

# Sustainability report 2009

COWI



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# Sustainability – guiding us to growth



When the storm rages, it is important to stay focused on where you are heading. The global economy was battered in 2009, and in response we decided to tighten our focus on sustainability and climate change, since we believe these are two areas that can benefit both us and our stakeholders in the long run.

The consequences of climate change continue to materialise all around us. No one can ignore the extreme weather, rising sea levels or retreating Polar ice. We have the knowledge to help mitigate and adapt to these changes, and this obliges us to help. In 2009 we redoubled our efforts in the climate change area, and this is a focus we will maintain in the years to come.

COWI is always looking to stay out in front when it comes to sustainability. And in 2009, our focus turned to Cradle to Cradle as we began collaborating with the Environmental Protection and Encouragement Agency, a Cradle to Cradle organisation established by Michael Braungart, one of the movement's founders. More about our work with Cradle to Cradle and how we have laid the foundation to be the leading consultant

in the field is described in this report.

We believe that success in today's global market requires a diverse management team. And to ensure that our management group maintains its focus on fulfilling that goal, I have accepted a year-long advocacy position that will see me serve as ambassador for more women in management. I will use this opportunity to encourage more women to seek management positions and work towards creating space for diverse management approaches.

In 2009 we tightened our focus on business integrity by launching a hotline for anti-corruption and business ethics. We recognise that our employees are the first to know if our business is not managed according to our values, and the new hotline gives us the

opportunity to react quickly should questions about unethical behaviour emerge – all without compromising COWI's open management culture.

The UN Global Compact and our commitment to the Caring for the Climate initiative play important roles because they help us keep our focus, even when the economic storm threatens to blow us off course. We believe sustainability and green innovation will guide us to growth, and in the years to come we will work systematically to make sure they remain firmly in focus.

Yours sincerely,

Lars-Peter Søbeye  
President and CEO

# Key facts and figures



COWI office in Lyngby, Denmark



COWI is a leading northern European consulting group providing state-of-the-art engineering, environmental science and economics services, and with a particular focus on environmental and social responsibility. COWI is a leader within its field, because COWI's 6,000 employees are leaders within theirs.

COWI's 3E profile – engineering, environment and economics – gives us a solid platform for developing sustainable services across sectors. We encourage our organisation to innovate and be creative, and above all to be an involved partner for our customers, business associates, the public sector, academic institutions and other stakeholders.

Since COWI's founding in 1930, we have been involved in more than 50,000 projects in 175 countries. Today, we have offices in 35 countries and over 6,000 employees representing a broad spectrum of different professions.



## Key numbers and figures

	2007	2008	2009	2009
DKK/EUR rate at 31 December 2009				744,15
	DKKm	DKKm	DKKm	EURm
Net turnover	3,031.4	3,498.0	3,993.4	536.6
(EBITDA*)	275.8	261.8	297.7	40.0
Operating profit on ordinary activities	138.0	165.0	188.4	25.3
Operating profit (EBIT)	180.8	167.4	189.8	25.5
Net financials	11.5	9.0	25.3	3.4
Profit before tax	192.3	176.4	215.1	28.9
Profit for the year	155.3	128.3	153.8	20.7
COWI's share of profit for the year	154.8	127.6	153.4	20.6

\* Operating profit before amortisation, depreciation and impairment losses

### Number of employees

Denmark	-	2,752	2,961	-
Norway	-	651	712	-
Central eastern Europe	-	340	419	-
The Arabian Gulf	-	521	654	-
Africa	-	195	202	-
Sweden	-	85	792	-
Other companies	-	328	260	-
COWI Group	-	4,872	6,000	-
Average number of employees	3,820	4,475	5,436	

### Green account for COWI in Denmark

Heating (MWh)	4,236	4,889	4,729	-
Electricity (MWh)	4,173	5,374	5,322	-
Water (m <sup>3</sup> )	13,639	14,885	15,006	-
Paper (ton)	114	103	115	-
Total waste (tonnes)	339	352	355	-

# Our sustainability platform

COWI's main asset is knowledge, and we believe we have a responsibility to use that knowledge to make the world a better place.

COWI leads some of the largest engineering projects in the world. Due to the size and scale of our projects, COWI is in a position to have a major impact on the environment and society of the locations where we work. This is something we take seriously, and we do our utmost to act responsibly, both as a consultant and as an employer.

