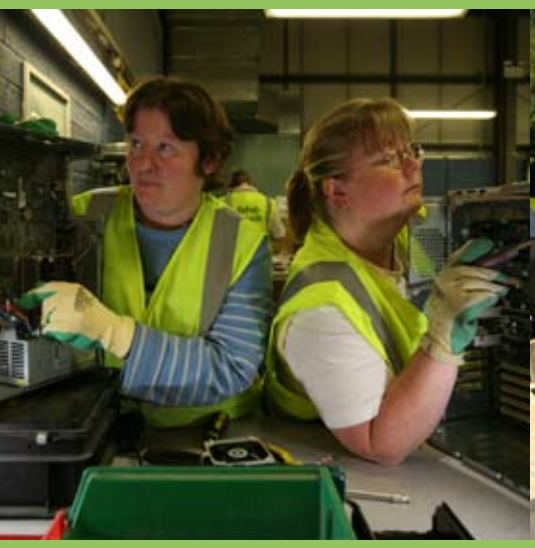
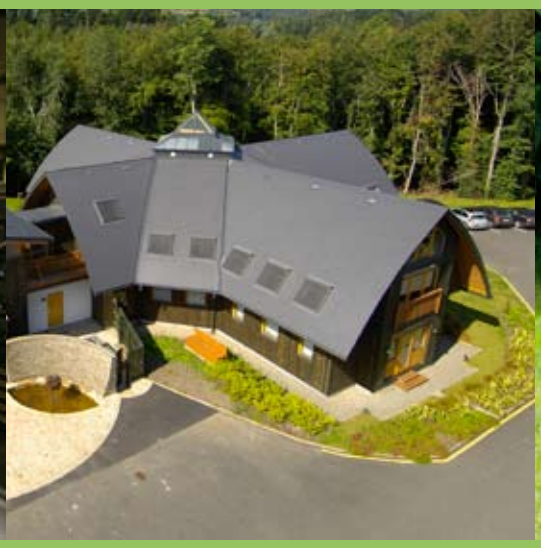
ENVIRONMENT

Companies are responsible for addressing both the impact of their production processes and their products on the environment. Demonstrating high levels of environmental management through the whole supply chain is the greatest challenge for companies in this area.

Implementing best practice in environmental management is essential to reducing costs, having a more efficiently run company, reducing environmental footprint and enhancing corporate reputation.

The BITCI Member Services Team advises on best practice, impact measurement & communication on all areas of environmental management. This includes best practice in the reduction of energy, water, material use, waste management, transport, climate change, noise management and compliance with national/ international standards. The team also advises on education and awareness-raising on environmental issues with customers, suppliers and employees.





AIB GROUP – ENGAGING OUR STAFF & CUSTOMERS TO BECOME MORE ENVIRONMENTALLY CONSCIOUS

AIB Group is Ireland's leading banking and financial services organisation. It operates in Ireland, Britain, Poland and the USA and employs 24,000 people. AIB Bank ROI consists of the group's retail and commercial activities in the Republic of Ireland. It also includes specialist businesses, offering credit cards, home mortgages, health insurance, car finance & leasing products. More than 9,500 staff work in AIB ROI, operating out of over 275 outlets.

Business Issue

Addressing the bank's environmental impact and incentivising customers to do likewise.

Solution Applied

Following the introduction of recycling initiatives in 2005, we have reduced the amount of waste going to landfill by 70%. For example, 2000 staff are based at our headquarters, Bankcentre in Dublin - all glass and tin cans are recycled, all food suppliers are required to remove cardboard packaging, wooden stirrers are used instead of plastic spoons, ECO friendly refuse sacks are used, napkins are made from 100% recycled paper and minimum usage is encouraged. We have moved to clean sources of energy and low energy lighting where possible, and improved insulation, intelligent heating control systems and water usage controls are now included in branch designs.

We have created a set of products and services to promote environmental awareness. For every customer who opts to receive their statements online, the bank donates €5 to the AIB 'Add More Green' Fund. We are guaranteeing the fund will generate a minimum of €500,000 which will be donated to environmental projects managed by the World Land Trust and Coillte. Since July 2007, we have been offering cash-back awards of up to €2,000 to new and existing customers when they draw down a mortgage or personal loan to install approved renewable home energy systems. We also offer cash-back awards up to €600 when new or existing customers avail of a car loan to buy an approved hybrid or flexi fuel car.

