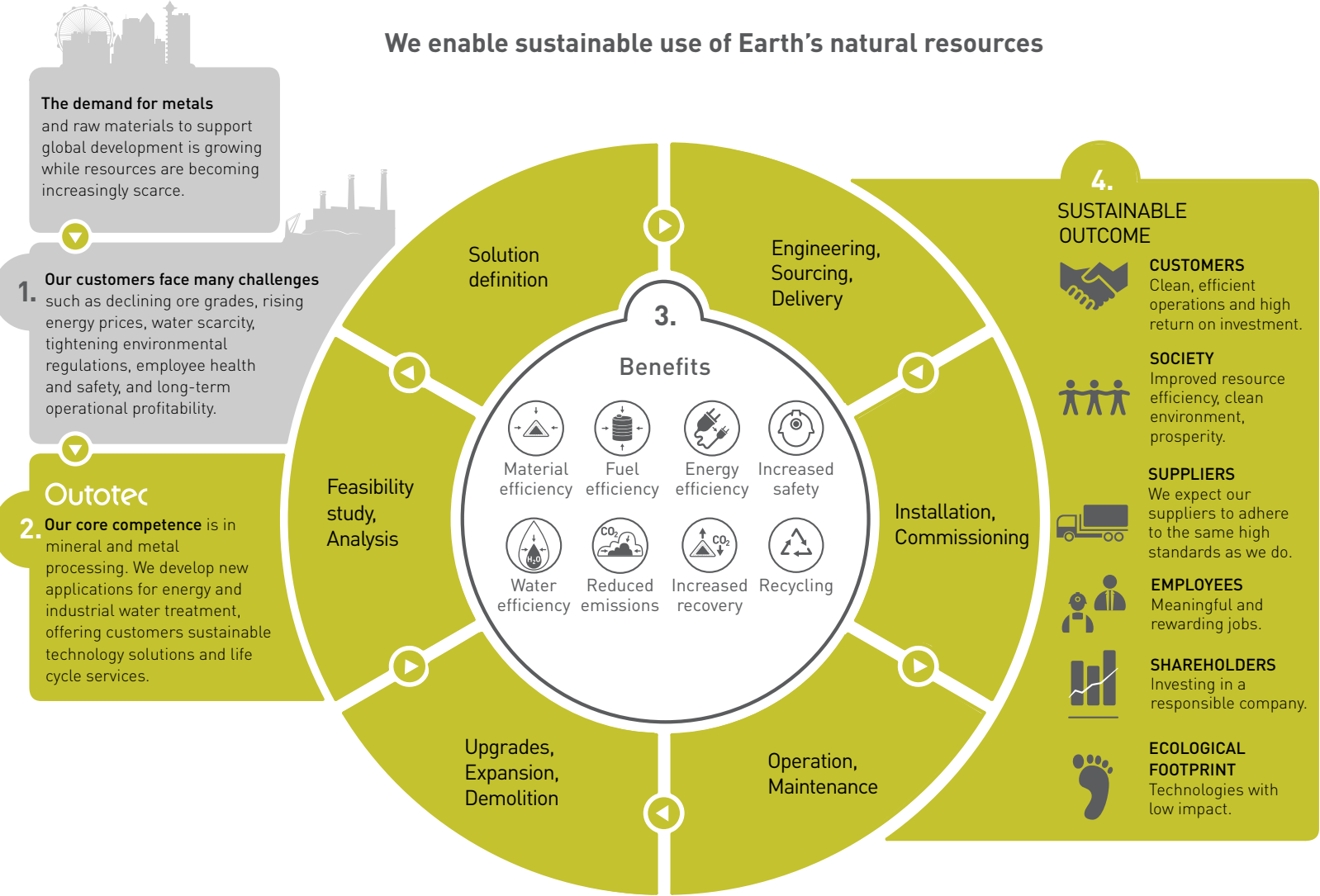
### Outotec's sustainability issues with high impact

- Energy efficient solutions
- Eco-efficient solutions
- Product life cycle
- Quality
- Improving customer environmental performance
- Customer satisfaction
- Business ethics and anti-corruption
- Employee and subcontractor health and safety
- Employee well-being

### Important sustainability issues

- Water use
- Compliance with laws and regulation
- Risk management and internal control
- Employee motivation and satisfaction
- Improving sustainability of Outotec's operations
- Carbon footprint

Feedback from Outotec's stakeholders, identification of key impacts, risks, and opportunities from sustainability trends and internal workshops led to the creation of Outotec's sustainability map.



## Management approach

### Economic responsibility

As a listed company 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 applies principles of good corporate governance and transparent accounting.

Outotec's operations have economic impacts on the local, national and global communities in which the company operates. We contribute to community well-being through paying taxes, direct and indirect employment, and other ways of community involvement. The world's industrial production is increasingly concentrated in Asia to serve the area's rapidly growing large local markets and to supply world markets with low-cost manufacturing. Thus, the majority of new metals production capacity is also being constructed in developing markets. Outotec is strengthening its presence and aims to support sustainable development in these markets.

An essential part of Outotec's growth strategy is to complement the company's technology portfolio of sustainable products and services through acquisitions. In 2010 for example, the acquisition of Ausmelt strengthened Outotec's recycling offerings, Larox brought new technologies and products for filtration and industrial water treatment, while Edmeston increased the



reliability of our sulfuric acid plant deliveries thanks to its material know-how.

### Environmental responsibility

Although improving the sustainability of Outotec's operations is an important target for the company, the development and delivery of energy-efficient and environmentally sound solutions for the customers has far more significance for Outotec in terms of environmental responsibility. We also intend to grow the share of environmental goods and services in our offerings.

As a leading provider of technology, Outotec ensures that all the plants, equipment and services engineered and delivered by the company are reliable and safe over the life cycle and all the products meet with all relevant health and safety laws and regulations. It is ensured that the equipment fulfills the safety-related industrial standards.

### Social responsibility

#### Society

Outotec contributes to the community well-being, in addition to paying taxes

and providing jobs directly and indirectly, by supporting charitable enterprises and events in line with our ethics. We also maintain close co-operation with educational institutions. Outotec does not support or give donations to political organizations.

### Human rights and labor practices

Outotec encourages its employees to value diversity and different cultures and treats people in an equal and fair manner regardless of their ethnic origin, nationality, religion, political views,

sex, sexual orientation, or age. Freedom of association prevails in Outotec.

Outotec's aim is to be an open and equal work community. The company culture encourages everyone to discuss and develop Outotec's operations. Regular briefing and interactive events are organized for the personnel regarding the company's financial situation, targets and successes. In addition, various influencing and discussion channels are used, such as the intranet, Outotec Round-Table, and meetings with employee representatives.

Competent and motivated people are essential to Outotec's success. Therefore the company provides continuous training and competence development as well as a healthy and safe working environment for the personnel.

As a technology company, Outotec needs both highly qualified employees and suppliers. In Outotec's customer projects, the locally sourced subcontractors need also to be trained specialists, and therefore the risk profile regarding affront/violation of human rights is relatively low. However, more emphasis will be put in future on the supplier selection procedures.

#### Globally integrated QEHS system

In 2010, in order to operate as a globally integrated company, to grow the business and to improve productivity and quality, Outotec's management started a process to create a globally Integrated System for Quality, Environmental and Health & Safety Manage-

#### The global QEHS system will:

- Facilitate the efficient, safe and legal operation of Outotec's business processes
- Facilitate continuous improvement of these processes concerning QEHS-related topics
- Ensure that our customers' needs are being satisfied
- Enable the certification of chosen QEHS system modules in chosen locations
- Facilitate Outotec's fast and profitable growth by providing scalability in the form of well-defined QEHS modules

ment (QEHS) to replace current unit-specific quality systems.

The aim is to establish and implement the agreed integrated QEHS Management System at all Outotec locations based on local laws and global Outotec policies in order to fulfill the requirements of our businesses, business processes, shared functions and support processes. The full coverage of this system, and its efficient implementation and continuous improvement, will help the businesses meet their growth targets. The QEHS system should also develop Outotec's competitiveness by facilitating even more efficient and modularized business processes, which deliver the desired output quality at the right cost. Improvements in Outotec's business processes will also be made by facilitating continuous improvement and by introducing harmonized ways to manage common problems in Outotec globally.



The operating QEHS systems consist of the developed system framework and the daily work of all the individuals in the Outotec organization. The systematic implementation of the processes and proactive approach to problem solving and debottlenecking are the fundamentals in achieving desired outcomes. QEHS will be integrated into Outotec's operational model.

Everyone at Outotec is responsible for the quality of their work and for ensuring the full implementation of all

Outotec policies, processes and procedures. Managers are also responsible for facilitating and monitoring their people to work in the processes, measuring, analyzing, problem-solving and for implementation of improvements in the process. Each unit is responsible for its quality assurance procedures and corrective actions. The whole Outotec organization is responsible for implementation and continuous improvement.

Read also Outotec strategy, p. 6.

# Our way of working

## Employees

At the end of 2010, Outotec had a total of 3,130 employees. Temporary personnel accounted for about 8 percent of the total. In addition to own employees, Outotec had approximately 328 full-time equivalent contracted professionals working in project execution.

Nearly half of Outotec's employees are based in Europe, however, Outotec has operations and employees in all the continents.

### Educational background

Outotec's position as an industry leader requires strong technological expertise, understanding of customers' production processes, project know-how, and production plant expertise. One third of Outotec's employees has a higher university level or post graduate degree, and some 40 percent of the employees has upper secondary level or lower university level degree.

### Challenging year for employees

The company's new mission 'Sustainable use of Earth's natural resources' was communicated to all employees globally as part of strategy communication. The target is that every employee in Outotec understands the purpose of the company, our future direction and ways to reach set goals.

There was a major restructuring within Outotec in 2010. Company acquisitions, the most significant of which was the acquisition of a filter solution supplier, Larox, brought more than 600 new employees to Outotec. Additionally, the company's operational model was changed, and related structural reorganization and development of global business processes got off to a good start. Through the organizational change, possible new cost savings were sought and overlapping functions were abolished.

Restructuring of the organization and adjusting to new ways of cooperat-

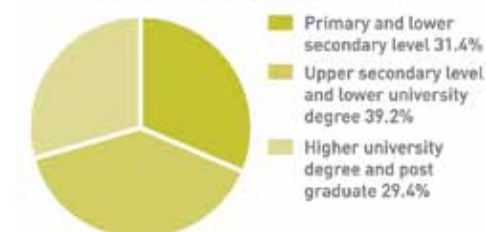
ing has demanded a lot of work and commitment from our personnel. Following negotiations carried out in the spring, the number of personnel was reduced by 161 world-wide. About half of the reductions were implemented through pension arrangements and by reducing fixed-term contracts. Internal transfers were used in an effort to minimize personnel reductions. The Services business was developed through internal transfers, as well as by recruiting new experts. At the same time, the legal structure of the company was simplified. For many employees, the change also meant a change of

Employees	2010	2009	GRI indicator
Number of employees at year end	3,130	3,128	LA1
Number of employees on average	3,151	2,612	LA1
Temporary, % of the total number	8	8	LA1
Number of full-time equivalent contracted professionals	328	250	LA1
Share of women in employees, %	20	N/A	LA2
Share of women in management, %	11	N/A	LA2, LA13
Wages and salaries paid, EUR million	224.4	159.5	EC1
Employee average age	41.3	43.7	LA2
Safety performance in manufacturing facilities, number of accidents	17	N/A	LA7

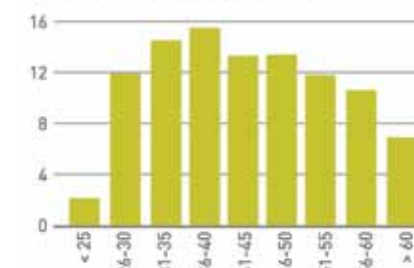
Personnel by country



Educational background



Personnel by age range, %



Personnel survey	2010	2008	2007
Employee satisfaction, %	63.7	66.4	63.9
Survey coverage, %	74.6	73.1	79.0

supervisor. For some, their supervisor is now based in another country.

While extensive internal changes were implemented at Outotec, business also began to pick up toward the end of 2010. Indeed, the year as a whole can be described as a fairly challenging and busy one for personnel.

#### Work satisfaction remained on a good level

The O'People personnel survey measuring work satisfaction globally was done in October/November 2010. The number of respondents rose from two years ago by nearly two percentage points to 74.6 percent. According to the survey, both overall satisfaction and commitment continue to be at a good level, although both fell slightly from the previous measurement. The biggest decrease was seen in cooperation, information flow inside the company and organization, which was expected because of significant changes that took place during the year. By contrast, management was perceived to have improved since the previous survey. The development of HR management continued on the basis of the results received from the previous survey, as well as country-specific surveys.

#### Employee turnover

During 2010 employee turnover remained low in main locations. The data collection system will be developed further, however, to get exact turnover rates of global operations.

#### Competence development

Competent and motivated people are essential to Outotec's success. Therefore the company provides continuous training and competence development as well as a healthy and safe working environment for the personnel.

To implement major changes globally requires commitment of all employees and enhanced communication and training. The whole Executive Board and nearly 100 employees in eleven design teams participated in the organizational design work in the beginning of 2010. In the second half of 2010, the process to create the strategy for the coming years engaged over 100 employees.

To support the communication of the new operational model and strategy as well as the on-boarding of new employees, an e-learning application was developed. Nearly 1,000 employees successfully completed the e-learning exercise.



In learning and development, 70 percent of Outotec's emphasis is on on-the-job learning, 20 percent on learning from others and 10 percent of formal training programs. In 2010, the new operational model and integration of Larox were the key themes in all communication, change management and trainings to increase the understanding of the new organization, matrix relationships, purpose of each employee's own job and target setting.

The average hours of trainings in different formats per year is estimated to be 10 hours/employee.

#### On-the-job learning

As part of on-the-job learning and personal growth, job rotation was very much encouraged and approximately 60 employees did take on new challenges. Outotec's new employees participated in various customer projects to get practical experience. Hundreds of employees participated in different development initiatives in Outotec, such as operational model design, strategy process and designing global business processes. As part of life-long learning and uniqueness of knowledge in certain expertise areas, Outotec encourages

experienced specialists to take an educator role to share their expertise and train successors.

### Learning from others

Mentoring is used to transfer tacit knowledge from senior experts to juniors. During 2009–2010 some 60 employees participated in the mentoring programs as mentees and mentors. A new concept was introduced in which two persons mentor a group of 10 persons for a year.