Part of the way we consider our impact is by making sustainability an integral part of our external projects, treating our employees well and running our buildings as energy efficiently as possible.

For COWI, sustainability means taking a holistic approach to the way we do business. It means thinking as much in terms of people and the planet as profit. And it means a commitment to treat all stakeholders with respect and dignity, to limit our environmental footprint wherever possible and to integrate business ethics into all our activities. Obliging ourselves to work holistically is in

COWI's sustainability platform





line with our fundamental values and with our membership of the UN Global Compact.

We are continuously improving our performance in the area of sustainability and corporate social responsibility (CSR). In the coming year we will work more closely with our suppliers to ensure that they fulfil minimum social and environmental standards and we aim to increase the global reach of our sustainability platform.

### About this report

This year we publish our third sustainability and CSR report. It is also used as COWI's UN Global Compact progress report for 2009.

We have decided to highlight the five themes we committed ourselves most to in 2009. They are:

- Our commitment to reduce climate change
- Our commitment to sustainable buildings
- Our commitment to Cradle to Cradle
- Our commitment on business ethics
- Our commitment to diversity and women in management

COWI is active in far more areas than those listed in this report. More information about what we do is available online at [www.cowi.com](http://www.cowi.com) in the 'About COWI' section.



“The global recession in 2009 forced us to think more strategically about corporate responsibility. We became better at linking it to our core business, and I believe that we can use this to our clients' advantage in the future,”

**says Annemarie Meisling  
CSR Manager.**

# 1 Climate change – seeing the solutions



“The climate change agenda pushes us towards a low carbon economy under water stress. An intense global innovation battle has started.”

**says Stig P. Christensen,  
R&D Director, COWI Denmark.**



Climate change and the potential impact it has on energy, water, health and land use represents the single largest environmental and societal challenge we face – but it is also a major opportunity.

The consultancy sector has a key role to play when it comes to finding solutions to the challenges climate change presents – not just in terms of mitigating and adapting to the changes, but also when it comes to restructuring economies and communities.

In 2009 we saw that there was a close link between climate change and a planet under water stress. We worked with businesses interested in calculating their water footprints, coastal cities trying to predict the impact of rising sea levels and local governments that wanted to understand the risk of groundwater depletion. In 2010, we will continue to look for

solutions to develop low carbon economies and communities under water stress.

We believe COWI can have the greatest impact on reducing climate change by working closely with our customers to develop the most climate friendly solutions possible.

In 2009 we focused on developing energy saving technology solutions for the construction industry, finding new materials to help mitigate climate change and refining climate change risk assessment tools for the private and public sectors. Even though COWI's own climate impact is relatively limited, we

still have an obligation to reduce our own emissions. Our Danish offices are in the midst of implementing a ten-point plan for reducing emissions. Additionally, a corporate initiative is taking place to minimise our climate footprint in all large offices in the COWI Group.

Pictures from the Climate Change congress in Copenhagen



“Spontaneous meetings are a vital part of any conference, but the aim of our dating initiative was to help foster stronger ties between participants and allow them to leave the congress feeling it was a beneficial, productive event that afforded them optimal knowledge exchanges – even with people they didn’t know,”

**says Josina Bergsøe,  
COWI’s Design Manager**

## Lessons from the Climate Change Congress

**COWI sponsored the Climate Change Congress organised by the University of Copenhagen in March 2009.**

The congress served as one of the key gatherings of climate change experts ahead of the UN Climate Change Conference in Copenhagen in December 2009.

“The congress gave us an opportunity to review the scientific basis for our climate change strategy,” says Claus Hvasshøj, COWI Market Director.

“We used what we learned about low carbon economies, water sector scarcity, extreme weather events, sea level increases, relocation of land use and economic activity in our business planning and customer services. These areas will play a key role in our climate change initiative in 2010.”

### **Knowledge dating for scientists**

In order to give participants a novel way to meet with each other, the sponsors of the congress came up with the idea to arrange ‘knowledge dates’.

To sign up for dates, participants listed their competences on-line and were then asked to describe their ideal profile of someone they would like to meet during the congress.



With fewer flights and more video conferencing in 2009, COWI employees in Denmark reduced their impact on the climate by 14 per cent.