Benefits for the Company

We want to be recognised as Ireland's leading financial services company with a green agenda, facilitating a win for the customer, the bank and the environment. We have already reduced our landfill costs and increased awareness of environmental issues among staff and customers through our 'Add More Green' campaign. According to Donal Forde, Managing Director, AIB Bank, *"we believe good business and environmental responsibility go hand in hand. As a company we are on a journey towards being more environmentally conscious".*

Benefits for the Stakeholder

We are providing 'green' options to customers and are supporting environmental projects nationally and internationally. According to Sir David Attenborough, World Land Trust Patron, *"I welcome AIB's decision to encourage customers to be more environmentally conscious. We are very pleased to have them as a new supporter of the Trust".*

Challenges

Initially establishing the business case to address these issues.

Tip

Changing behaviour is difficult, but once it gathers momentum, everyone gets involved.

Departments Involved

All Departments

Solution Champion

Jacqui Mc Crum, Head of Corporate Social Responsibility,
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COILLTE TEORANTA – HOW BUILDING DESIGN CAN REDUCE CO_2 EMISSIONS

Coillte Teoranta is Ireland's leading forestry and forest-products company and the largest land-owner with 440,000 ha of land. Coillte has three divisions: Coillte Panel Products, Coillte Forest and Coillte Enterprise (comprising a range of businesses developed from the company's core skills and forest assets, including Land Development and Training & Safety). The company had a turnover of €213 million and a profit of €23 million in 2006.

Business Issue

In an effort to reduce the environmental impact of Coillte, a sustainable, carbon neutral timber building was chosen for the company's new headquarters in Co Wicklow.

Solution Applied

- Designed to encourage natural cross ventilation, the windows have different opening positions to provide background ventilation in winter, minimal ventilation in spring and autumn, and full ventilation for summer.
- High level windows are motorised and provide secure night time cooling in summer, as required.
- A generous overhang at roof level minimises high angle summer solar gains while allowing gains from a low angle sun to help heat the building in winter.
- High level windows in the sloping roof have inbuilt retractable external blinds to reduce solar gains in summer but without daylight or heat penalty in winter. The demand for mechanical cooling is removed and the high insulation levels ensure very low heat demands in winter.
- The primary heat source is from two arrays of solar thermal panels, a flat plate array and an evacuated heat tube array. The heat is stored in a large buffer vessel, topped up as necessary from a wood burning boiler that uses either wood pellets or wood chips.
- The primary building material is timber, sourced sustainably, and the insulation uses recycled paper products to levels exceeding current building regulations. While the timber used in the main structural elements was supplied directly from the Griffner factory in Austria, the rest came from Coillte forests. All of the OSB (oriented strand board) used in the wall and floor elements was supplied by Coillte's SmartPly plant in Waterford. The Douglas fir, used in the cladding and decking, hardwood floors, stairs and boardroom furniture were produced by Coillte's hardwood mill in Dundrum, Co. Tipperary.

Benefits for the Company

The building is a showcase for both Irish timber and sustainable building practices. It is cost-efficient and uses natural sources of light, heat and air conditioning. According to Damien Dunne, Facilities Manager, *"using a carbon neutral wood pellet heating system impacts positively on our own carbon footprint but has also delivered significant cost savings when compared to the use of oil".*

Benefits for the Stakeholder

According to Ciaran McNamara, Human Resources, *"It is a very natural working environment. The office is so bright and airy. And visitors are always very impressed!"*

Challenges

Coillte was one of the first companies in Ireland to use wood pellet technology in its building and it took a discerning management committee to agree to it at that time.

Tip

An increased initial outlay has resulted in significant cost-savings over the longer term.

Departments Involved

Facilities Division

Solution Champion

Billy White, Facilities Manager,
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CLOGRENNANE LIME - WORKING IN PARTNERSHIP TO REDUCE WASTE GOING TO LANDFILL

Clogrennane Lime is a wholly owned subsidiary of CRH plc, one of the top six in the building materials sector worldwide with operations in 28 countries employing over 80,000 people. Clogrennane Lime is the No.1 lime producer in Ireland, producing quicklime and hydrated lime carrying the 'White Rhino' brand. Clogrennane Lime employs 30 people at its plant just outside Carlow town and also operates a new plant at Toonagh Lime Works, Ennis, Co. Clare. Lime has many environmental applications, including desulphurisation of air emissions from power stations, water treatment and soil stabilisation.

Business Issue

Clogrennane Lime holds an Integrated Pollution Prevention and Control licence from the Environmental Protection Agency and is a member of Repak. Its modern lime kiln, in which temperatures reach 1000˚C, operates to the best available technique. In early 2007, the decision was made to review the waste management system. Clogrennane Lime already recycles all waste tyres, scrap metal, fluorescent lights and print cartridges, and identified the management of two waste streams, packaging and office waste, as areas where improvements could be made.