Outotec has its own concepts to strengthen leadership and supervisory skills. Leadership development and new key expert position holders in a matrix organization were supported by coaching programs. In 2010 there were about 25 personal coaching processes for key employees to support them in their challenging job. Also management team development processes started for the Executive Board and management teams of the Non-ferrous Solutions and Services business areas, for 35 executives in total. The Corporate Human Capital function has created an in-house coach pool to find a suitable coach to meet different needs and developed regular monitoring of quality and achievement of targets of the coaching processes.

### Training programs

As part of formal trainings, some corporate-wide programs were organized. In leadership development, 120 discipline leaders participated in a tailored train-

ing program, and a one-year O'Leader program was organized for 16 young experts and leaders. Different tools such as EQ-i Emotional Intelligence (160 participants) and 360 assessments (55 participants) were used as part of personal growth and coaching. Also some local leadership development programs were organized in Australia and Chile. A program for increasing lump-sum turnkey project understanding was organized twice in Germany. In addition, Outotec's business lines and product lines organized technical trainings for employees and customers worldwide. Various support functions, Services business area and product lines trained their network and global community members. Furthermore, language training in several languages and some cross-cultural training for Indian and Middle East cultures were organized. Over 650 employees received training for MS Office and Lotus Notes applications. Also, many employees individually participated in external training and graduation programs.

### Performance Development Dialogues

In 2010, Outotec launched a renewed process supported by an electronic workbook for Performance Development Dialogues (PDD), and approximately 350 managers globally were trained and supported in the use of the new tool. The Outotec Performance Development Dialogue process includes a participative process between an employee and a line manager. Target

setting is tied to an annual bonus system. The targets and evaluated results are always signed by both parties and approved by over manager (line manager's manager). In 2010, 86 percent of the employees had a Performance Development Dialogue (2009: 64%).

### Labor practices

#### Round-Table discussed strategy

Outotec Round-Table is a discussion forum for personnel representatives and management on matters concerning the whole of Outotec. It is based on the European Works Council directive 94/95 EU, Article 6 and it covers all employees in EU countries as well as Norway (and Switzerland). Outotec Round-Table was held three times in 2010. Topics discussed included strategy, acquisitions, organizational change and development programs. Some 20 personnel representatives participated in the meetings.

### Employee benefits

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

Fair and motivating compensation is achieved through pay that is in line with the requirements of the job, and the performance and skills of the employee. Furthermore, every employee is covered by the bonus system.

55 percent of employees are covered by collective bargaining agreements. Binding collective agreements are followed in each country where they are applicable to Outotec employees.

Almost all Outotec employees are covered by an annual bonus system to encourage them for performance and development. The bonus is paid only to those who have been employed by the company at least six months during the accounting period, or if a person has been hired during the accounting period, the minimum employment time is 4 months.

### Health and safety

In 2010, Outotec started the work to harmonize its environmental and quality management systems and to create an Integrated System for Quality, Environmental and Health & Safety Management (QEHS) that is based on Outotec's business objectives and requirements, internal policies and international standards.

Outotec has adopted a policy on occupational health, safety and environment which addresses issues from a general perspective, leaving specific details to be further elaborated and applied as required locally. It is each employee's responsibility to comply with those policies.

The Occupational Health and Safety (OHS) Committee at Outotec's headquarters facilitates regular OHS training and education for employees and continuously audits safety at the working

## Targets related to employees

Target for 2010	Performance in 2010	Target for 2011	GRI indicator
	Decision was made to review Outotec principles. Outotec signed the United Nations Global Compact initiative.	Have a dialogue with employees about Outotec values, principles and code of conduct and redefine them. Long-term target is to provide training related to code of conduct to all employees.	SO3
Build a platform that enables harmonized processes and effective utilization of personnel data globally.	Human Capital master data system was developed.	Implement the HC master data system globally and develop it to include relevant personnel data needed to establish corporate wide indicators.	LA1-13
	86% of employees had a Performance Development Dialogue.	90-95% of employees have a Performance Development Dialogue.	LA12

area. The committee contributes to a safe working environment and maintains a system to record accidents and hazardous situations in the workplace.

### Women in the workforce

Outotec's Board of Directors had one female member in 2010. The share of women in the workforce was 20 percent and the share of women in managerial positions was approximately 11 percent. The low shares may reflect the typically high share of men in the history of the mining and metallurgical industry. There were no reported incidents of any type of discrimination cases in 2010.

### Procedures for local hiring

When Outotec starts a new operation in a country, normally an expatriate is sent to take care of integration of the new operation. However, the target is that senior management of the local operation is hired locally. Currently there are operations in 24 countries with a local manager in 93 percent of them.

Read also Interaction with stakeholders, p. 20.

## R&D and innovation

Outotec's success is based on a strong portfolio of world-class technologies, robust expertise and innovative personnel. To stay at the forefront of sustainable solutions we continuously improve and develop our proprietary technologies. We will further strengthen our portfolio of sustainable solutions for the entire value chain from ore to metals, and complement our in-house R&D with acquisitions and partnerships.

We cooperate with universities, research institutes and customers in R&D. Outotec has over 560 patent families, over 4,700 national patents and applications, and over 70 trademarks. Key areas of expertise are physical separation, metallurgy including pyro- and hydrometallurgy, as well as gas handling technologies. We have two in-house research centers, state-of-the-art laboratories and test facilities, which have made it possible that dozens of Outotec technologies are today industry standards. Outotec also has extensive knowledge of material technology, plant and equipment engineering, equipment and process automation and the implementation of large international projects.

Outotec actively strives to explore new applications for its 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 scarce raw materials in an efficient and environmentally sound way. For some time now, rising costs of energy and stringent legislation have led users to seek out energy efficient technologies. Water is also 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 adjacent industries such as energy and industrial water treatment are attractive as they show high synergy potential and manageable risks. Outotec's energy and environmental solutions business includes offerings for bioenergy, water, improved heat recovery, and applications for oil shale and oil sands. Naturally, all of the company's business areas focus on energy and water efficiency, emission reductions and waste management in their product development. In addition to in-house R&D, Outotec develops sustainable solutions in partnership with other companies. For example utilizing its expertise in solid-water separation technologies Outotec cooperates with Kemira to improve the oil recovery and water efficiency in oil sands extraction.

In 2010 Outotec commissioned a new CO<sub>2</sub> removal pilot plant at its R&D center in Germany. The pilot installation is aimed to fully demonstrate Outotec's proprietary Circofer® process



for the direct reduction of fine iron ores based on coal, where CO<sub>2</sub> removal from the process gas enables full utilization of the reduction potential of coal. It also complements the existing circulating fluidized bed pilot plant allowing for the cleaning of process gas also from coal and biomass gasification. The new pilot plant plays an important role in the development of Outotec's new offerings for the energy industry providing the testing facilities to reduce the carbon footprint of coal and biomass-based energy production well as the oil winning from oil shale. However, the segregation of captured carbon dioxide is not included in scope currently at the pilot plant.

### Targets related to R&D

An essential part of Outotec's growth strategy is to complement the company's technology portfolio of sustainable products and services through acquisitions. In R&D Outotec focuses on technology development to increase resource efficiency, for example by reducing energy and water consumption and environmental impacts of the company's products and services. We plan to grow the percentage of environmental goods and services in our offering and order intake through product development and acquiring sustainable technologies.

R&D and innovation	2010	2009	GRI indicator
R&D expenditure, EUR million	28.5	20.5	EN6, EN26
R&D expenditure, % of sales	2.9	2.3	EN6
R&D grants, EUR million	1.3	2.0	EC4
Amount of new patent applications filed	50	56	
New national or regional patents granted	287	286	
Amount of patent families	565	539	
Proportion of Environmental Goods and Services in order intake, %	72	76	EN6

Performance in 2010	Target for 2011	GRI indicator
72% of order intake classified as Environmental Goods and Services (EGS).	Grow the percentage of EGS in order intake, long-term target is to reach a level of 80–90%.	EN6
EUR 28.5 million invested in R&D.	Increase the investments in R&D in line with business growth.	EN6, EN26
Acquisitions of Ausmelt and Larox brought new sustainable technologies for recycling and water filtration.	Continue growth through acquisitions, update the acquisition process to include sustainability assessment in due diligence.	EC1
4.2 million tonnes CO <sub>2</sub> emissions avoided (CDP 2010) through use of three Outotec technologies.	Over 5% annual increase in the amount of avoided CO <sub>2</sub> emissions through use of Outotec technologies and solutions.	EN26

Read more about our R&D activities in Outotec Annual Report 2010, pages 36–39.

## Code of conduct, values and principles

As defined in our Corporate Responsibility Policy, corporate responsibility needs to be an integral part of all Outotec operations, activities and decision-making everywhere we operate. Compliance with laws forms the basis of all Outotec's actions. This Policy serves currently as guidelines for Outotec's business ethics, and management as well as employees are expected to comply with it.

In order to develop our performance and reporting, we strive for a continuous dialogue on corporate responsibility issues with our customers, employees, shareholders, suppliers, as well as public and non-governmental organizations. As a listed company Outotec is committed to increasing the shareholder value. We deliver on this commitment by developing and maintaining competitive and profitable operations based on ethical business practices. We apply principles of good corporate governance and transparent accounting. Outotec's Corporate Governance Statement 2010 has been prepared in accordance with recommendation 54 of the Finnish Corporate Governance Code and related instructions issued by the Securities Markets Association.

### Committing to the Global Compact initiative

In 2010 Outotec signed the United Nations Global Compact initiative and

committed to its principles of human rights, environment, labor, and anti-corruption. By joining the corporate responsibility Global Compact initiative

Outotec has expressed its intent to further advance sustainability and social responsibility principles in its business practices.

Outotec's current values, defined jointly with employees as the Principles, reflect the target culture where we



	UN Global Compact Ten Principles	Outotec
Principle 1:	Businesses should support and respect the protection of internationally proclaimed human rights	<ul style="list-style-type: none"> <li>• Outotec Principles</li> <li>• Outotec Corporate Responsibility Policy</li> <li>• Outotec Occupational Health, Safety and Environmental Policy</li> <li>• Local health and safety systems</li> <li>• Employee training and development</li> <li>• Collective bargaining agreements</li> </ul>
Principle 2:	Businesses should make sure that they are not complicit in human rights abuses	<ul style="list-style-type: none"> <li>• Outotec Principles</li> <li>• Corporate Responsibility Policy</li> </ul>
Principle 3:	Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining	<ul style="list-style-type: none"> <li>• 55% of employees covered by collective bargaining agreements</li> </ul>
Principle 4:	Businesses should uphold the elimination of all forms of forced and compulsory labor	<ul style="list-style-type: none"> <li>• Outotec Principles</li> <li>• Corporate Responsibility Policy</li> </ul>
Principle 5:	Businesses should uphold the effective abolition of child labor	<ul style="list-style-type: none"> <li>• Outotec Principles</li> <li>• Corporate Responsibility Policy</li> </ul>
Principle 6:	Businesses should uphold the elimination of discrimination in respect of employment and occupation	<ul style="list-style-type: none"> <li>• Corporate Responsibility Policy</li> </ul>
Principle 7:	Businesses should support a precautionary approach to environmental challenges	<ul style="list-style-type: none"> <li>• R&amp;D, technology development to improve process solutions environmental performance, comply with all relevant environmental legislation, risk management (materials used, products, processes)</li> <li>• Quality and environmental management systems</li> <li>• Risk management system</li> <li>• Technology Policy</li> </ul>
Principle 8:	Businesses should undertake initiatives to promote greater environmental responsibility	<ul style="list-style-type: none"> <li>• R&amp;D, technology development</li> <li>• Energy efficiency agreements in Finland</li> <li>• Unit-specific quality and environmental management systems</li> <li>• Outotec products and services fully comply with local environmental laws and regulations</li> </ul>
Principle 9:	Businesses should encourage the development and diffusion of environmentally friendly technologies	<ul style="list-style-type: none"> <li>• BAT offerings; sustainability KPIs in Outotec solutions</li> <li>• Outotec mission and vision</li> <li>• Sustainability features in product design</li> </ul>
Principle 10:	Businesses should work against corruption in all its forms, including extortion & bribery	<ul style="list-style-type: none"> <li>• Corporate Responsibility Policy</li> </ul>

want to work. These Principles are Sustainable technology; Lead in life and work; Pro customer; and Share and care. However, as the personnel has increased due to acquisitions and active recruiting, more than half of the current personnel has not been involved in defining the Principles. Therefore it was decided in 2010 that Outotec Principles and brand values need to be reviewed and their alignment with the new mission and strategy to be checked. This work will be done in 2011.

### Compliance with regulations and laws

Outotec endorses ethical business practices and complies with national and international laws and regulations. In 2010, there were no incidents of corruption or anti-trust behavior reported. No fines or sanctions for the non-compliance with laws and regulations were imposed. Neither had any issues emerged concerning the rights of indigenous people.

Our products comply with industrial health and safety standards and regulations. We provide extensive product information for the customers in the form of user manuals and technical descriptions. No non-compliance con-

cerning the provision and use of products and services has been reported to Outotec.

### Internal control and audit

Internal control is a fundamental part of Outotec's corporate governance system. Internal control can be defined as a set of processes designed to provide reasonable assurance on achievement of company objectives in areas of effectiveness and efficiency of processes and economic use of resources, reliability of financial reporting information and compliance with external rules and regulations as well as internal policies and procedures.

Internal audit helps Outotec to comply with good corporate governance, give an independent perspective for management in considering and reviewing company operations, and accomplish its objectives by bringing a systematic, disciplined approach to evaluating and improving the effectiveness of risk management, control, and governance processes.

The existing internal and external audit processes take into account eventual corruption suspicions. Legal seminars are held throughout the or-



ganizations on a regular basis to train employees in the organization's anti-corruption policies and procedures.

### Targets regarding code of conduct, values and principles

Because there are so many new employees in the company who are not familiar with Outotec Principles and Corporate Responsibility Policy, an updated code of conduct providing

more concrete guidelines for everyday situations will be developed in 2011. We plan to have a dialogue with employees about Outotec values, principles and code of conduct, and based on the results of the dialogue redefine them. As a long-term target we plan to make the code of conduct available for all stakeholders via the internet and provide training related to the code of conduct to all employees.