## Green account for COWI in Denmark

### **Air travel decline lifts green account**

In spite of COWI's growth of 14,2 percent in 2009 compared to 2008, COWI's Danish employees flew less according to the company's 2009 green account. In all, employee air travel fell by 20 per cent, reducing COWI Denmark's carbon footprint to 3.8 tonnes per employee – a 14 per cent improvement on 2008, when the figure was 4.4 tonnes per employee.

Transport amounted to 61 per cent of COWI's emissions in 2009, making it the largest source. Air travel alone made up 47 per cent of emissions, or 3,873 tonnes of CO<sub>2</sub> equivalents. Traveling by car to and from meetings kicked in another 13 per cent, while domestic rail travel accounted for less than one per cent of emissions.

Electricity consumption accounted for 30 per cent of emissions and heating another 10 per cent.

But while heat use remained relatively unchanged from 2007\* to 2009 at about 2,240 kWh per office workplace, electricity use rose by 14 per cent, to 2,516 kWh from 2,203 kWh. From 2008 to 2009, however, electricity consumption fell by 5 per cent. Between 2007 and 2009 water use fell to 7,000 litres per office workplace from 7,100 litres.

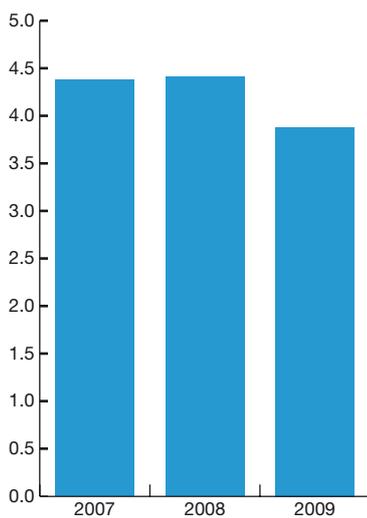
### **Reduction in air travel singled out**

The statistics give no clear indication of why air travel declined in 2009, but a number of explanations were possible, according to Stig Christensen.

“We have a climate strategy that seeks to make us a leading climate consultant, and that has had a positive impact on the attention we pay to putting our own house in order,” he said, noting that the company had invested in new communication tools such as video rooms and the Communicator

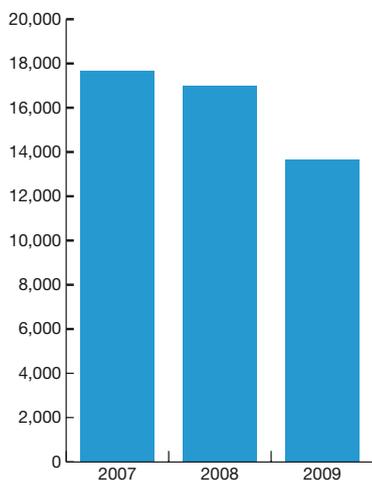
### Climate impact per office workplace

Tonnes CO<sub>2</sub> equivalents/office workplace



### Travel by air, total

Km/office workplace



IT network system. Employees have also been encouraged to use the investments to hold video meetings whenever possible, instead of travelling.

“And that is at least one of the explanations,” Christensen said. “But you could also point to our strategy to divide the company into international regions. That should also reduce the amount of travel to and from our offices in Denmark.”

Despite COWI’s growth, a third explanation, could also have been a slowdown in some sectors due to the recession.

Even though the company’s electricity and heat consumption did not fall, COWI is better than average in both categories, according to Stig Christensen.

“The increased power use over the past few years can be traced back to our revamp of the IT system, and won’t have that great an effect on our overall climate impact.”

“COWI meets or exceeds recognised benchmarks for power, water and heat use in office buildings. Power, water and heat use have been on the decline since we started keeping records in 2001, and I think it is safe to say that our basic operation is cost and climate effective.

### Working towards a group-wide green account

The green account only includes COWI’s employees in Denmark. COWI Norway and COWI Belgium have conducted similar reviews, but varying national standards make it impossible to compare across borders. Nevertheless, according to Christensen, the reports serve as the first steps toward a group-wide climate report.