Solution Applied

Clogrennane Lime partnered with Advanced Environmental Systems (AES), who offered a previously unavailable recycling option. This involved the recycling of all packaging waste including wood pallets, plastic and paper packaging, as well as office paper. Following a short consultation process with AES personnel, suitable locations and numbers of bins were decided upon and the system was implemented in February 2007. As Leo Grogan, Managing Director of Clogrennane Lime notes, *"Clogrennane Lime understands that environmental performance is dependant on good communications throughout the company"*. Two consultation talks were held to discuss the changes involved. Feedback on the system was welcomed and one idea arising was a simple form of improved compaction for paper waste. AES provided all colour coded bins, skips and other material. Posters and stickers were supplied to raise awareness of the new system.

Benefits for the Company

- A competitive package was agreed upon and there was also a significant reduction in landfill costs.
- The involvement of all staff in designing and implementing the system provided an opportunity for teamwork and staff are proud of the success of the system.

Benefits for the Stakeholder

- No packaging waste has been sent to landfill since the introduction of the new system. AES can offer other customers a practical example of the benefits of exploring new waste management options. According to Dr John MacNamara, Environmental Director with AES (Ireland) Limited, *"the success of the initiative was based on partnership. It was essential for AES to understand the processes occurring at Clogrennane Lime and then tailor a recycling and waste management solution to suit the specific needs of the site".*
- Improved awareness of staff on the benefits of recycling encourages recycling at home.

Challenges

Confidentiality concerns for waste office paper were addressed by using a shredder to shred all office waste paper.

Tip

Involvement of staff members in the planning and implementation of the system is key.

Departments Involved

Environment and Quality

Solution Champion

Joe Connolly, Environmental and Quality Officer,
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DIAGEO
IRELAND

DIAGEO IRELAND – EMBEDDING OUR COMMITMENT TO ENVIRONMENTAL SUSTAINABILITY

Diageo is Ireland's number one drinks business with an outstanding collection of beer, wine and spirit brands. Diageo Ireland directly employs more than 2,300 people in operations around Ireland including Dublin, Belfast, Bushmills, Dundalk, Kilkenny and Waterford. We also contribute significantly to approximately 15,000 other jobs and invest in excess of €500m annually on materials, supplies and wages. Exports of our world famous Guinness and Baileys brands exceed €750m per year.

Business Issue

Environmentally sustainable practices must inform the business philosophy and approach of the organisation across all its units. We are committed to constantly improving Diageo Ireland's environmental performance, which we believe is good for business, good for our stakeholders and good for customers.

Solution Applied

In February 2007, Diageo introduced an initiative to offset carbon emissions from business air travel. When a brewery team member takes a business flight, carbon emissions are calculated and then 'offset' through investment in carbon emission reduction schemes. These include funding reforestation projects, purchasing energy efficient fuel stoves for families in developing countries and supporting sustainable energy projects across the world. In March 2007, Diageo finalised a 'green electricity' contract with Bord Gáis. All electricity purchased for Diageo breweries in Dublin, Dundalk, Kilkenny and Waterford will now be sourced and produced from wind farms and wind turbines. Last year 10,000 tonnes of brewing by-product from the Smithwick's brewery was recovered by introducing a bio-filtration system. In 2007 we expect c. 1,300 tonnes of wood chip to be harvested, providing the energy potential to heat 165 average sized homes for a year.

Benefits for the Company

Offsetting carbon emissions ensures that carbon usage is factored as a cost into business decisions. Diageo Ireland gained accreditation for the new Irish energy management system IS 393, developed by Sustainable Energy Ireland. Analysis reveals that in an eight-month period, our water use was reduced by 8.5% and our thermal energy use reduced by 7.4%. All new initiatives provide us with invaluable learnings which we can build on to further address the environmental impact of our production activities and are of benefit to the Diageo group globally. The reputation of Diageo Ireland as an innovator in environmental practice is enhanced among the drinks sector in Ireland.

Benefits for the Stakeholder

Consumers are increasingly conscious of the environmental and social impacts of the choices they make. By implementing and communicating a range of environmental initiatives, consumers can be confident that Diageo Ireland is taking proactive steps to lessen our environmental impact and that environmental sustainability is a key part of our long term business plan.

Tip

Select best "expert" partner for your projects.