Performance in 2010	Target for 2011	GRI indicator
Decision was made to review Outotec principles. Outotec signed the United Nations Global Compact initiative.	Have a dialogue with employees about Outotec values, principles and code of conduct and redefine them.	SO 3

## Governance and sustainability

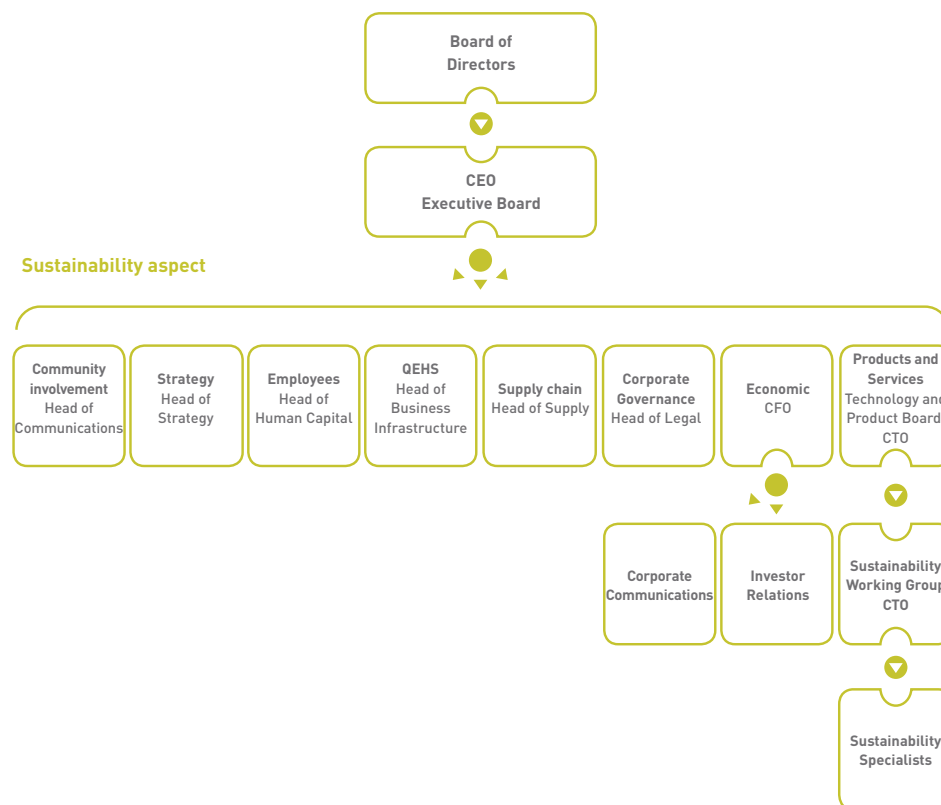
Outotec follows the Finnish Corporate Governance Code (available at [www.cgfinland.fi](http://www.cgfinland.fi)) issued by the Securities Market Association and adopted by the NASDAQ OMX Helsinki stock exchange. Outotec complies with the regulations and recommendations issued by NASDAQ OMX Helsinki.

At Outotec, the highest level of responsibility for issues related to 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. In addition, Outotec has a separate sustainability working group that meets two to three times annually. The group is headed by the Chief Technology Officer (CTO) and decisions made at these meetings are communicated to the Technology Board including the CEO and to Business Areas' Presidents.

### Sustainability working group

In 2010, Outotec's Technology and Product Board and sustainability working group set sustainability targets, and monitored and reviewed the company's sustainability actions. The CEO received regular updates on sustainability-related issues from the CTO, who in turn received reports from the Vice President of Environment and Sustainability.

### Decision making in sustainability issues



The purpose of the working group was to identify Outotec's actions related to sustainability and climate change. The group was also responsible for the annual calculation of the company's carbon footprint and the emissions avoided through the use of Outotec's technology solutions. It is through these means that the company moni-

tors the progress it has made in its actions to mitigate climate change issues.

### Monetary incentives for management related to sustainability

Employees whose responsibilities include working with sustainability and environmental issues have personal targets set in their annual bonus plans.

This pertains mainly to environmental and sustainability managers. Inventors working with new, patentable solutions also receive monetary rewards for their inventions. In general, the inventions that qualify are those with potential for introducing energy savings and reductions in CO<sub>2</sub>. Furthermore, Outotec rewards all employees for making proposals that improve the sustainability of the company's internal processes.

The company's research center in Pori, Finland applies a reward system based on balanced scorecard indicators. The majority of Outotec's technology development projects focus on raw material and energy efficiency improvements and thus CO<sub>2</sub> emissions reductions, but management of other emissions has been the target a longer period of time. Water efficiency is also often a driver for Outotec's research and customers expect Outotec to develop new technologies that result in energy and cost savings. Employees of the research center are rewarded if the number of inventions and patent applications exceed a defined annual target.

### Board work

The Board of Directors of Outotec consists of seven members, six of which are independent. Tapani Järvinen, who was the former CEO of the company until end of 2009, is defined as dependent because of his employment relationship. One of the Board members is female.

In 2010, the Board of Directors met 14 times. The average attendance of mem-

bers at Board meetings was 100 per cent. The Board of Directors assesses its performance regularly by conducting an internal self-evaluation annually.

The remuneration of the Board members is described in Outotec Annual Report 2010, p. 62. There is no linkage between the compensation for Board members and the social or environmental performance.

The Board of Directors as a whole determines the qualifications and expertise of the candidates for the members of the board and decides who will be submitted to the AGM.

The Board has an audit committee consisting of four Board members, who are independent of the company. The

committee's task is to review, in greater detail than is possible for the Board as a whole, the auditing work, the internal controls, the scope of internal and external audits, invoicing by the auditors, the company's financial policies and other procedures for managing company-specific risks. In addition, the committee shall prepare recommendations to the General Meeting of Shareholders concerning the election and fees of the auditors for the company. In 2010, the Audit Committee met four times and all members were present.

Outotec's Board of Directors established a Human Capital Committee in November 2010 which focuses on policies and procedures, employee

benefit plans and compensation as well as remuneration of the CEO and other executives. The Human Capital Committee did not convene during 2010.

### Targets related to governance

We aim to improve our sustainability governance processes, data collection and reporting in 2011. Following this report, which is Outotec's first GRI-based sustainability report, a web based communication platform focusing on sustainability will be launched. As part of the targeted growth is planned to be achieved through acquisitions, we intend to update our acquisition process to include sustainability assessment in due diligence.

Target for 2010	Performance in 2010	Target for 2011	GRI indicator
Build a platform for future growth, develop an efficient and flexible way of working and harmonize operations.	New mission, vision and strategy defined. New operational model was launched in April.	Improve sustainability governance processes, data collection and reporting.	
	Acquisitions of Ausmelt and Larox brought new sustainable technologies for recycling and water filtration.	Continue growth through acquisitions, update the acquisition process to include sustainability assessment in due diligence.	EC1
	Decision to improve transparency and communication related to corporate responsibility.	Publish the first GRI-based sustainability report and web-based communication platform.	

## Interaction with stakeholders

Outotec's most important stakeholders are customers, current and future employees, suppliers, shareholders, and the scientific community. These key stakeholders have been prioritized in the sustainability working group. In addition, we cooperate with media as well as public and non-governmental organizations. Outotec has dedicated functions to deal with the key stakeholders in an open and continuous dialogue and to enhance transparency.

### Customers

Outotec's customers comprise large global mining companies as well as small and medium-sized mining and metallurgical companies operating locally. In addition, our customers include companies utilizing natural resources as their raw material, such as fertilizers and energy producers. 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 the investment or plant. Personal discussions and site visits are always needed in Outotec's business. In a number of cases we have joint R&D projects with the customers in order to develop the best possible solution for the customer's specific need.

In addition to regular business



contacts, we organize seminars, users' meetings, training and workshops for the customers. To get feedback and information on customers' expectations, we make 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 and meet frequently at technical conferences and trade shows around the world.

### Sustainability expectations

Outotec studied its customers' sustainability expectations in 2009 by sending a questionnaire to 500 customers. The

survey was done in cooperation with the students of University of Oulu. The results of the survey showed that the majority of the customers place much emphasis on the environmental friendliness of their products and solutions in their strategic product decisions, and that environmental issues have had a strong impact on the company's values and philosophy. Outotec was rated as a reliable and environmentally conscious supplier. Customers rated Outotec's products/solutions as of high quality, but did not agree strongly that Outotec's price is reasonable. However, customers said they are willing to pay more for environmentally friendly products and

solutions. Communicating actively the sustainability of the offered technologies and how they can improve the environmental performance of the customer's production is an area of development for Outotec according to the survey.

In 2010, Outotec organized a seminar 'Sustainable solutions for Vietnam' in cooperation with Vietnam National Coal - Mineral Industries Group for the decision-makers in Vietnam.

### Awards in customer work

Outotec and Brazilian alumina producer Alunorte received an energy efficiency award at the Hannover Messe 2010. Alunorte was presented with the 'Special Recognition' award for using optimization processes in its cyclones to improve heat transfer and cut down on pressure losses thus resulting in energy savings and more stable operation. Alunorte uses Outotec® calcination technology in its production.

Together with the construction subcontractor Graña y Montero, Outotec received a safety award from their client Votorantim Metais for outstanding safety results achieved in the Cajamarquilla project in Peru. The project team achieved 500,000 working hours without a severe incident during the construction.

For the second consecutive year, Outotec received the Top Engineering Award in the category Engineering Mining/Metals – Supplier (Plants/ Equipments and Technological Services in Mining and Metals) in Brazil. The

award is an initiative of the Engineering Association from Minas Gerais, seeking to recognize suppliers in each segment, disseminating and enhancing engineering, engineering professionals, continuous revolution and academic development.

### Customers' customers' sustainability expectations

In 2010, Outotec conducted a study with the objective of going deeper into the value chain and exploring our customers' sustainability expectations. These companies are for example car manufacturers and other original equipment manufacturers. In order to gain insight into their sustainability needs, a German car manufacturer was chosen for closer analysis. Results of the analysis illustrated that environmental proficiency can be a door opener in becoming a supplier, and suppliers with better environmental performance are promoted. When price and quality factors are evenly matched, better environmental performance is a competitive advantage. In order to increase their profitability and competitiveness, metal producers should and will in future choose energy efficient solutions. More sustainable metal production and improved environmental performance also make them more attractive suppliers in general to their clients. Outotec can provide solutions that make this possible for the metal producers, and often in a profitable way.

### 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 Outotec's 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 intranet, Outotec Round-Table, and meetings with employee representatives. During 2010, focus was on the use of the intranet in developing the dialogue between management and personnel. The CEO's blog postings were amongst the most visited pages, and frequently commented. In 2010 there were also online questionnaires for employees focusing on change and well-being.

Employee expectations regarding sustainability are illustrated in one of the 1,500 answers in the 'Have your say' dialogue held at the end of 2009: "Outotec shall be the benchmark for sustainability in the field of natural resources exploitation. There is still a lot to do in making the mineral and metal processes more efficient, and the global mining industry still interprets fatal accidents as a part of the business, while this approach has totally changed e.g. in the chemicals industry. Outotec should highlight the efficiency and the safety in all her solutions all over the world."

Read more about our employees, p. 11.

### Students

We have identified students and future employees as an important stakeholder group increasingly interested in sustainability and our performance as a responsible employer.

To increase recognition and to strengthen its employer image, Outotec has actively sought different forms of collaboration with university students, especially in Finland and Germany. This collaboration is planned to be expanded in other countries as well. We organize visits, internships, cooperative work on research, topics and supervision for 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.

### Investors

In recent years investors have more and more been requesting information on Outotec's corporate governance and sustainable technologies.

### Widely spread shareholder base

Outotec's investor base is geographically widely spread and the company's freefloat is 100 percent. Some half (May 2011) of the company's shares are held outside Finland and the two largest shareholders account for some nine percent of the shares. The shareholder structure means there are numerous requests for information from the capital markets regarding the company's

business operations, economic performance, corporate governance as well as environmental and social issues. The aim in communicating with the capital market is to ensure that the market has a true and fair view of the company's

### Case, Student cooperation:

Outotec was the main organizer of the 12<sup>th</sup> International Ferro Al-loy Congress, which was held in Helsinki in June 2010. Outotec cooperated with the communication students of the Haaga Helia University of Applied Sciences to create the visual design of the congress materials. The main criterion for the design was that it should reflect the theme 'Sustainable Future'. The teachers included the design task in the study program and announced a competition for students. Each student participated with ideas and proposals for select items. Outotec's organizing team selected the most suitable ideas for further development. The students then designed in smaller teams all materials needed at the congress: posters, signage, book cover, jingle, congress bag, badges and stationery as well as the gift for speakers. The students of Aalto University and Haaga Helia University of Applied Sciences also helped the organizers by working as congress assistants during the event.

financial position, operations and future prospects in order to make investment decisions. At the end of 2010 Outotec had 15,114 shareholders. Shares held in 17 nominee registers accounted for 57.4 percent and Finnish households held roughly 13.6 percent of all Outotec shares.

### Continuous dialogue

Outotec's IR team has a continuous dialogue with investors and analysts and meets them on a regular basis at investor meetings, road shows, industry seminars and annual general meetings. In conjunction with the interim and annual financial reviews the company hosts webcasts in order to disseminate public information simultaneously to the market. In addition, Outotec organizes the CEO's mid-quarter Q&A sessions (started in 2010) and Capital Market Days. As part of Outotec's CMDs, management sheds more light on company strategy, business operations and long-term plans, as well as introduces technologies and solutions in more detail to the capital market. In addition to Finnish law, EU directives, Corporate Governance and stock exchange rules and regulations, Outotec's IR policy is based on self-regulation which is embodied, for the most part, in the company's Disclosure Policy.

In 2010, Outotec had 22 road shows and hosted 100 investor meetings at the company headquarters. 19 analysts conducted research on Outotec. One key task for the company



in 2010 was to introduce the new CEO and management team to the capital markets. Management introduced the new operational model and renewed strategy at the Capital Market Day in November 2010. The CEO's Q&A sessions, which were launched in 2010, formed an important channel in order to maintain a dialogue in between the interim reviews and to comply with fair disclosure. These live webcasts aim to give further clarity on information made public already earlier. In order to serve the capital market efficiently, and ensure equal access to company-related information, as well as to comply with disclosure requirements, the live webcasts are recorded and available on demand for future reference.