*\*Note: The figures in the green accounts for 2007 have been adjusted on the green accounts for 2009 as a different calculation basis has been used.*



## Key figures for COWI in Denmark

### Floorage and office workplaces occupied, COWI in Denmark

Gross floorage (m <sup>2</sup> )	64,113
Heated area (m <sup>2</sup> )	50,695
Number of office workplaces	2,115

### Total resource consumption, COWI in Denmark

	2007	2008	2009
Heating (MWh)	4,236	4,889	4,729
Electricity (MWh)	4,173	5,374	5,322
Water (m <sup>3</sup> )	13,639	14,885	15,006
Paper (ton)	114	103	115
Total waste (tonnes)	339	352	355
* Incineration	236	259	238
* Recycling	70	81	91
* Disposal	33	12	25
* Special waste	0.1	0.1	0.2

### Resource consumption per office workplace occupied, COWI in Denmark

	2007	2008	2009
Heating (kWh)	2,237	2,398	2,236
Electricity (kWh)	2,203	2,636	2,516
Water (m <sup>3</sup> )	7,2	7,3	7,1
Paper (kg)	61	51	54
Total waste (kg)	179	173	168
* Incineration	125	127	113
* Recycling	37	40	43
* Disposal	17	6	12
* Special waste	0.06	0.05	0.1

### Resource consumption per m<sup>2</sup>, COWI in Denmark

	2007	2008	2009
Heating (kWh)	72	98	93
Electricity (kWh)	69	85	83

# Laying the foundation for sustainable construction

“Owners of tomorrow will demand sustainable buildings, and the competitive edge will belong to contractors who integrate environmentally friendly materials and sustainable durability strategies into their work. In the Arabian Gulf we see the demand rising almost daily,”



**says Marco Malpiedi,  
Market Director, COWI Gulf.**



Building smarter and more sustainable is a win-win situation: for the same amount we spend on conventional approaches to construction, we can build buildings that can help future generations.

Sustainable construction is about more than just energy efficiency. It requires a multidisciplinary approach that takes into account factors like materials, indoor air quality and operation and maintenance.

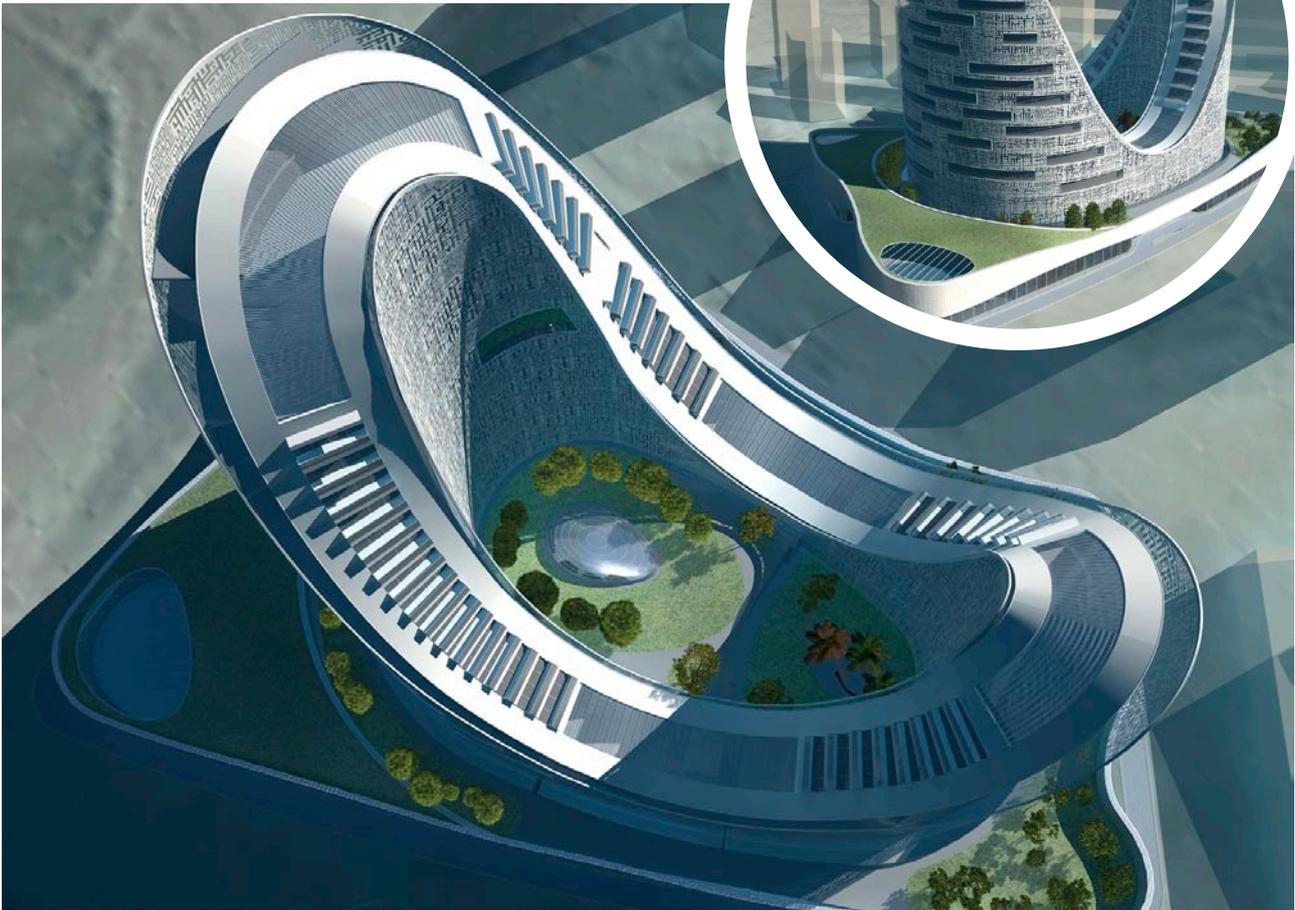
But in order to build sustainably, we also need to understand the social context of the building – the way it will be used, its aesthetics