Departments Involved

Environmental management,
Quality & Systems management

Solution Champion

Jean Doyle, Head of Corporate Social Responsibility,
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Angela Smith, Corporate Social Responsibility Assistant,
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ELAN - EMBEDDING A CULTURE OF ENERGY MANAGEMENT

Elan Corporation is a neuroscience-based biotechnology company committed to making a difference in the lives of patients and their families by bringing innovations in science to fill unmet medical needs around the world. Established in Ireland in 1969, Elan employs 1,800 people world-wide. Research & Development, Manufacturing and Marketing are primarily conducted in Ireland and the US.

Business Issue

Elan's main manufacturing plant is in Athlone and accommodates Development, Quality, Regulatory and Administrative Divisions. The Athlone facility resides on a 40 acre site and employs 500 people. Committed to ensuring environmental excellence in every aspect of the business, the environmental team sought to reduce its energy consumption of electricity by 10% and natural gas by 15% in 2007.

Solution Applied

- Detailed monitoring of energy consumption identified areas of high energy demand and resources were employed to investigate potential measures for energy reduction. Several initiatives were implemented as a result.
- Manufacturing rooms were shutdown when not required, particularly during weekends. This involved the installation of additional Air Handling Units (AHUs).
- A rota for turning off lights was established in the main manufacturing buildings.
- A 50% reduction was made in the number of condenser pumps operating the major chillers.
- Supply pressure of compressed air from the main compressors was reduced.
- The number of air changes per hour of AHUs was reduced.

The operations of the major AHUs on site were also reviewed and AHUs in one large building were changed from 'once through' to re-circulated air. Set points of the humidification process were changed; cooling and heating set-points of AHUs were changed; timers were installed on AHUs of office areas to facilitate weekend shutdown and a full maintenance of all AHU valves was undertaken. Satellite boilers were converted from diesel oil to natural gas and the supply pressure from main site boilers was reduced.

Benefits for the Company

- Consumption of electricity, gas and oil has been reduced by 19.4%, equating to a reduction in greenhouse gas emissions of 15% in the same period in 2006.
- All of these initiatives have been implemented without interfering in manufacturing schedules.
- A capital investment of €50,000 is expected to achieve savings of €300,000 per annum. Payback on the capital investment of additional AHUs was 6 months.
- According to Donogh McGuire, Vice President of Small Molecule Manufacturing, *"the control of energy costs, and the consequent reduction in greenhouse gas emissions, formed a central part of the site's overall cost reduction plan. By communicating the targets to all levels of the organisation, the programme has had high visibility, and as a result, significant improvements have been made across many areas".*

Benefits for the Stakeholder

Usage reduction is driven by the benefit to the environment, coupled by cost-savings. Natural gas is now the main fuel supply on site, having been changed from diesel oil in the past 18 months. Natural gas is cleaner for the environment.

Challenges

- Getting people on board and maintaining momentum in relation to energy reductions.
- Encouraging employees to engage in simple tasks such as switching off computers and lights.

Tip

Inform and educate staff on the difference all employees can make in reducing energy consumption.

Departments Involved

Environment

Solution Champion

Catherine Desmond, Senior Environmental Scientist,
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GLANBIA PLC - ACHIEVING ACCREDITATION FOR ENERGY MANAGEMENT SYSTEM

Glanbia plc is a leading international dairy foods and nutritional ingredients Group, headquartered in Ireland. Glanbia has operations in Ireland, Europe and the USA, with international joint ventures in the UK, USA and Nigeria. 2006 revenue amounted to €1.9 billion and Glanbia has 4,500 employees worldwide. Glanbia Ingredients Ireland (GII) is the largest multi-purpose integrated dairy site in Europe, processing a broad portfolio of dairy ingredients.

Business Issue

As energy represents 40% of Glanbia Ingredients controllable costs, fuel prices and energy efficiency are vital to the future competitiveness of GII. In the context of environmental climate impacts, GII is constantly seeking to reduce emission levels. The primary source of energy at Glanbia Ingredients Ballyragget is natural gas as the Combined Heat and Power (CHP) plant produces electricity and steam for the site. Historically Glanbia had a good energy management system in place but the energy usage was not fully monitored. With efficiency and sustainability in mind, Glanbia Environmental Management identified a set of KPIs and completed a detailed risk assessment at the site.

Solution Applied

- Signed up to Sustainable Energy Ireland's (SEI) Energy Agreements Programme in May 2006 and committed to implementing a strategic and systematic approach to energy management.
- IS 393 programme was selected to implement an energy management system in line with best practice to improve competitiveness and minimise environmental impact.
- Glanbia achieved accreditation to the IS 393 Energy Management System in May 2007 and is the first dairy company in the world to hold this standard.