### Third best Nordic company in Carbon Disclosure Project 2010

Being transparent means that we try to answer to various sustainability-related questionnaires sent by investors and analysts. One example of these is the Carbon Disclosure Project (CDP). In 2010, Outotec was ranked the third best Nordic company in the Carbon Disclosure Leadership Index, which is a key component of CDP's annual Nordic 200 Report. The Index highlights companies with the most complete and professional approach to corporate governance with respect to climate change disclosure practices. Outotec's score in the CDP ranking in 2010 was 90/100.

### Good reputation amongst investors

In 2010, Outotec was ranked the sixth best company in a survey by Reputation Management Consultancy Pohjoisranta evaluating the reputation of 100 listed companies in Finland. The ranking improved from the ninth place the company achieved in its first year as a listed company. Altogether 1,283 persons, mainly private investors, participated in the survey. It has six different dimensions to measure reputation, using factors related to corporate culture and leadership, financial excellence, public image, products and services, social responsibility and operational dynamics.

Read more about dividends, shareholders and share-related key figures on p. 38 and in Outotec Annual Report 2010, p. 126–127.

### Suppliers

Outotec uses thousands of suppliers around the world for its customers' projects. These include mechanical workshops, component manufacturers and local construction and engineering companies.

Read more about our suppliers in Impact of our supply chain, p. 39.

### Scientific community

As a technology company, we cooperate closely with universities, research institutes and international organizations.

In 2010 Outotec donated EUR 600,000 to Finnish universities to further enhance the level of research and education in universities important for Outotec. The donations strengthen the

company's wide cooperation with scientific communities focusing on technology and economy.

Outotec continued its sponsorship of the Millennium Technology Prize. In 2010, the prize was awarded to Professor Michael Grätzel, recognized as the developer of third-generation dye-sensitized solar cells. Grätzel cells are likely to have an important role in low-cost, large-scale solutions for renewable energy.

Outotec joined the University of Alberta's industrial research program intended to foster sustainable water use in the extraction of Canada's oil sands. The program represents collaboration between Kemira and Suncor Energy services, the Canadian government and the Alberta Water Research Institute. Its goal is to establish an industrial research chair – 'Water Quality Management for Oil Sands Extraction' – within the Natural Science and Engineering Research Council of Canada (NSERC) at the University of Alberta. The five-year research program focuses on water quality management, and will generate studies addressing water consumption, reuse and recycling by the in-situ oil sands extraction industry. It aims to solve this highly relevant environmental challenge which the oil sands industry currently faces.

Outotec also continued its active work in various organizations in developing environmentally sound technologies. A representative of Outotec participates in the update of the

non-ferrous metals BREF, a document which defines Best Available Techniques for non-ferrous metals, as a member in the European Integrated Pollution Prevention and Control Bureau (IPPC) technical working group and in an environmental working group of the Federation of Finnish Technology Industries. In addition, Outotec has been involved, for example, in the International Copper Association's Health and Environment Program Advisory Committee work. In addition, one of Outotec's experts is a lead author and editor of a document on recycling technology under the auspices of Dr. Ernst von Weizsaecker, the co-chair of the UNEP resource panel.

Read also Commitment to external initiatives, p. 23.

## Commitment to external initiatives

Outotec works actively in various organizations and in engaging with policy makers. A representative of Outotec participates in the definition of Best Available Techniques (BAT) for nonferrous metals as an expert in the European Union's working group. In addition Outotec has been involved in the committee work of the International Copper Associations' Health and Environment Program, among others.

### The United Nations Global Compact initiative

In 2010, Outotec signed the United Nations Global Compact initiative, committing the company to its principles of human rights, environment, labor and anti-corruption. By joining the corporate responsibility Global Compact initiative Outotec expresses its intent to further advance sustainability and social responsibility principles in its business practices.



### Carbon Disclosure Project

Outotec has participated in the Carbon Disclosure Project (CDP) since 2009. CDP analysis is based on a questionnaire focusing on greenhouse gas emissions, emissions reduction targets and the risks and opportunities associated with climate change.

CARBON DISCLOSURE PROJECT

Companies are scored on their climate change disclosure, with high scores indicating good internal data management and an understanding of the climate change related issues affecting the company. Read more about our performance in CDP 2010 in Investors, p. 22.

### Support and active cooperation with scientific communities

Outotec donated EUR 600,000 to further enhance the level of research and education in Finnish universities and to strengthen the company's wide cooperation with scientific communities focusing on technology and economy.

### Sponsorship of the Millennium Technology Prize

Outotec continues its sponsorship of the Millennium Technology Prize. In 2010, the prize was awarded to professor Michael Grätzel, who is recognized as the developer of third-generation dye-sensitized solar cells. Grätzel cells are likely to have an important role in low-cost, large-scale solutions for renewable energy.



### Research program to foster sustainable water use

Outotec joined an industrial research program of the University of Alberta



intended to foster sustainable water use in Canadian oil sands extraction. In addition, the company is establishing a Natural Science and Engineering Research Council of Canada (NSERC) industrial research chair at the university entitled 'Water Quality Management for Oil Sands Extraction'. The research chair is a joint effort between Outotec and the companies Kemira and Suncor Energy Services, the Canadian government and the Alberta Water Research Institute. The five-year research program focuses on water quality management studies to address water consumption, reuse and recycling by the in situ oil sands extraction industry.

#### **Collaboration and sponsorship of technology development**

Outotec also continued its active work in the development of environmentally sound technologies in various organizations. As an expert in the European Union's technical working group and in an environmental working group of the Federation of Finnish Technology Industries, an Outotec representative participates in the updating of the BREF on non-ferrous metals, a reference document which defines Best Available Techniques (BAT). In addition, Outotec has been involved with the work of the International Copper Association's Health and Environment Program Advisory Committee, among other organizations.

The board of the Helsinki University of Technology established the Tapani

Järvinen Environmental Technology Fund in honor of Outotec's retired CEO Tapani Järvinen. The fund aims to promote the research of environmental technology and will fund the research and development work of distinguished individuals. The basic capital for the fund was donated by Outotec.

#### **Cleantech Finland®**

Since its inception, Outotec has been active in developing the Cleantech Finland® brand together with Finpro. The Cleantech Finland® brand brings Finnish clean energy and environment experts together in an effort to build clean technologies as part of Finland's competitive advantage.



#### **Commitment to rehabilitating the Baltic Sea**

Outotec joined the Baltic Sea Action Group in 2009 with a commitment to contribute EUR 40,000 annually for three years and provide professional services related to improving the state of the Baltic Sea. The focus of Outotec's professional services for the group will be the minimization of metal-containing dusts and sulfur dioxide emissions of the metals industry as well as the reduction of metal-containing effluents. Outotec will also contribute its expertise in symposia focusing on environmentally sound processing methods in the metals and energy industries. In February



2010 Outotec participated in the top level meeting of the Baltic Sea Action Summit and later in the year initiated a study on oil and organics containing industrial waters at its research centers. Outotec's new applications of the circulating fluidized bed technology for oil shale processing and sewage sludge incineration have further potential to reduce emissions to the Baltic Sea.

#### **Technology Industries of Finland Centennial Foundation Fund for the Association of Finnish Steel and Metal Producers**

Outotec was one of the five founding members of the Foundation aiming to grant EUR 300,000 annually in grants and scholarships to students and university research groups.

## Finnish Business and Society



Outotec is a member of Finnish Business & Society which promotes financially, socially and ecologically sustainable business in Finland and is a member of CSR Europe, CSR 360 Global Partner Network and Global Reporting Initiative.

## Support for children and youth

Outotec's support for local communities, whether international, national or local, primarily targets sustainable development, arts and music as well as student and youth activities. The focus of Outotec's donations to charitable causes is on projects that aim to improve sustainable development and/or human life.

In 2010, Outotec continued to sponsor the renowned Tapiola Choir, which is composed of about 70 young, talented singers and musicians aged nine to 18. Donations to charitable causes included support for the Engineers without Borders' initiative to build water collectors in Kenya and for the SOS Children's Village in Kitwe, Zambia.

## Principal international stakeholder organizations

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 the formation of life.	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
Eurometaux	Non-ferrous metals industry in Europe	Member via the Association of Finnish Steel and Metal Producers
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
Cleantech Finland	Promote clean technologies	Member since 2009
Baltic Sea Action Group	Improving the state of the Baltic Sea	Member since 2009
EU IPPC Bureau T W G evaluating the reference values for BAT on non-ferrous metals	Ensure in cooperation with Finnish non-ferrous metals industry that the technologies and emission values relating to them are realistic but reachable	Outotec's employee member since 2007
Excellence Finland	Promote sustainable excellence and competitiveness in Finland	Member
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, Member of Environmental Working Groups
Carbon Disclosure Project		Reporting since 2009
United Nations Global Compact	Greenhouse gas emissions reduction	Participant since 2010
Global Reporting Initiative	Business sustainability guidelines	Outotec sustainability report 2010 according to GRI guidelines

# Our impact

## Metals and sustainability

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 impacts on the environment as well as on society. 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.

### Outotec's role

As a technology company, the bulk of Outotec's impact on the environment and communities unfolds through our customers. Our primary sustainability challenge is therefore to help minimize any negative effects our customers' operations may have on the social wellbeing in communities. 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. The minimization of energy

and water consumption and the effective utilization of raw materials not only reduce environmental impact, they also improve profitability.

### The industry's impact on the environment and on local communities

Resource-based industries have great potential to assist the economic development of the communities in which they operate. The mining industry has, for example, aided the development of several areas in the United States, Canada, and Australia, as well as helped Chile to emerge as South America's most successful economy. Unfortunately, there are also many challenges, such as corruption, that countries face when attempting to translate their wealth of natural resources into economic prosperity<sup>i</sup>.

Historically, the mining and metals sectors have been heavy consumers of energy. For this reason, climate change concerns are a significant risk for the industry. Energy is often the most significant cost in the processes of Outotec's customer industries. Energy

accounts for around 70 percent of costs in aluminum production, and the energy consumption of concentrators attached to mines amount to approximately 50 percent of total operating costs.

In many mining regions such as Chile and Australia, the quality and quantity of water also pose problems, as the water demands of companies 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<sup>ii</sup>. Production processes also create slag and other potentially harmful by-products, waste and eco-toxic emissions.

<sup>i</sup> ICMM: Economic wellbeing: <http://www.icmm.com/page/4655/our-work/industry-issues/articles/mining-and-economic-development>

<sup>ii</sup> ICMM, environment: <http://www.icmm.com/our-work/work-programs/environment>

Read also Industry drivers, p. 28.

## Expert's view: Metals, water, energy and sustainability

Outotec's Director of Technology & Product Management, Dr. Markus Reuter, gives us an outline of how metal production and prudent usage of water and energy enable the sustainable use of our shared natural resources.

Metals are an essential component of today's society: a moment's reflection on their ubiquitous presence in virtually all energy and material production processes is enough to confirm this. We also, of course, consider an abundant supply of clean water a routine essential, and the constant need for energy is a given all over the world. However, the resources of our planet are limited, as is the strain to which we can subject it in terms of emissions, pollution, and disposal of waste. For these reasons, finding ways to lower the environmental footprint of our collective existence is a vital priority.

This urgent need highlights Outotec's status as a vital player in sustainability. Two things are required: the best available technology for reducing the environmental toll of existing



processes, and innovative solutions to reverse the trend on a global scale. With our decades of experience and forward-looking attitude, we see ourselves as capable of fulfilling both of these criteria, enabling sustainability as a company by providing metals for products that lower society's environmental footprint.

### Closing the loop

At Outotec, we produce some of the world's most energy-efficient metals and water processing solutions, often making extensive use of local resources and personnel. We are justifiably proud of our sustainability track record in process technologies. However, our activities do not end there. The ultimate aim of our solutions is to decouple resource usage, and thereby the welfare of our societies, from nature. This is achieved through

advanced metal recovery, water and recycling technologies.

It may surprise you to learn that for some metals, recovery has already eclipsed mining as the principal source for production. Lead is a good example, as over 65% of the metal currently produced worldwide is sourced from recycled car batteries. Outotec's top submerged lance technology helps to make this possible, and can be used to process and recover other metals, as well as e-waste.

Resource efficiency is of great importance when considering the production of metals from this perspective. Prudent and efficient use of materials and technology will define our future on this planet, and, by recognizing this fact today, we are taking a responsible step towards ensuring that the preconditions for an advanced society continue to be available for generations to come.

### Enabling sustainability

As we strive to make clear, Outotec's commitment to sustainability extends far beyond our own operations, which are relatively minor in terms of emissions. We see our impact in the mining and metallurgical industries as of core importance to the effective use of the planet's limited resources.

You may have seen the phrase 'enabling sustainable use of Earth's natural resources' in an Outotec publication. This statement is testament to the fact that we not only seek to produce metals sustainably, but also aim to provide the materials necessary for green energy production methods such as solar and wind power, as well as other energy-conserving solutions like mass transport concepts. All of these are means of reducing our footprint as a global society, and all, for better or worse, require metals from the outset. The key fact is that we want those metals to be produced in a sustainable manner, and then returned to the value chain via recycling once they have achieved their purpose in the world.

Take wind power, for example. Those impressive windmills one can see towering over the shorelines of some of our most forward-thinking countries are constructed mainly of steel, and the magnets employed within them incorporate rare earth elements. It must be recognized that without the mining and metallurgical industries, the resource-efficient solutions of the near and far future will simply not come to pass.

### Consumer expertise

A company cannot provide metallurgical solutions effectively without deep insight into the fields in which the end product will ultimately be used nor without substantial knowledge of consumer demands. Every quantity of metal produced using Outotec technologies will end up with a consumer of some kind, and knowledge of how they will employ these materials is one of the best ways in which we can promote resource efficiency. Understanding both the design and the substance well can lead to enterprising new whole-of-system solutions and techniques to impact sustainability significantly. Again, Outotec has a unique opportunity to offer its expertise here, for the greater benefit of our society.

There is also a more wide-ranging perspective, of equal or greater importance, which involves seeing where society's usage of metals is headed, anticipating trends in sustainable solutions, and ensuring that the materials in demand in the future are put to good, efficient use before they, too, reenter the production cycle. We at Outotec, for our part, will continue working to ensure that the fundamental link between metals and sustainability is handled with awareness, experience, and significant expertise. In doing so, we hope to help guarantee a sustainable future for our planet.

## Industry drivers

Outotec believes that the increasing awareness of sustainability is the most important megatrend driving industries today. This trend can be seen not only in developed economies but also in emerging and developing markets.