and the long-term economic benefits.

In 2009 we established an interdisciplinary network dedicated to developing solutions to match new market demands. The sustainable buildings network ensures that we are aware of social, environmental and economic issues when providing consultancy to the construction industry.

Our staff is trained to be able to certify sustainable buildings according to LEED and BREEAM standards so they can give developers, investors and owners a clear idea of how sustainable their buildings are.

The investments are already paying off, and we are seeing demand for sustainable solutions rise despite the recession.



## A green hotel in Saudi Arabia

Saudi Arabia's first LEED certified hotel will offer five star luxury and high environmental standards.

In 2009 COWI won a competition to design a mixed-use development in the city of Al Khobar. At the centre of the development is a 20-storey, five-star hotel with adjacent office buildings. Surrounding it will be recreational and retail facilities such as a gym, a pool, restaurants, cafés and high-end boutiques. In all, some 42,000 m<sup>2</sup> will be developed as part of the project.

## The sustainable approach

COWI's approach embraces Saudi Arabian culture and nature. The exterior is contemporary, but takes its inspiration from classical Arabic architecture. Sleek lines and a choice of natural materials provide an atmosphere of a modern hotel that respects its heritage.

Particular consideration has been given to how the building will be affected by the sun, and the final design will allow it to take advantage of natural light without making it vulnerable to the punishing desert sun. This has been achieved by designing singularly loaded structures that incorporate shallow floor plates.

"COWI's 38 years in the Gulf region have given us a solid reputation as a multidisciplinary consultancy provider, which is reflected in the fact that we have been retained to provide full integrated services for the project, such as architecture, structures, energy modelling, site-wide infrastructure and utilities." says Maan Al Salloum, Head of Architecture, COWI Gulf, Bahrain

## ◀ Sustainable features of the green hotel

As a LEED certified building, the development must live up to the highest environmental standards. COWI's design calls for:

- an orientation and biomorphic shape that reduces the impact of wind and solar gain while at the same time increasing structural stability and maximising enclosed space by incorporating green roofs and atrium gardens
- the building to generate its own power by using horizontal axis wind turbines and solar cells laminated into the glass of the facade.
- heating and cooling to be produced using energy piles and for water to be heated using solar thermal energy
- using double-glazed multi-ventilation windows and cavity walls as a way to aid passive heating and cooling systems
- wastewater to be recycled and reused in a hierarchy culminating in landscape irrigation
- a green roof and a living wall to help reduce air pollution and CO<sub>2</sub> emissions
- recycled materials to be used during construction
- double façades to the south, east and west that can help reduce the overall cooling load by buffering direct sunlight and reducing solar gain
- passive heat storage and heat recovery

## Concrete as a sustainable material

The heat generated by the audience and the spotlights on the stage of the Royal Danish Playhouse is recycled in the dressing room, administrative offices and the foyer.