Benefits for the Company

- Glanbia is a member of Large Industries Energy Network (LIEN), reporting annually on energy usage and reduction of consumption and emissions for the Energy Performance Index (EPI). The target for 2006 was 62, Glanbia achieved 59.11.
- Driven by a culture of efficiency in all aspects of operations at the facility, the energy management system is engaging personnel across all departments.
- In 2006 the amount of energy used per processed 1,000 litres of milk decreased showing an increase in overall energy efficiency across the site.
- According to Jim Bergin CEO, GII, *"we are very proud to have achieved the IS 393. The systems that the environmental team have evolved to reach this accreditation enables the business to improve energy efficiency and reduce costs, particularly relevant in the context of energy price increases and the impact of climate change"*.

Benefits for the Stakeholder

Less energy is used per tonne of product, resulting in awareness and communications programmes developed within the company. Employees are now learning how to reduce energy bills on a private level thereby personally reducing their carbon footprint.

Challenges

Having achieved IS 393 Accreditation in one year, the challenge is to maintain the standard and learn how to best manage the large amount of documentation required.

Tip

IS 393 is an energy management system that requires technical and documentation management systems. If you are prepared to put in the effort and investment, it will more than pay off, and this is reflected in the bottom line. Measurement and monitoring are fundamental to the planning and implementation of any energy management system.

Departments Involved

Energy & Environmental Team, Glanbia Ingredients Ireland

Solution Champion

Audrey O'Shea, Environmental Coordinator, Glanbia Ingredients, mlangton@glanbia.ie

IBM IRELAND – BUSINESS BENEFITS OF PACKAGING REUSE

IBM is the longest established IT multinational in Ireland. Over 3,200 are employed in Dublin, Cork and Galway. IBM has a diverse portfolio of businesses in Ireland including sales and services, hardware and software manufacturing, software development, telesales and marketing, an International Financial Services Solutions Centre and a Corporate Treasury Centre.

Business Issue

Respecting ecosystems and efficient, sustainable resource management is one of IBM's core environmental values in Ireland. Waste elimination helps us to deliver this value.

Solution Applied

In 2006, a cross functional team including Engineering, Manufacturing and Global Logistics developed a packaging reuse programme, to protect high value parts as they are being transported. The supply chain was revealed to have 4 stages: IBM USA (Poughkeepsie); IBM Ireland (Dublin); Geodis Logistics (Dublin) and Maersk (USA). The concept was simple and innovative. Instead of disposing of the packaging at the end of the supply chain, the packaging was sent back, in a reverse logistics operation, to be continually reused. Deciding the best process to suit both manufacturing and logistics was achieved using team work, communication and negotiation skills. The types of packaging in this reuse/return loop included cardboard, foam, ESD bags, desiccant bags, plastic parts and wooden pallets.

Benefits for the Company

- Minimising waste at all stages of the supply chain has had a profound effect elsewhere in IBM's operations, including less waste land-filled, less trips to the site by waste contractors and a reverse logistics program - full containers now returning down the supply chain.
- We have decreased the requirement for new packaging which has put less emphasis on the utilisation of resources.
- The amount of waste generated in 2006 dropped 31%. The amount of waste going to landfill dropped 23%.
- According to Dan Carrell, Director, ISC Manufacturing, *"by returning and reusing packaging material we have enabled our supplier - IBM Poughkeepsie, USA - to reduce their annual spend on packaging. This means a corresponding reduction in the use of raw materials derived from natural resources such as wood and oil. IBM in Ireland has reduced the amount of waste disposed of into landfill, much of which is non-bio degradable, such as polyethylene foam and other plastics. The workload on our waste disposal process including people and machinery has also decreased".*
- The success of this pilot project has resulted in its implementation for other server products both in Ireland (Dublin) and the USA (Poughkeepsie) to great effect.

Benefits for the Stakeholder

- Fewer trips by waste contractors results in reduced heavy vehicle traffic, reduced noise pollution and an increase in road safety.
- The introduction of packaging transportation by ferry in preference to air-freight has had a positive environmental benefit. Sea freight has the lowest carbon footprint by far, and with more freight now being shipped by sea as a result of this project and others, the environmental 'cost' of producing an IBM server has been reduced.

Challenges

Coordinating a cross-functional team, implementing a new reverse logistics system, working with external partners and allocating space in manufacturing.

Tip

To always consider, can it be used again? Does that vehicle have to return empty?