Much of global development can be attributed to metals and minerals. However, society is confronted by a dilemma: the need for metals is growing, while at the same time there is great concern over the environmental impacts of producing them. As a technology company, we at Outotec believe that this dilemma can be resolved.

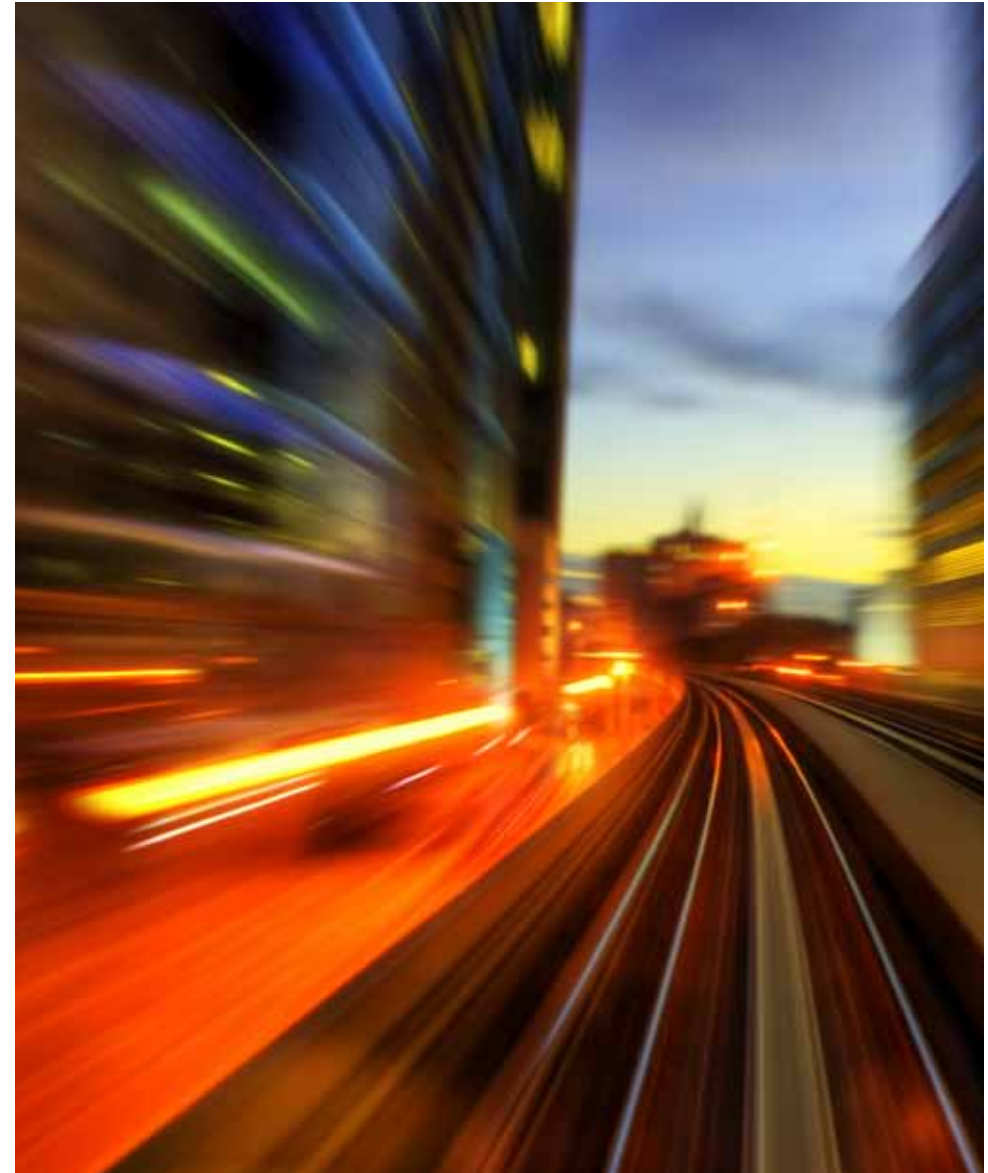
Decision makers have realized that the current exploitation of nature cannot continue. Increasing energy consumption and criticism against nuclear power plants, pollution and lack of clean water are growing issues that need to be addressed. At the same time, employee health and safety requirements are increasing. All of the aforementioned developments stimulate increased investment into sustainable solutions, a trend that we believe will continue to strengthen over time.

The companies producing minerals, metals and materials face many challenges and require social license to operate. We have identified six trends that act as drivers of sustainable development. These contribute to an increased demand for new technology, presenting great opportunities for Outotec's technologies and solutions.

### INDUSTRY DRIVERS

1. Ore grades are declining and the demand for metals is increasing. In order to meet the demand, more ore needs to be processed with more advanced technology.
2. Making metals requires a lot of energy and energy costs are constantly climbing. More energy-efficient processes are needed.
3. Mining and metallurgical industries are major emitters of CO<sub>2</sub> and eco-toxic substances. Cleaner solutions must be developed.
4. Water availability and pollution are critical issues. Advanced solutions for water cleaning, conservation and recycling are needed.
5. Peak oil is approaching. Oil is expected to run out by 2050 with current production rates, thus alternative sources are needed.
6. The need for recycling is growing, thus requiring new technologies for turning scrap and waste into products.

Read also Metals and sustainability, p. 26.



## Risks and opportunities

Outotec's business environment is impacted by the fact that while developed economies are stagnating, emerging countries keep growing fast, especially China. This accelerates urbanization and the use of natural resources. The exhaustion of natural resources as well as a new energy paradigm, where oil is expected to run out by 2050 and nuclear power is being abandoned by many countries, requires improvement in the eco-efficiency of resources and materials. Awareness is increasing in environmental, social and economic sustainability all over the world. Furthermore, there is a trend of outsourcing non-core activities. This means that networking and partnerships will be increasingly important, both for our clients and us, in R&D and tailoring solutions. The industry is consolidating, resulting in fewer but bigger customers, and competition will further increase.

From an environmental, social and governance perspective, Outotec's greatest risks and opportunities unfold through our customers. Within Outotec, an in-house system of risk management is in place throughout the company to identify operational risks and opportunities. The Board of Directors is responsible for the company's risk management procedures and for ensuring that risks are taken into account in strategic planning and business operations on the Group level. In turn, the Project Board is primarily responsible

for the risk assessment procedure. Furthermore, Outotec's Technology Management function includes a team that concentrates on the environment and sustainability.

The risks and opportunities discussed below are those that have been deemed as key risks by management and which bear a strong link to sustainability. Outotec has defined a risk to be anything that may have an impact on the company's business activities. While risks can be threats, uncertainties or lost opportunities, they may also be potential opportunities. Outotec's risk management policy defines a balanced risk profile from the perspective of all stakeholder groups.

Strategic and business risks are associated with the nature of the business and are often difficult to quantify. Among other areas, strategic risks relate to Outotec's business portfolio, market position, and major investments. Business risks are connected to the operating environment, customers' and subcontractors' operations, and overall economic outlook. Outotec follows up on environmental legislation, competitors' technologies and Best Available Technologies, as well as our own operations and solutions offerings.

### Climate change poses risks and opportunities

We continuously look for new business opportunities to address the challenges

that our customers are facing. These challenges include improved energy efficiency, reducing CO<sub>2</sub> and other emissions as well as improved recovery of metals and greater efficiency in the utilization of raw materials in general. We also assess the water consumption in our customers' processes.

We aim to capitalize on these opportunities to introduce technology improvements or develop new technologies that mitigate climate change and promote sustainability. By successfully implementing our technologies and solutions to address customer challenges, Outotec's references increase, which also enhance competitiveness.

While climate change presents Outotec with attractive business opportunities, some risks may affect our customers and therefore indirectly Outotec. International, national, regional or state regulations on emissions may present risks, and excessively strict limits on emissions can threaten the operations and existence of some customers. Furthermore, cap and trade schemes may force our clients to move operations into areas with less stringent regulations, and in some cases excessively strict regulation may lead to plant closure. High energy prices, which may be a cause of the cap and trade schemes, also compromise our customers' competitiveness.

Outotec's technologies are designed to improve the efficiency of our customers'

processes and therefore help them address these risks. They help customers to reduce emissions to air, water and soil, and thus help them control the financial implications of regulatory risk. For instance, energy savings, which lead to reduced carbon emissions, make customers less vulnerable to fuel and energy taxes and regulations. These include international, national, regional or state regulations on emissions, carbon taxes, as well as cap and trade schemes.

In order to help customers reduce their exposure to emissions and energy related regulatory risks, Outotec provides proven environmentally sound and energy saving solutions that meet environmental standards and regulations. Regulatory opportunities can help Outotec grow its business because inefficient mining and metallurgical processes need to be replaced with new technologies. Outotec's solutions, for instance, help cushion customers against carbon taxes and secure their competitiveness. Furthermore, with the carbon trade mechanisms, customers utilizing Outotec's technologies may have the opportunity to turn a profit from CO<sub>2</sub> savings and obtain emission reduction credits (ERCs). Outotec's customers will not be threatened by tighter environmental regulation and will be able to indicate that their production requires less energy and results in fewer emissions than their

competitors. In the future a premium may be placed on clean production, but strictly speaking the main benefits are maintaining a license to operate, lower operation costs and improved recovery.

We work in close partnership with our customers to continuously develop our technology solutions, a task that is carried out both in-house and in cooperation with universities and research

institutes globally. In 2010, Outotec invested EUR 28.5 million in research and technology development. In addition, we plan to acquire new technologies and processes based on customer needs.

Outotec revised its operational model in spring 2010 for the purpose of better addressing the growing sustainability challenges our customers face. As a response to the increasing signifi-

Sustainability driver	Opportunity for Outotec	Risk for the customer and/or Outotec
<b>Ore grades are declining, ores are more complex and more difficult to process.</b>		
Average copper ore grade is 0.8%, which is 20% less than ten years ago, and it is forecasted to fall further to 0.65% by 2020. To produce one tonne of copper requires 30 more tonnes of ore to be milled, which also results in an increased amount of tailings and the consumption of energy and water.	Outotec's vast knowledge of mineralogy and process technologies, comprehensive R&D and testing facilities enable the company to develop new process solutions for low- grade and complex ores. Outotec's technologies enable efficient ore processing and higher yield thanks to advanced process control in the grinding and flotation phases. Customers replace inefficient mining and metallurgical processes with new technologies. There are increased business opportunities also for energy and water efficient solutions.	Developing new incremental technologies takes time and is expensive. If Outotec fails to develop new technologies or keep its portfolio competitive, it may lose business. Customers' operations require sufficient amounts of water, coal, fossil fuels, rock 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 rise too high for the customers and they may need to close down some operations, which could also reduce Outotec's business.
<b>Making metals is energy-intensive and energy costs are constantly climbing.</b>		
Minerals and metals processing is very energy-intensive. GHG emissions in this industry are mainly related to energy use. Roughly 7% (2008) of the world's energy is used by the metals sector and will increase due to falling ore grades. Grinding mills alone consume 10% of Australia's total energy consumption.	Several Outotec technologies are rated BAT by EU thanks to their energy-efficiency and low CO <sub>2</sub> emissions. Outotec designs sealed processes that utilize the energy contained in the raw materials. For example, adoption of best practice technologies in iron and steel, aluminum and non-ferrous metals production worldwide would reduce CO <sub>2</sub> emissions annually by 280-460 million tonnes (IEA 2007; Tracking Industrial Energy Efficiency and CO <sub>2</sub> Emissions). Through Outotec's technology solutions impacts of carbon taxes for our clients are cushioned and their competitiveness secured.	Price changes prompted by resource scarcity, energy shortages and changes in consumer attitude imply high financial risks for our customers and subsequently for Outotec. If in consumers' point of view CO <sub>2</sub> footprint from plastic is smaller than from aluminum or copper, they might change attitudes and buying habits, which would risk our customers' and Outotec's business.
<b>Cleaner solutions need to be developed.</b>		
Sulfur is a constituent in many ores, therefore sulfur dioxide (SO <sub>2</sub> ) is released in smelting and refining. The metals industry emits annually over 13 million tonnes of SO <sub>2</sub> , the largest amounts in Peru, Chile, Russia and Australia. SO <sub>2</sub> emissions have 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.	Outotec's sustainable technologies guarantee license to operate far into the future and make it easier for customers to get financing for their investment. Modern metallurgical processes combined with sulfuric acid plants can capture 99.99% of the sulfur. Efficient gas cleaning captures mercury, arsenic, antimony, bismuth and lead from off-gases and sealed processes minimize fugitive emissions. Outotec is continuously working to further develop its existing technologies and innovate new ones, and therefore well positioned in the competition.	Too strict laws and regulation can result in unprofitable operation and the customer may lose its license to operate. If Outotec fails to provide competitive solutions for the customer, it may lose business.

cance of climate change, all business areas are now focused on improved energy and water efficiency, carbon dioxide reductions, waste management and life cycle services.

Many growth opportunities are seen in adjacent industries, such as the energy sector, for environmental solutions, including industrial water treatment. In order to be less dependent on

the cycles of the mining and metals industries, Outotec has begun to pursue opportunities to deliver its technologies to other process industries.