The Royal Danish Playhouse, where COWI provided general engineering services, is one of the first buildings to use thermo-active concrete in its construction. The system uses the heat from the audience and spotlights to heat water that is circulated inside plastic pipes in pre-cast concrete elements. In the summer, the building, located on Copenhagen's waterfront, is cooled using seawater circulated through the same pipe system. Doing so reduces the amount of energy needed to operate cooling systems by around 80 per cent.

## Sustainable concrete award

Partly due to this technology, the Danish National Playhouse received the Danish Sustainable Concrete Award in 2009. "What's remarkable is that the playhouse doesn't look like a concrete building. Instead the concrete has been utilised for sustainable solutions where most appropriate. By using the heat capacity of concrete in thermal active slabs, a useful material becomes multifunctional," noted award selection committee chairman Julian Weyer.



# Cradle to Cradle – lightening the burden of consumption



COWI provides advice on green roofs which is one of the ways to integrate the Cradle to Cradle concept



Roads, buildings and consumer products that solve their own environmental problems are at the heart of Cradle to Cradle thinking. COWI is among the first consulting engineering firms to begin integrating the concept in our business activities.

Imagine the old carpet you threw away being turned into fuel for a cement mixer. Or your house taking a cue from nearby trees and filtering air and water.

Unconventional ideas, both, but they are just two of the myriad of ways in which products, infrastructure, buildings and cities designed according to the principles of Cradle to Cradle (C2C) can contribute to their surroundings, instead of being a burden on them.

That can occur by making them so they produce energy, biomass or clean air. Regardless of their approach, however, one essential requirement for C2C products is that anything used to build them must either be convertible into

biological nutrients or technical nutrients that can be reused over and over and over again in other products.

#### **COWI as a first mover**

COWI entered into an agreement with C2C consultancy firm Environmental Protection and Encouragement Agency (EPEA) in 2009, making it one of the first consulting engineering firms to do so. The EPEA was set up by German chemist Michael Braungart, who is also one of C2C's founders.

Braungart visited COWI in the summer of 2009 to introduce the concept to employees and management. At the meeting it was decided to establish a partnership between COWI and the EPEA.

“C2C supports COWI’s goal of using its projects to make a positive difference. But the concept is also highly valuable for our customers: not only does it help them fulfil their sustainability goals, they can also use their C2C certification to improve their commitment to the environment,”

**says Mogens Heering,  
Director, Water and Environment.**



Jasper Steinhausen,  
Sustainable Business Developer

## Mind-blowing opportunities

Jasper Steinhausen, COWI's Sustainable Business Developer, calls C2C's potential "mind-blowing".

"It pushes a new green agenda in all areas of our business – such as bridges, tunnels and roads."

Steinhausen, a passionate C2C advocate, hopes the idea can also push COWI in a more holistic direction when it comes to its projects: "It forces us to draw on our full array of specialists in different business areas, be it indoor climate, sustainability, waste management or what have you."

Maja Nørgaard,  
MSc in Architectural Engineering



## First-hand C2C in Amsterdam and Hamburg

As part of its emphasis on C2C, COWI gave employees and external pioneers a first-hand view of what the movement is all about – first by studying the variety of ways Amsterdam has put the idea into practice, and then by receiving in-depth training at the EPEA in Hamburg.

Architectural engineer Maja Nørgaard came back from the Amsterdam trip more enthused about C2C than ever. “C2C can come off as being a vague set of ideas, but we were given an opportunity to get up close to C2C products at Philips and office furniture maker Steelcase. The trip gave us real-world examples of how C2C has been implemented.”

### **Doing good, instead of doing less bad**

C2C is inspired by nature’s ability to create solutions that have multiple benefits. The phrase, “houses like trees, cities like forests”, illustrates the positive agenda for the design of tomorrow’s buildings and cities. A C2C building is designed to make positive contributions to the environment, the climate and human well-being. Just like trees, the ideal C2C house should produce oxygen, filter the air, store rainwater and help to increase biodiversity.