Departments Involved

Process Engineering, Manufacturing, Global Logistics, Packaging Engineering

Solution Champion

Claire Penny, Environmental Affairs Manager,
pennycla@ie.ibm.com

INTEL IRELAND – REDUCING OUR ENERGY USE

Intel has invested €7 billion in turning its Leixlip operations into the most technologically advanced industrial campus in Ireland producing logic, memory and support chip devices.

Business Issue

Intel believes that climate change is a serious economic, social and environmental challenge that warrants an equally serious societal and policy response. To that end, the Intel Ireland site in Leixlip Co. Kildare is to the forefront of energy efficiency improvements in Intel worldwide.

Solution Applied

In 2003, the Site Environmental Policy was extended to include specific energy aspects. Intel has an internal energy target of achieving a 4% reduction per year below 2002 levels and this has been incorporated into an external goal to reduce by 2010, greenhouse gas emissions per production unit by 30% against a 2004 baseline. In water, the initial target was to achieve 25% fresh water savings and this has now been updated to reduce water usage per production unit to below 2005 levels by 2010.
Energy teams review energy consumption and improve plant efficiency. Some of the main elements of this programme include:

- Installation of heat recovery chillers which allow waste heat from the chillers to heat incoming clean air for other areas.
- Installation of a monitoring and targeting system which allows the energy use for each piece of plant to be monitored against set targets.
- Interlocks on air-conditioning to prevent simultaneous heating and cooling.
- Reducing the number of air changes in the cleanroom whilst still maintaining quality standards.
- Installation of passive infrared sensors in areas across the site reducing lighting levels in line with occupancy.
- Seating plans in buildings coordinated to match shift patterns: day work/shift people co-ordinated in specified areas and then zoning of lighting in buildings to allow automatic switching off in selected areas at a specified time.
- Change to energy efficient bulbs across the site.

Benefits for the Company

- Over €5m has been invested in energy and water reduction projects. Natural gas consumption on site has been reduced by 10% despite large expansions in manufacturing and office space. This equates to a 10% reduction in greenhouse gas emissions.
- Increased employee participation.
- Building community and external relations – role modeling of energy reduction activities.
- Awarded the overall Sustainable Energy Ireland award in 2004.

Benefits for the Stakeholder

- Energy Awareness, reduction and conservation works have always been a priority in Intel but the focus has increased even more since 2003. The result has been significant reduction in energy usage and an associated reduction in greenhouse gas emissions.
- Our energy efficiency programme is in line with the Energy Agreements Programme devised by Sustainable Energy Ireland in 2004. Minister Noel Dempsey spoke of the significance of the participation of the companies involved in the programme, *"… set an excellent example to all sectors. Society as a whole will reap the benefits which accrue from the combined activities of these organisations".*

Challenges

Building momentum, collating the data and endeavoring to give feedback on the results.

Tip

Engage management at all levels in the programme.
Track energy reduction initiatives.
Communicate results of initiatives.

Departments Involved

Facilities Engineering, Environmental, Public Affairs Departments

Solution Champion

Kevin Geoghegan, Energy Manager,
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Irish Life

IRISH LIFE – REDUCING THE USE OF ENERGY THROUGH EMPLOYEE ENGAGEMENT

Irish Life is Ireland's largest life assurance company and the market leader in the provision of life, pension and investment products to both individuals and companies. It offers a broad range of high quality financial products and these are available to customers through a variety of distribution channels – financial advisors, independent intermediaries and bank branches – with nationwide coverage. The company has over 400,000 customers and over 2,000 employees and its focus is exclusively on the Irish market.

Business Issue

Irish Life wanted to find an effective way to promote energy conservation in the company and to reduce its impact on the environment.

Solution Applied

- In February 2007, Irish Life launched a "Power of One" Project to achieve a 5% reduction in energy usage at its Head Office site in Abbey Street in Dublin. The total energy saving target for 2007 is 125,000 kWh.
- For every kilowatt hour saved, the company is donating 10c to the Irish Life Staff Charities organisation. This is an internal organisation set up by Irish Life staff to raise funds for selected charities - one Irish, one overseas - every year.
- 70 "Power of One Champions" were recruited throughout the company to encourage participation by all employees and to monitor performance.
- To promote awareness of the project, Irish Life held a "Power of One Week" in June 2007. Events and activities included a talk by Duncan Stewart to staff on the environment, a children's art competition and a "Jungle Experience".
- The "Jungle Experience" was designed by Red Hot Productions to create awareness of what might be lost through unsustainable development & energy production. Employees were able to get up close to snakes (including an anaconda), a tarantula, a scorpion and a monitor lizard.
- The week proved to very successful and it helped to raise awareness of the project particularly among younger members of staff.