Sustainability driver	Opportunity for Outotec	Risk for the customer and/or Outotec
<b>Availability of water and water pollution.</b>		
Availability of water is becoming a critical issue at many mine sites, because when ore grade declines by 20%, water consumption increases respectively. For example, processing one tonne of ore requires some 3,500 liters of water, one tonne of nickel some 377,000 liters of water in a hydrometallurgical process, and one tonne of gold 252 million liters of water. Furthermore, mining and metals extraction can impact nature due to discharges of contaminated water.	Outotec has technologies which lead to significant reduction in fresh water consumption, recycling of process water and decrease in water loss. For example, advanced filters separate water from concentrates energy-efficiently. Paste thickening separates water from tailings and reduces water consumption by approximately 10%. Paste can directly be used as a back fill in the mine. The company is also developing new applications for industrial effluent treatment and cooperating with Kemira in developing solutions for water-intensive industrial applications.	Customers who have operations in areas of draught may be forced to close down their operations, which may reduce Outotec's business.  If Outotec fails to develop new water-efficient applications it may not be able to grow its business.
<b>Peak oil is approaching.</b>		
Global energy demand is expected to increase by 44% in the next two decades (EIA, 2009). With current rate of production, industry estimates that global conventional oil reserves will be exhausted in 40 years. The world's proven oil shale reserves are 3 trillion barrels, many-fold compared to conventional oil reserves. Current methods for oil shale and oil sand processing are inefficient in oil recovery, energy and water consumption and have a substantial impact on the environment.	Outotec already has some technologies which enable environmentally sustainable use of oil shale, oil sand and bio fuels as new alternative energy sources, and the company is developing new applications in cooperation with Eesti Energia, Kemira, and some other companies, universities and research institutes. The demand for sustainable solutions for alternative energy sources is increasing and Outotec can expand its business in the energy sector and environmental solutions.	Too high energy prices due to carbon taxation and emission trading schemes can cause our clients lose their competitiveness and are obliged to stop operation. If the first reference plant for oil shale processing with Enfit technology fails, Outotec's growth opportunities will reduce. If the environmental regulation will tighten so much that oil shale and oil sand processing will not be allowed, Outotec may lose business. There is also a risk that the development of new technologies will not succeed.
<b>Need for recycling is increasing.</b>		
Metals are almost 100% recyclable, which is not fully utilized. Product lifetime is becoming shorter, thus the need of recycling is growing. Manufacturing new products from recycled metal consumes much less energy than for virgin metal. There is also need for recycling of process water and turning waste into products.	Outotec can grow its business by selling solutions for the production of metals from secondary materials, such as electronic waste, metallic scrap, cabling, battery paste/scrap. Outotec's technologies are used for the recovery of metals from residues, fume dusts and waste stockpiles at production sites. They utilize raw materials efficiently reducing the amount of emissions, residues and waste.	If the industry does not succeed in organizing the recycling of scrap and waste properly, opportunities for Outotec may be reduced.

## Impact of our products and services

Outotec innovates, develops and delivers solutions which utilize natural resources and raw materials efficiently, reduce energy and water consumption, produce less waste and emissions as well as minimize the plant's lifetime operating costs. Through our vast experience and in-house R&D centers, we have the ability to tailor processes for different raw materials, test and scale up, or develop new processes for complex raw materials. 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.

Our concentrator technologies enable efficient ore processing and higher yield thanks to advanced process control in the grinding and flotation phases. Outotec has technologies which lead to significant reduction in fresh water consumption, recycling of process water and decrease in water loss. For example, advanced filters separate water from concentrates energy-efficiently. Paste thickening separates water from tailings and reduces water consumption by approximately ten percent. Paste can be used directly as a backfill in the mine.

Modern metallurgical processes

combined with sulfuric acid plants can capture 99.99 percent of the sulfur. Efficient gas cleaning captures mercury, arsenic, antimony, bismuth and lead from off-gases and sealed processes minimize fugitive emissions. In metallurgical processing, energy is the most significant cost item and main reason for CO<sub>2</sub> emissions. Outotec designs sealed processes that utilize the energy contained in the raw materials. The annual emissions avoided by the metallurgical industry through use of Outotec's ferrochrome production technology, copper flash smelting technology and alumina calcination technology amounted to 4.2 million tonnes of CO<sub>2</sub> equivalency (CO<sub>2</sub>-e) in 2009. In addition, Outotec's new CO/CO<sub>2</sub> filter enabled the use of process gas in direct electricity generation.

Once a plant is built and commissioned, we assist the customer by providing services and technological improvements to maintain the plant so that it will run smoothly, safely and efficiently at all times.

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

Several Outotec technologies are Best Available Techniques (BAT) rated

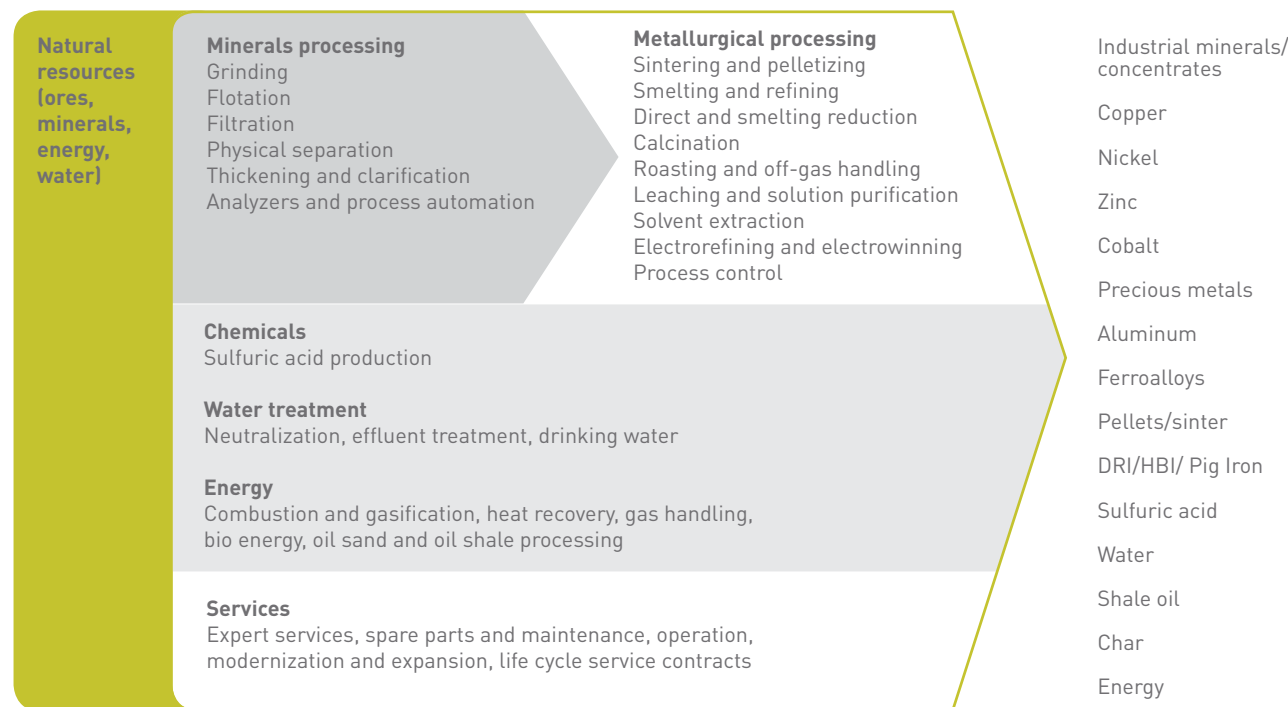


by EU thanks to their energy-efficiency and low emissions. Outotec designs sealed processes that utilize the energy contained in the raw materials. For example, adoption of best-practice technologies in iron and steel, aluminum and non-ferrous metals production worldwide would reduce CO<sub>2</sub> emissions annually by 280–460 million tonnes (IEA 2007; Tracking Industrial Energy Efficiency and CO<sub>2</sub> Emissions). Through Outotec's technology solutions impacts of carbon taxes for our clients are cushioned and their competitiveness secured.

#### Outotec BAT-rated products:

- Flash smelting and flash converting for copper and nickel
- Zinc direct leaching
- Electrolytic refining of copper, nickel, zinc
- Direct reduction of iron ore fines
- Traveling grate process for iron ore pelletizing
- Emission optimized sintering for iron ores
- Ferrochrome process
- Alumina calcination
- Aluminum smelting (rodding plant, green paste plant)
- Partial roasting of copper concentrate
- Zinc roasting in fluidized bed
- Pyrite roasting
- Sulfuric acid production (single/double absorption)
- Spent acid regeneration
- Wet electrostatic precipitator

#### Outotec's expertise in a value chain from natural resources to minerals, metals, energy, water and other materials





### Products and services that address customers' challenges

The industries in which our customers operate face many crucial and growing challenges. At the present time, ore grades are declining, more efficient energy consumption is essential, and the availability of water and natural resources is at risk. Peak oil is rapidly approaching, carbon dioxide emissions need to be drastically reduced and recycling is increasingly essential. These circumstances mean that the demand for sustainable technologies is growing. In this global situation, we see oppor-

tunities to apply our wide technology platform even more broadly and tap unused market potential.

### Product safety

As a leading provider of technology, Outotec ensures that all the plants, equipment and services engineered and delivered by the company are reliable and safe over the life cycle and all the products meet with all relevant health and safety laws and regulations. It is ensured that the equipment fulfills the safety related industrial standards and often this is carried out in accor-

dance with the provisions of the assessment of the risk defined in the EU machinery directive. In larger deliveries the process or plant is often examined by a structured and systematic hazard and operability study (HAZOP) in order to identify and evaluate problems that may represent risks to personnel or equipment, or prevent efficient operation. In 2011 the aim is to widen the HAZOP to cover all major deliveries.

Outotec provides information to customers on the impacts of products and services (e.g. their energy consumption, emissions, metal recovery and wa-

ter usage). For different kinds of equipment Outotec makes safety information available according to industry standards. For industrial processes safety is an integrated part of the operational manuals covering the whole delivery of Outotec. In addition, Outotec provides training services to the client, including safety training. The operational manuals contain information on maintenance and in addition Outotec offers maintenance as a service package.

Read also Industry drivers, p. 28.

## Ecological footprint of our operations

Outotec operates globally, mainly in offices which are located in 24 countries. In addition, the operations include two research centers in Finland and Germany, two manufacturing workshops in Finland and three assembly shops in Canada, China and the USA, a ceramic plate production plant in Finland and some warehouses. However, the majority 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 the use of unit-specific environmental and quality management systems. In addition, at our workshop in Turula and at our Pori Research Center, we are committed to the Federation of Finnish Technology Industries' energy efficiency program. No spills were reported from these activities in 2010.

In 2010, Outotec started the work to harmonize the company's environmental and quality management systems and to create an Integrated System for Quality, Environmental and Health & Safety Management (QEHS) that is based on our business objectives and requirements, internal policies, and international standards. The maintenance, including external certification, of just one management system instead of three separate systems will

decrease bureaucracy and costs. The common QEHS system will be implemented globally and the aim is to get external certification in the company's main locations.

In 2010 Outotec acquired four new companies including three equipment manufacturing workshops that contributed to an increase of scope 1 and 2 greenhouse gas (GHG) emissions. Due to increased business activities, scope 3 GHG emissions from air travel rose.

GHG emissions from air travel are the biggest single source of Outotec's emissions. New video conferencing systems were installed in Outotec's facilities to reduce air travel. Flights to visit customers are an integrated part of Outotec's business, by which means Outotec contributes indirectly to avoid emissions through the use of Outotec's technology solutions and services. The positive impact of Outotec's business travels can be best illustrated by comparing Outotec's annual greenhouse gas emissions in 2010 (24,254 tonnes CO<sub>2</sub>-e) with emissions avoided through our goods and services (4,200,000 tonnes CO<sub>2</sub>-e).

Energy consumption	2010	2009	GRI indicator
<b>Direct energy consumption, TJ</b>	<b>17.5</b>	<b>5.3</b>	<b>EN3</b>
Propane gas, TJ	9.8	0.02	EN3
Light fuel oil, TJ	0.5	0.4	EN3
Coal, coke, semi coke, TJ	1.0	1.1	EN3
Diesel and gasoline, TJ	6.2	3.8	EN3
<b>Indirect energy consumption, TJ</b>	<b>132.5</b>	<b>96.2</b>	<b>EN4</b>
Electricity, TJ	67.6	51.3	EN4
Heating including steam, TJ	65	44.9	EN4
<b>Total energy consumption, TJ</b>	<b>150.0</b>	<b>101.6</b>	<b>EN3, EN4</b>

Greenhouse gas emissions	2010	2009	GRI indicator
Scope 1 emissions (own fuel combustion, company cars), tonnes of CO <sub>2</sub> -e	2,587	1,349	EN16
Scope 2 emissions (purchased heat and electricity), tonnes of CO <sub>2</sub> -e	10,617	7,243	EN16
Scope 3 emissions (air travel and commuting), tonnes of CO <sub>2</sub> -e	11,049	9,512	EN17
<b>Total greenhouse gas emissions, tonnes of CO<sub>2</sub>-e</b>	<b>24,254</b>	<b>18,104</b>	<b>EN16</b>
Greenhouse gas emissions avoided through use of Outotec technologies, million tonnes of CO <sub>2</sub> -e	4.2	4.1	EN18

Materials used	2010	2009	GRI indicator
Paper, tonnes	100.1	92.1	EN1

Waste	2010	2009	GRI indicator
Waste recycled, tonnes	1,480.3	843	EN22
Landfill waste and incinerated waste, tonnes	678.3	584.9	EN22
Hazardous waste, tonnes	27.3	25.5	EN22, EN24
Total waste, tonnes	2,185.9	1,453.4	EN22
Paper recycled, tonnes	96.3	59.8	EN22

A small amount of hazardous waste is formed in the final surface treatment of filter presses in Lappeenranta works. In addition, oily waste from lubricants used in Turula works is hazardous. The hazardous waste is sent for treatment to local hazardous waste treatment facilities.

Water consumption	2010	2009	GRI indicator
Total water withdrawal, m <sup>3</sup> /year	43,774	30,305	EN8

Water is purchased locally from municipal water suppliers and the waste water is sent to municipal waste water systems. Because our workshops are mainly assembly shops, no process water is discharged.

### Local unit-specific environmental performance

Energy consumption and emissions in Finnish units (Research Center in Pori and Turula works)	2010	2009	GRI indicator
Energy consumption, TJ	44.5	46.8	EN3, EN4
Energy saved due to efficiency improvements, TJ	3.4	1.1	EN5, EN7
Emissions, tonnes of CO <sub>2</sub> -e	2,983	3,140	EN16

Company cars in Finland	2010	2009	2008	GRI indicator
Company car emissions, grams of CO <sub>2</sub> -e/km	147	173	191	EN16
Reduction from 2008, %	23	9		

### Targets related to environmental performance

Performance in 2010	Target for 2011	GRI indicator
New video conferencing systems installed in Finland and Germany to reduce air travel. Emission reduction achieved through use of video conferencing.	Increase video conferencing globally and introduce 20 new installations.	EN18

### Local unit-specific targets

In addition to common Outotec-wide targets we have local or unit-specific targets regarding the energy efficiency of operations. Outotec Research Center and 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. Actions taken to achieve the targeted savings include the implementation of energy efficient air conditioning and heating at the new production facilities in Turula and the refurbishment of the ventilation system at the main building at the research center.

Outotec's target in Finland is to reduce company cars' emissions per km by 18 percent by 2013 compared with base year 2008.