Looking towards the future, Nørgaard predicts that imagineering – an amalgamation of imagination and engineering – will be one of the key terms for the architects and engineers of tomorrow.

# 4 Taking a stand on business ethics



“Employees are usually the first to know if someone has violated company policy or even the law. By giving employees a way to voice their concerns we hope to be able to catch illegal or unethical behaviour while it is still in the early stages,”

**says Ditlev von Grumbkov, Senior Compliance Officer**



## Collaborating with EthicsPoint

COWI works together with US-based EthicsPoint to allow employees to confidentially report information about suspected corruption or violation of the company's ethical rules.

Employees can contact EthicsPoint with information about possible wrongdoing around the clock, online or by telephone.

COWI has set up a new anti-corruption and business ethics hotline as a way to prevent unethical behaviour.

In 2009, COWI unveiled an anti-corruption and business ethics hotline that gives employees the opportunity to report suspected wrongdoing in the company – 24-hours a day, seven days a week, either by phone or by email. Employees can use the hotline to report their concerns about serious ethics violations, including bribery, financial fraud, violations of environmental or working conditions and harassment.

A timely tip-off can prevent problems from snowballing to the point where they become difficult to manage. By setting up the hot-

line, COWI hopes to continue to protect its good name and to keep employee morale high.

The hotline can only be used to report suspected serious violations of COWI's internal policies and only if employees' concerns have not been listened to by their supervisors. Employees will still be advised that their normal line of communication is their primary reporting channel.

# Fostering innovation through diversity



## Celebrating cultural diversity in Oman

Gunilla Svantesson is COWI's HR Manager in Oman. As an HR manager she is on the front line when it comes to diversity's promise and problems.

"The global mobility of COWI's employees is one of the factors that make us such an attractive workplace. COWI offers you the chance to work in another country on some very exciting projects," says Svantesson, and highlights COWI's involvement in the construction of the new Muscat International Airport as an example of the importance of cultural diversity.

"We have employees from a lot of different countries working in Muscat. Our employees and managers have to be aware that there is no single way to achieve results, or that their way isn't always the best. Not having the same cultural reference can sometimes be challenging, but most employees find it very stimulating. It broadens your perspective, and it definitely develops you as a professional and as a person," says Svantesson.



A more diverse employee and management group makes better and more innovative decisions.

Respect for diversity and inclusion is imperative in an international company with 35 permanent offices and even more temporary project offices in Asia, Europe, the Middle East, Africa and the Americas.

It is our experience that one of the best ways to ensure respect for diversity and inclusion is to mix employees on specific projects and in our leadership development programme.

Mixing employees with different competences, backgrounds, ethnic origin and gender enables us to

better understand our customers' needs and provide them with more innovative and creative solutions. We also believe that diversity and inclusion helps us attract and retain the most talented workforce from all over the world.

To keep abreast of diversity issues, COWI participated in Diversity Lab 2009, a network set up by the Danish Institute for Human Rights that allows companies to meet and discuss how to attract and retain a diverse workforce.



“As an international company we want to make sure that we can attract and retain the most competent employees. We believe in the creativity that arises when people from different backgrounds, genders and countries work together,”

**says Lone Hass, Executive Vice President for People Relations and Responsibility.**





## Gender balance in COWI

Because engineering is a field that traditionally attracts more men than women, we are conscious about the gender makeup of our workforce.

In 2009 we focused on increasing the number of women in management. Our goal is to ensure that the percentage of men and women in management reflects the gender balance in each business area. One of our first targets is to raise the percentage of women in the succession pipeline so it matches the level of female employees in each business area. Currently, women make up 25 per cent of those in the succession pipeline. Our target is 32 per cent by the end of 2010.