Benefits for the Company

- The campaign has enhanced the company's reputation for being innovative and for being environmentally responsible.
- It has raised awareness among employees of the need to minimise the company's impact on the environment.
- Cost savings have been achieved as a result of minimising energy usage.

Benefits for the Stakeholder

- Employees are able to get involved in a structured way in reducing energy usage in the company.
- It has provided a case study for the Government-run "Power of One" campaign to promote energy conservation at work to a wider audience.
- There is a benefit to the environment because of reduced CO_2 emissions.

Challenges

Gathering reliable historic data.

Tip

Keep energy saving initiatives simple and choose ones that will involve the maximum number of employees.

Departments Involved

Irish Life HR and Facilities Department

Solution Champion

Carol Pemberton – General Manager HR- Ireland Retail,
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LM Ericsson – Reducing Waste Sent to Landfill

Ericsson has been operating in Ireland since 1957 and has now over 1,600 employees located across three sites - Athlone, Dun Laoghaire and Clonskeagh. The main activities are Sales & Support to local Customers, Research & Development and a Global Service Delivery Centre. Ericsson in Ireland is a service company offering telecommunication solutions to our customers.

Business Issue

The main waste products generated are primarily electronics and office waste. We have a global process in place to manage our electronic waste which leaves the locally generated waste arising from our office activities. This includes paper, cardboard, tippex whiteboard markers, empty toner cartridges, batteries etc. The importance of managing waste and reducing the quantity being sent to landfill continues to be an issue of concern to government, businesses and individuals alike.

Solution Applied

Our goal was to develop a common waste management system across all Ericsson sites in Ireland. In 2001, following a communication and awareness programme, our environmental manager in conjunction with our facilities contractor set up a pilot in our Athlone site. The pilot ran for five weeks and was well received by participating staff. We completed the rollout in Athlone followed by Beech Hill and finally Dun Laoghaire. The rollout on all sites was completed by the end of 2001.

- Central waste collection points set up in office areas of all buildings.
- Bins for the various waste streams are located at the collection points.
- Bins are colour coded as well as being labelled indicating their intended contents.
- Individual desk waste paper bins were removed from desks as collection points catered for waste paper, cans, cardboard and general office waste. This reduced recyclable waste being disposed of in office waste paper bins which ultimately went to landfill.
- Each desk was provided with a desk top paper saver, a small storage tray for waste paper. The tray, when full, is brought to the central collection point and emptied into the appropriate bin.
- Waste is removed from the central collection points on an ongoing basis and sent to licensed recycling facilities.
- Everyone is now responsible for the segregation of waste at source which is necessary to achieve optimal recycling rates.

Benefits for the Company

- Improvement of our environmental performance; continuous improvement being a crucial requirement of our ISO 14001 Environmental certification.
- Good impression given to our customers who demand high environmental performance from our products and services.
- Enhanced the company's image as an Environmental Leader.
- Positive feedback in staff surveys.
- Reduction in the annual cost of waste disposal.

Benefits for the Stakeholder

- Waste management is a major issue for businesses and this process has significantly reduced waste sent to landfill.
- Employees now feel they are making a vital contribution to the environmental cause.
- Recycling approx. 400 kg of waste annually that would have formally been sent to landfill.

Challenges

- Changing mindsets and habits of a lifetime.
- Convincing everyone that this was the way forward at a time when environmental issues had a lower public profile then they have today.

Tip

Keep everyone informed of progress.
Let everyone have an input.
Give everyone ownership.

Departments Involved

All Departments

Solution Champion

Brendan Farrington, Environmental & Operational Development Manager, brendan.farrington@ericsson.com

ORACLE EMEA LTD – CHANGING COMPANY & EMPLOYEE BEHAVIOUR TO MINIMISE IMPACT

Oracle Corporation is the world's largest enterprise software company that develops, manufactures, markets, distributes, and supports computer software that helps governments, corporations, and organisations of all sizes manage and grow their businesses. We are a leader in innovative software technologies for enterprise information management. Oracle operates many lines of business in Ireland including Sales, Marketing, Accounting, Software Development, Software Localisation and Translation, Recruitment, Manufacturing and Distribution.

Business Issue

To maintain facilities and run business operations in a manner that minimises any adverse impact on the environment, the company's Facilities department set about achieving ISO 14001 Certification.