Read also Management approach, p. 9.

## Economic impact

Through solid financial performance Outotec benefits all company stakeholders. Profitable business enables growth and development of the business as well as 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.

### Solid performance in 2010

Outotec's financial performance was solid and we achieved the targets that we had set for 2010. Well over half of our sales came from the emerging markets. Sales grew due to the technology and service businesses of four acquisitions, namely Larox, Ausmelt, Millteam and Edmeston. In addition, we achieved the targeted EUR 25 million

annualized savings in fixed operational costs and plan to reinvest a substantial amount in R&D and building our global operational platform and respective tools to ensure long-term growth and profitability improvement.

## Added value to stakeholders

### Generation of added value

#### + Customers

Sales EUR 969.6 million

#### - Suppliers

Cost of goods, materials and services purchased  
EUR 658.4 million

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= EUR 311.2 million

#### Added value

Outotec

### Distribution of added value

#### ▶ Employees

Wages and salaries  
EUR 224.4 million

#### ▶ Public sector

Direct taxes  
EUR 30.9 million

#### ▶ Creditors

Interest on debt and borrowings  
EUR 8.2 million

#### ▶ Shareholders

Dividends  
EUR 32.0 million

### Financial targets

Outotec's long-term financial targets to ensure continuous profitable growth are

- to grow faster than the market resulting in a compound average annual sales growth of 10-20 percent;
- annual operating profit margin from business operations, excluding one-time costs and purchase price allocations of acquired businesses, to be at 10 percent on average; and
- to maintain a strong balance sheet in order for the company to have operational flexibility and to execute acquisitions.

In addition, we aim to grow the sales of our services to an annual level of EUR 500 million by the end of 2015.

### Tax expenses

Outotec pays taxes to 24 governments in countries where the company either has own operations or customer

projects. Our tax rate and taxes paid in a certain year vary according to large projects under implementation or completed in that particular year, and the legislation of the country in which the project is located.

Our income tax expenses in 2010 totaled EUR 10.4 million (2009: EUR 18.6 million). These expenses include taxes paid on the basis of local tax legislation, tax adjustments from previous years and the effect of annual change in deferred taxes. The direct taxes (current taxes in Outotec's consolidated financial statements) were EUR 30.9 million in 2010 (2009: EUR 13.7 million), out of which the majority, EUR 30.2 million in 2010 (2009: EUR 14.0 million), came from outside Finland. The most significant countries in terms of tax expenses in 2010 were Germany, Chile, Australia and South Africa, whereas in 2009 the respective countries were Brazil, Chile, Peru and Australia.

### Dividends

The value of Outotec's share rose 187 percent on the NASDAQ OMX Helsinki in 2010 and the closing price at the end of the year was EUR 46.24 (Dec 31, 2009: EUR 24.74). At the same time, the NASDAQ OMX Helsinki portfolio index, OMX Helsinki CAP, increased 25 percent. However, the share price in 2009 was affected by the uncertainty in the markets and the global economy at that time.

Our market capitalization at year-end was EUR 2,117 million (Dec 31, 2009: EUR 1,107 million). When the dividends paid and the changes in share price are taken into consideration, Outotec's total shareholder return (TSR) in 2010 was 90 percent (2009: 138%).

Outotec's target as defined in the company's dividend policy is to distribute at least 40 percent of annual net income of the preceding financial year per share as dividends.

Our profitability from business operations improved in 2010. Earn-

ings per share were EUR 0.59 (2009: EUR 1.01). The decrease was due to one-time costs related to restructuring and purchase price allocation amortizations. The Annual General Meeting decided that a dividend of EUR 0.75 per share be paid out for 2010. This is a total of EUR 34.3 million, and it was paid to shareholders in April 2011 (dividends paid in 2010: EUR 32.0 million).

### Donations

According to Outotec's donation policy the focus of donations is on global projects that aim to improve sustainable development and/or human life. Outotec will 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). Outotec does not give political contributions.

Read more about Outotec's financial performance in Outotec Annual Report 2010.



## Impact of our supply chain

At Outotec the supply chain has historically been managed on a project-by-project basis. The new operational model, introduced in spring 2010, has marked a strong transition period for our supply chain management activities. Outotec considers the establishment of global supply chain management as a key strategic pillar for the company, and has actively begun to streamline its supply activities. Simultaneously, Outotec appointed a Senior Vice President, Supply, Michael Frei, to oversee the development of supply chain management, including corporate responsibility aspects.

### Supply chain management

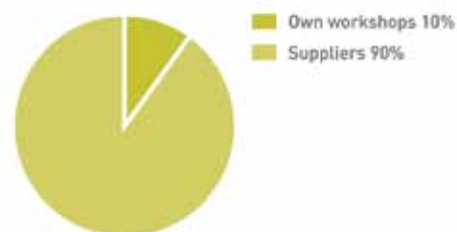
Outotec sees its supply chain as encompassing both our own activities as well as management of our suppliers. We deliver large tailored solutions to our customers all over the world and hence use various suppliers in our projects. In 2010, Outotec spent approximately EUR 660 million on external sourcing.

Some 90 percent of manufacturing is sourced from external suppliers. The remaining 10 percent of Outotec's manufacturing takes place in the company's three manufacturing workshops in Finland and three assembly shops located in China, USA and Canada.

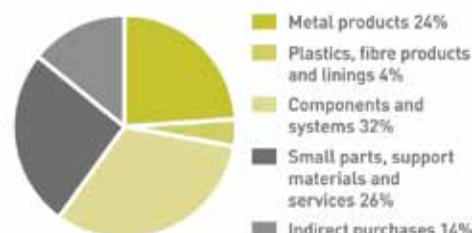
Besides managing our own manu-

facturing facilities we also operate construction sites on behalf of our customers. For this reason, installation and services comprise an important part of our supply chain. On the supplier side, Outotec's supply chain management encompasses supplier selection and project purchasing.

#### Manufacturing



#### Supplies by category



Data for these graphs has been collected during 2007–2009.

### Sustainability aspects in supply chain

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 and construction work provided by our subcontractors and project-specific suppliers. We therefore aim to develop long-term relationships with selected suppliers and establish procedures to ensure that results meet with our expectations.

We expedite the work at our suppliers' manufacturing workshops and impose quality checks throughout the manufacturing and logistics timelines. Currently, however, expediting and inspection focuses on project control and technical aspects. Outotec is developing systematic procedures for checking ethical behavior, labor practices, environmental soundness, and governance issues of its suppliers. The development and implementation of these procedures is part of the global Supply development initiative started in 2010.

As a technology company, Outotec needs high-quality suppliers. In Outotec's customer projects, also the locally sourced subcontractors need to be trained specialists, and therefore

the risk profile regarding affront/violation of human rights is relatively low. However, more emphasis will be put on supplier selection procedures in the future to improve our supply chain management, and thus also our sustainability performance.



Together with the construction subcontractor Graña y Montero, Outotec received a safety award from their client Votorantim Metais for outstanding safety results achieved in the Cajamarquilla zinc plant project. The health and safety team of Outotec and Graña y Montero reached the spectacular mark of 500,000 working hours without a severe incident. The project had more than 600 employees in various fields of construction as a part of Outotec's turnkey delivery to Votorantim Metais, Peru.

### Safety in field operations

Safety is an important aspect in Outotec's field operations at customers' sites. Outotec's project manager is responsible for the company's own and subcontractors' site activities and follows the management of environmental issues, safety, systematic practices and cleanliness. All Outotec's project and service persons follow the customer's safety regulations at 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.

In its main locations Outotec provides training in occupational safety for all employees whose work involves or will involve participating in installation, commissioning, maintenance, or general site operations related to plants, equipment or services delivered by Outotec to its customers. The objective of the training is to teach employees hazard recognition, methods of preventive action and to improve practical collaboration between the customer and supplier organizations on shared sites.

### Our manufacturing/assembly shops

Outotec operates three manufacturing workshops in Finland, and three assembly shops located in China, USA and Canada. These facilities have unit-specific local quality, health and



safety systems in place and they care of proper sorting and further handling of wastes, including hazardous wastes.

## Our suppliers

Outotec uses thousands of suppliers around the world for our customers' projects. These include mechanical workshops, component manufacturers and local construction and engineering companies. The majority of purchasing (approximately 63%) takes place in the EMEA region (Europe, Middle East, Africa).

Outotec has defined Supply as a strategic function and it is highly pri-

oritized as a development area in the company's strategy, which builds and manages the supplier base through sourcing category management. Furthermore, it leads and develops sourcing activities with locally based purchasing for projects and services.

## Targets regarding supplier activities

Previously, supplier activities were looked at only on a project basis, but new corporate wide supply policies are now being developed that will implement global Outotec standards across all operations.

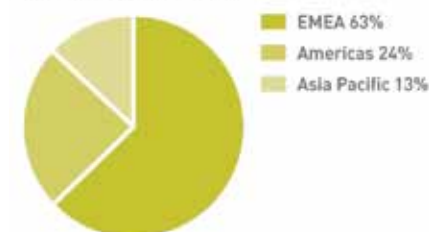
The main target for 2011 is to assess

the supplier base and supplier qualification procedures, including sourcing policy. As well as developing our policies, we have also introduced programs that will help systematically incorporate them into our daily operations. For example, we plan on incorporating suppliers into one template that will be used across the company. We consider the supplier qualification process an essential element, which will be put in place during 2011.

As a long-term target we aim to establish a systematic supplier relationship management system with a harmonized code of conduct and

consistent use of it. A responsible supply chain is naturally a key aim of this strategy.

Sourcing by region



## Safety performance in our manufacturing facilities

Facility	Number of employees in 2010	Number of accidents in 2010	GRI indicator
Turula works in Finland <ul style="list-style-type: none"> <li>manufacturing and assembly of proprietary equipment, components and complete production lines</li> <li>committed to the Federation of Finnish Technology Industries' energy efficiency program</li> </ul>	160	8 of which 4 were lost-time injuries and 4 non-lost-time injuries	LA7
Lappeenranta works in Finland <ul style="list-style-type: none"> <li>manufacturing and assembling filters and their components</li> </ul>	100	3	LA7
Turku Ceramics in Finland <ul style="list-style-type: none"> <li>manufacturing ceramic plates for filters</li> </ul>	28	2	LA7
Suzhou assembly shop in China <ul style="list-style-type: none"> <li>supports Outotec's filter business</li> </ul>	27	0	LA7
Burlington assembly shop in Canada <ul style="list-style-type: none"> <li>focuses on aluminum smelter equipment</li> </ul>	11	1	LA7
Jacksonville assembly shop in the USA <ul style="list-style-type: none"> <li>focuses on physical separation equipment</li> </ul>	12	3	LA7

Performance in 2010	Target for 2011	GRI indicator
The new Supply function built the basis for the systematic sustainable development of Outotec's supply base across the corporation.	Assess supplier base, update and develop the sourcing policy.	EC6, HR2

Read also Impact of our supply chain, p. 39.

# About the report

## Report scope and profile

This report, the first of its kind for Outotec, covers the company's sustainability performance for the 2010 calendar year. In the upcoming years performance and targets will be reported annually on the company's website. Outotec's sustainability reporting is prepared according to the Global Reporting Initiative (GRI) 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, solutions and stakeholders. The selected core indicators are of importance at the corporate level and are based on those proposed by the GRI guidelines.

We report on our own operations, but do not include delivery projects, use of the technology and 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.

## Data collection

The environmental data reporting system was introduced in Outotec in 2009. The data on environmental performance 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 2010 Outotec acquired the Larox filtration business, Millteam, Edmeston and Ausmelt. These new businesses are included in the environmental data reporting.

For collection of social performance data, a global master data system was applied. Outotec HC Master Data system, introduced in autumn 2010, has been built on SAP HCM (Human Capital Management) software. It includes accurate data of each Outotec employee globally and covers all major business units. The system will be further developed in 2011. Safety data is collected locally by safety managers and information is sent to the headquarters, where the global data is consolidated.

Performance data on the environmental aspects of sustainability has been collected from major business

units for electricity, heating, owned or leased company cars, flight emissions, water, paper, recycled waste, and land-fill waste. In addition, the combustion of fuels in company owned combustion sources (scope 1 emissions) and hazardous waste occurring in Outotec's research centers, equipment manufacture workshops, and ceramic plate production plant are included in the report. The sources of own fuel combustion are identified through separate environmental data reports provided on an annual basis. When required, e-mail correspondence was used to collect the information from the different business units.

For Outotec's most important and largest business units, environmental data was available. Outotec's smallest offices were not able to report environmental data as they are located in bigger office premises together with other companies. They pay a monthly lump sum to the office providers and it is not possible to identify electricity, heat, and water consumption. For this population an average number was calculated based on the available data.

Economic performance data is based on data collection through ERP systems

and Outotec's HFM system. The figures used in the consolidated financial statements of Outotec have been prepared according to IFRS (International Financial Reporting Standard). In addition, some data has been collected manually from MS Excel sheets.

In preparing the report, the 'Guidance on Defining Report Content' has been applied. The content of this report was reviewed and approved by Outotec Executive Board in May 2011.

### Identified users of the report

We have identified investors, customers, current and future employees and suppliers as the main users of this report.

## Key targets

The materiality assessment and the CO<sub>2</sub> emissions avoided through Outotec's technology solutions clearly illustrate where Outotec can achieve the most positive impacts on sustain-

ability – namely through improvements in its technologies to enable customers to reduce the environmental impact of their operations. Besides efforts in R&D and providing customers

with process solutions, technologies and services, Outotec also strives to improve the economic, environmental and social performance of its own operations. By joining the corporate

responsibility UN Global Compact initiative Outotec has expressed its intent to further advance sustainability and social responsibility principles in its business practices.