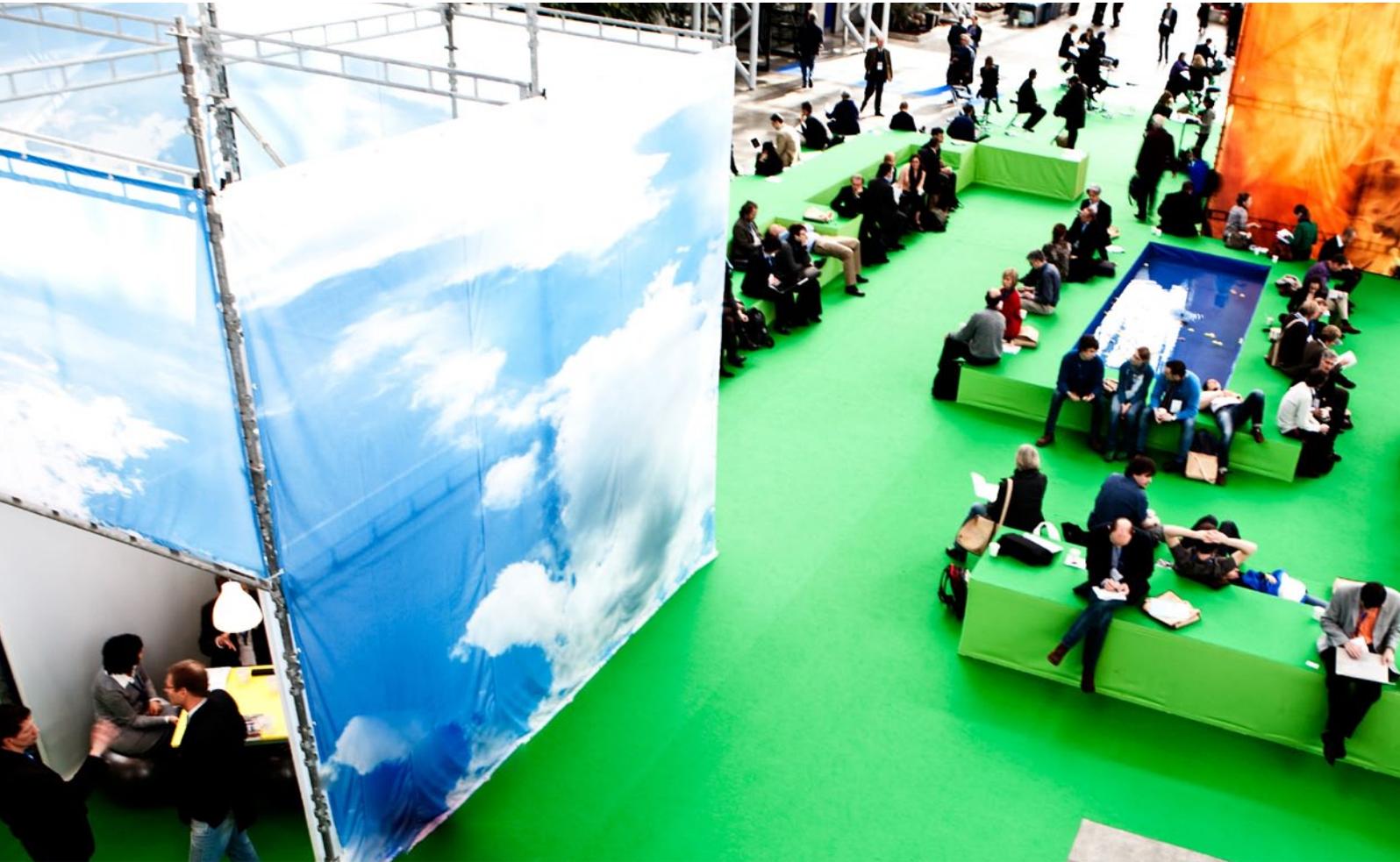
	Employees in %	Successors in %
Men	68%	75%
Women	32%	25%

One of the ways to reach the target in 2010 is to make COWI's career opportunities more transparent. We are all working to make titles across the entire COWI Group more uniform, and we hope this will make it easier for women to plan their career and enter into management if they wish to do so.

We have held numerous workshops with female managers and used the information to outline what are perceived as the main barriers they face when pursuing a managerial career at COWI.

In 2010, President and CEO Lars-Peter Søbye will be one of ten ambassadors for more women in management. COWI will use the initiative to explore new ways to encourage more women with management ambitions. The initiative has the support of the Confederation of Danish Industry and the Ministry for Gender Equality.

Picture from the Climate Change Congress



COWI A/S  
Parallevej 2  
DK-2800 Kongens Lyngby

Tel +45 45 97 22 11  
Fax +45 45 97 22 12  
[www.cowi.com](http://www.cowi.com)