Solution Applied

- The facilities team was tasked with implementing a new Environmental Management System aimed at changing company and employee behaviour. The starting point involved a comprehensive review of energy usage and waste generation in order to set targets to reduce impact. Initiatives arising from the review included the installation of water meters in all buildings; the introduction of a weekly recycling programme; composting food waste; implementing a timing schedule for air conditioning and ventilation systems to eliminate unnecessary usage and appointing security staff to monitor unnecessary usage.
- Environmental management responsibilities are now embedded in procurement practices. For example, when sourcing carpet for a new building, the transaction included retiring 42 tonnes of certified carbon credits to offset the total life cycle impact of this purchase. In addition the company has eliminated the purchase of polystyrene cups – approximately 10,000 per week of which 100% went directly to landfill. We have also made the decision to only buy recycled paper for use in printers and copiers.
- To support the certification process, the company established a group of volunteers to send regular educational newsletters and survey the behaviour of staff. Although certification has been achieved, the work of the environmental team is not finished and it is currently investigating additional initiatives to further reduce our environmental impact.

Benefits for the Company

Reducing, and in some cases eliminating environmental wastage not only reduced our ecological footprint, it has also positively contributed to the bottom line. In addition, the initiative has increased employee engagement. According to John McGann, leader of the environment group. *"Everybody in Oracle was aware of the audit, they knew that they might have a part to play. So when the certification was achieved, everybody felt a little bit of ownership".*

Benefits for the Stakeholder

There have been many environmental benefits in terms of reduced impact. For example, during 2006 we recycled 79,267kilos of paper representing a saving of 1348 trees, conserving 240kw of energy and saving 396m3 of landfill.

Challenges

Continually improve environmental performance in a sustained manner.

Tip

Set up ongoing processes for the continual monitoring of Key Performance Indicators covering issues such as waste and energy. Success is achieved when the Environment Committee is no longer required.

Departments Involved

All lines of businesses

Solution Champion

Paul O'Riordan – Managing Director.
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Wyeth®

WYETH – IDENTIFYING AND IMPLEMENTING WATER REDUCTION OPPORTUNITIES

Wyeth is the tenth largest multinational pharmaceutical company in the world producing pharmaceuticals, consumer healthcare products and veterinary medicines. Wyeth has worldwide resources of 52,000 employees and manufacturing facilities on five continents. They have been in Ireland for over 30 years and is one of the largest employers in their sector here, employing 3,000 people.

Business Issue

Wyeth uses a significant quantity of water, both in the manufacturing of our products and the support of the Campus at Grange Castle, Clondalkin. It was identified that there were inefficiencies in the use of water that could impact on our Integrated Pollution Prevention Control (IPPC) Licence and the volumetric discharge limit for the Campus.

Solution Applied

- A cross-functional project team from Engineering, EHS and Projects was set up.
- A water mass balance for the Campus was completed. This identified exactly where water was being used and the opportunities for water reduction.
- A list of water reduction projects were drawn up. These were prioritised, based on return on investment economic analysis.
- The projects were then implemented on a phased basis, with the projects that offered the best return on investment implemented first.
- The project also involved the installation of additional metering equipment to identify further water reduction projects.

Benefits for the Company

- A reduction in water usage of between 800-1000 m3/day.
- A cost saving as a result of the reduced requirement to purchase incoming fresh water and treat the resulting waste water, thereby reducing the treatment costs.
- Ensuring compliance with the IPPC Licence volumetric discharge limit.
- According to Kieran Phelan, Environment, Health and Safety Associate Director at Wyeth, *"the implementation of the project has allowed for further Campus development without the need for additional infrastructure for water use and wastewater treatment. It also has helped us to maintain our high level of environmental compliance".*

Benefits for the Stakeholder

Reducing the amount of incoming water and reducing the quantity of wastewater generation, help to minimise Wyeth's environmental impact.

Challenges

- Limited instrumentation to measure non-process related water use led to the requirement for manual assessment of water usage in some areas.
- In addition to the mechanical solutions that were put in place to reduce water usage, there was also a requirement to ensure that the mentality of reducing unnecessary water usage was instilled into users.
- Ensuring that all future capital projects address water conservation as a critical part of the overall design.

Tip

The key to the success of this project was the cross-functional team completing the water mass balance at the start. Complete understanding led to full commitment to the project.

Departments Involved

Engineering Technician Services, Environment, Health and Safety, Engineering Projects

Solution Champion

Máire Finnerty, Engineering Technical Services &
Bryan Mulchinock, Environment, Health and Safety,
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