The key targets related to sustainability are collected in this table:

	Target for 2010	Performance in 2010	Target for 2011	GRI indicator
Economic and governance	Build a platform for future growth, develop an efficient and flexible way of working and harmonize operations.	New mission, vision and strategy defined. New operational model launched in April.	Improve sustainability governance processes, data collection and reporting.	
		Acquisitions of Ausmelt and Larox brought new sustainable technologies for recycling and water filtration.	Continue growth through acquisitions, update the acquisition process to include sustainability assessment in due diligence.	EC1
		Decision to improve transparency and communication related to corporate responsibility.	Publish Outotec's first GRI-based sustainability report and web-based communication platform.	
Environmental		72% of order intake classified as Environmental Goods and Services.	Grow the percentage of EGS in order intake; long-term target is to reach a level of 80-90%.	EN6
		EUR 28.5 million invested in R&D.	Increase investments in R&D in line with business growth.	EN6
	Assess the existing QEHS procedures, standards, forms and best practices.	As part of the new operational model one person appointed to be responsible for QEHS systems globally.	Harmonize the QEHS systems in and for all units and locations with international certifications by 2013.	
		4.2 million tonnes CO <sub>2</sub> emissions avoided (CDP 2010) through use of three Outotec technologies	Over 5% annual increase in the amount of avoided CO <sub>2</sub> emissions through use of Outotec technologies and solutions.	EN26
		New video conferencing systems installed in Finland and Germany to reduce air travel. Emission reduction achieved through use of video conferencing.	Increase use of video conferencing globally and introduce 20 new installations.	EN18
Social		Decision was made to review Outotec principles. Outotec signed the United Nations Global Compact initiative.	Have a dialogue with employees about Outotec values, principles and code of conduct and redefine them. Long-term target is to provide training related to the code of conduct to all employees.	S03
	Build a platform that enables harmonized processes and effective utilization of personnel data globally.	Human Capital master data system was developed.	Implement the HC master data system globally and develop it to include all relevant personnel data needed to establish corporate wide indicators.	LA1-13
		86% of employees had a Performance Development Dialogue.	90-95% of employees have a Performance Development Dialogue.	LA12
		The new Supply function built the basis for the systematic sustainable development of Outotec's supply base across the corporation.	Assess supplier base and update and develop sourcing policy.	EC6, HR2

# Independent Assurance Report – Outotec Sustainability Report 2010

## 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 2010.

## 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 preparation of any Sustainability Information, apart from the Independent Assurance in section 6.0. 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 2010. 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> 2010 to December 31<sup>st</sup> 2010.

The Sustainability Information assured included the Standard Disclosures (GRI; sections 1 to 4), and 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 Engagements 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, Management Approaches and reported Performance Indicators 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 between March and May 2011. 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 2010 as well as performing cross-checks on a sample basis concerning environmental data.
- Checking the accuracy of the economical information from Annual Reports 2009 and 2010.
- 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 2010 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 2010 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+-level is achieved. We assessed the scope of Sustainability Information provided by Outotec for each Standard Disclosure and Performance Indicator included 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.
- Although Outotec has identified its technology solutions to have the largest potential in addressing sustainability issues, the scope of the report is limited to Outotec's own operations. For future reporting periods we recommend the boundary of the report to be expanded to include, where possible, project execution as well as site and supplier performance.
- For improved transparency, it is recommended that Outotec further improves its reporting on possible failures in the future.
- As the social data gathering process is fairly new and to some extent still under development at Outotec, Outotec should emphasize on improving the accuracy and completeness for future reporting periods.

## 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 environmental consultancy services, combined with training, research and planning, for companies in the infrastructure, industry and service sectors. Ecobio's team is 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, 6<sup>th</sup> of June 2011  
Insinööritoimisto Ecobio Oy



Taru Halla  
Managing Director



Thomas Andersson  
Project Manager



# GRI application level statement



## Statement GRI Application Level Check

GRI hereby states that **Outotec Oyj** has presented its report "Outotec sustainability report 2010" to GRI's Report Services which have concluded that the report fulfills the requirement of Application Level B+.

GRI Application Levels communicate the extent to which the content of the G3 Guidelines has been used in the submitted sustainability reporting. The Check confirms that the required set and number of disclosures for that Application Level have been addressed in the reporting and that the GRI Content Index demonstrates a valid representation of the required disclosures, as described in the GRI G3 Guidelines.

Application Levels do not provide an opinion on the sustainability performance of the reporter nor the quality of the information in the report.

Amsterdam, 14 June 2011



**Nelmara Arbex**  
Deputy Chief Executive  
Global Reporting Initiative



The "+" has been added to this Application Level because Outotec Oyj has submitted this report for external assurance. GRI accepts the reporter's own criteria for choosing the relevant assurance provider.

The Global Reporting Initiative (GRI) is a network-based organization that has pioneered the development of the world's most widely used sustainability reporting framework and is committed to its continuous improvement and application worldwide. The GRI Guidelines set out the principles and indicators that organizations can use to measure and report their economic, environmental, and social performance. [www.globalreporting.org](http://www.globalreporting.org)

**Disclaimer:** Where the relevant sustainability reporting includes external links, including to audio visual material, this statement only concerns material submitted to GRI at the time of the Check on 3 June 2011. GRI explicitly excludes the statement being applied to any later changes to such material.

# Global Reporting Initiative Index and UN Global Compact

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

Report Application Level	C	C+	B	<b>B+</b>	A	A+
<b>STANDARD DISCLOSURES</b>		<b>REPORT EXTERNALLY ASSURED</b>		<b>REPORT EXTERNALLY ASSURED</b>		<b>REPORT EXTERNALLY ASSURED</b>
<b>G3 Profile Disclosures</b> <b>OUTPUT</b>	Report on: 1.1 2.1–2.10 3.1–3.8, 3.10–3.12 4.1–4.4, 4.14–4.15		Report on all criteria listed for Level C plus: 1.2 3.9, 3.13 4.5–4.13, 4.16–4.17		Same as requirement for Level B	
<b>G3 Management Approach Disclosures</b> <b>OUTPUT</b>	Not Required		Management Approach Disclosures for each Indicator Category		Management Approach Disclosures for each Indicator Category	
<b>G3 Performance Indicators &amp; Sector Supplement Performance Indicators</b> <b>OUTPUT</b>	Report on a minimum of 10 Performance Indicators, Including at least one from each of: Economic, Social and Environmental.		Report on a minimum of 20 Performance Indicators, at least one from each of Economic, Environmental, Human rights, Labor, Society, Product Responsibility.		Report on a core G3 and Sector Supplement* Indicator with due regard to the material Principle by either: A) reporting on the Indicator or B) explaining the reason for its omission.	

\* Sector Supplement in final version

GRI Content	Reference page	Reported	Global Compact principles
Profile Disclosures			
1 <b>Strategy and analysis</b>			
1.1 CEO's statement	CEO's letter to stakeholders, p. 4–5	Fully	
1.2 Key impacts, risks and opportunities	Materiality assessment, p. 7–8 Risks and opportunities, p. 29–31 Key targets, p. 43	Fully	
2 <b>Organizational profile</b>			
2.1 Name of the organization	Outotec in brief, p. 2	Fully	
2.2 Primary brands, products, and/or services	Outotec in brief, p. 2	Fully	

	GRI Content	Reference page	Reported	Global Compact principles
2.3	Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures	Outotec in brief, p. 2	Fully	
2.4	Location of organization's headquarters	Outotec in brief, p. 2	Fully	
2.5	Number of countries where the organization operates	Outotec in brief, p. 2	Fully	
2.6	Nature of ownership and legal form	Outotec in brief, p. 2	Fully	
2.7	Markets served	Outotec in brief, p. 2	Fully	
2.8	Scale of the reporting organization	Outotec in brief, p. 2 Economic impact, p. 37–38	Fully	
2.9	Significant changes during the reporting period regarding size, structure, or ownership	Outotec in brief, p. 2	Fully	
2.10	Awards received in the reporting period	Highlights 2010, p. 3 Customers, p. 20–21 Sustainability aspects in supply chain, p. 39–40		
3	<b>Report parameters</b>			
3.1–3.4	Report profile	Report scope and profile, p. 42 Contact information, p. 53	Fully	
3.5	Process for defining report content	Materiality assessment, p. 7–8 Interaction with stakeholders, p. 20–23	Fully	
3.6	Boundary of the report	Report scope and profile, p. 42 Data collection, p. 42	Fully	
3.7	State any specific limitations on the scope or boundary of the report	Report scope and profile, p. 42	Fully	
3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities	Report scope and profile, p. 42 Data collection, p. 42	Fully	
3.9	Data measurement techniques and the bases of calculations	Data collection, p. 42	Fully	
3.12	Table identifying the location of the Standard Disclosures in the report	GRI Index and UN Global Compact, p. 47–52	Fully	
3.13	Assurance	Independent assurance, p. 44–45	Fully	
4	<b>Governance, commitments and engagement</b>			
4.1–4.10	Governance	Governance and sustainability, p. 18–19 Risks and opportunities, p. 29–31	Fully	1–10
4.11–4.13	Commitments to external initiatives	Commitment to external initiatives, p. 23–25 Risks and opportunities, p. 29–31	Fully	1–10

	GRI Content	Reference page	Reported	Global Compact principles
4.14–4.17	Stakeholder engagement	Employees, p. 11–14 Interaction with stakeholders, p. 20–23	Fully	
<b>ECONOMIC PERFORMANCE INDICATORS</b>				
	Management approach to economic responsibility	Management approach, p. 9–10 Economic impact, p. 37–38	Fully	1,4,6,7
EC1	Direct economic value generated and distributed	Economic impact, p. 37–38	Fully	
EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change	Risks and opportunities, p. 29–31	Fully	7
EC3	Employee benefit obligations	Employee benefits, p. 13	Partly	
EC4	Significant financial assistance received from government	R&D and innovation, p. 14–15	Fully	
EC6	Spending on local suppliers	Supply chain, p. 39–41	Partly	
EC7	Procedures for local hiring	Labor practices, p. 13–14	Partly	6
EC8	Development and impact of infrastructure investments and services provided primarily for public benefit	Commitment to external initiatives, p. 23–25	Partly	
<b>ENVIRONMENTAL PERFORMANCE INDICATORS</b>				
	Management approach to environmental responsibility	Management approach, p. 9–10 Ecological footprint, p. 35–36	Fully	7,8,9
EN1	Materials used	Ecological footprint, p. 35–36	Partly	8
EN3–5	Energy consumption and energy saved	Ecological footprint, p. 35–36	Fully	8,9
EN6	Initiatives to provide energy-efficient or renewable energy-based products and services	R&D and innovation, p. 14–15	Partly	8,9
EN8	Water withdrawal	Ecological footprint, p. 35–36	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. 35–36	Fully	8
EN18	Initiatives to reduce greenhouse gas emissions	Ecological footprint, p. 35–36	Fully	7,8,9
EN19	Emissions of ozone-depleting substances by weight		Not relevant	8
EN20	NOx, SOx, and other significant air emissions		Not relevant	8
EN21	Water discharge		Not relevant	8

	GRI Content	Reference page	Reported	Global Compact principles
EN22	Waste by type and disposal method	Ecological footprint, p. 35–36	Fully	8
EN23	Total number and volume of significant spills		Not relevant	8
EN24	Hazardous waste	Ecological footprint, p. 35–36	Fully	8
EN26	Initiatives to mitigate environmental impacts of products	R&D and innovation, p. 14–15	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	Code of conduct, values and principles, p. 16–17	Fully	8
<b>SOCIAL PERFORMANCE INDICATORS</b>				
<b>Labor practices and decent work</b>				
	<b>Management approach to labor practices and decent work</b>	Management approach, p. 9–10 Labor practices, p. 13–14	Fully	1,3,6
LA1	Total workforce by employment type, employment contract, and region.	Employees, p. 11–14	Fully	
LA2	Total number and rate of employee turnover by age group, gender, and region.	Employees, p. 11–14	Partly	6
LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Employee benefits, p. 13	Partly	
LA4	Percentage of employees covered by collective bargaining agreements.	Employee benefits, p. 13	Fully	1,3
LA5	Minimum notice period(s) regarding significant operational changes		Not reported	3
LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities by region.	Employees, p. 11–14 Our manufacturing, p. 40–41	Partly	1
LA8	Education, training and prevention programs regarding serious diseases		Not reported	1
LA10	Average hours of training per year	Competence development, p. 12–13	Partly	
LA11	Programs for skills management and lifelong learning	Competence development, p. 12–13	Fully	
LA12	Percentage of employees receiving regular performance and career development reviews.	Competence development, p. 12–13	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.	Employees, p. 11–14	Partly	1,6
LA14	Ratio of basic salary of men to women by employee category		Not reported	1,6

	GRI Content	Reference page	Reported	Global Compact principles
	<b>Human rights</b>			
	<b>Management approach to human rights</b>	Management approach, p. 9–10 Code of conduct, values and principles, p. 16–17	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.	Sustainability aspects in supply chain, p. 39–40	Partly	1,2,3,4,5,6
HR4	Total number of incidents of discrimination and actions taken.	Labor practices, p. 13–14	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	Sustainability aspects in supply chain, p. 39–40	Fully	1,2,5
HR7	Operations identified as having significant risk for incidents of forced or compulsory labor	Sustainability aspects in supply chain, p. 39–40	Fully	1,2,4
HR9	Total number of incidents of violations involving rights of indigenous people and actions taken.	Code of conduct, values and principles, p. 16–17	Fully	1,2
	<b>Society</b>			
	<b>Management approach to society</b>	Management approach, p. 9–10 Employees, p. 11–14	Fully	10
S01	Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities	Commitment to external initiatives, p. 23–25 Sustainability aspects in supply chain, p. 39–40	Fully	
S02	Percentage and total number of business units analyzed for risks related to corruption.	Code of conduct, values and principles, p. 16–17	Partly	10
S03	Percentage of employees trained in organization's anti-corruption policies and procedures.	Code of conduct, values and principles, p. 16–17	Partly	10
S04	Actions taken in response to incidents of corruption.	Code of conduct, values and principles, p. 16–17	Fully	10
S05	Public policy positions and participation in public policy development	Principal international stakeholder organizations, p. 25	Fully	1–10
S06	Total value of financial and in-kind contributions to political parties, politicians, and related institutions	Economic impact, p. 37–38	Fully	10
S07	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Code of conduct, values and principles, p. 16–17	Fully	
S08	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations.	Code of conduct, values and principles, p. 16–17	Fully	

	GRI Content	Reference page	Reported	Global Compact principles
	<b>Product responsibility</b>			
	<b>Management approach to product responsibility</b>	Management approach, p. 9–10 Impact of our products and services, p. 32–34	Fully	1–8
PR1	Health and safety impacts of products and services	Impact of our products and services, p. 32–34	Fully	1
PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services	Code of conduct, values and principles, p. 16–17	Fully	1
PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information	Impact of our products and services, p. 32–34	Partly	8
PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling	Code of conduct, values and principles, p. 16–17	Fully	8
PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction	Customers, p. 20–21	Fully	8
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		Not reported	

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