

Ecodesign Centre (EDC)

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About the Ecodesign Centre (EDC)

Established in 2006 the Ecodesign Centre (EDC) is an applied research organisation that aims to build capacity and capabilities to enable effective ecodesign in industry. The setting-up of EDC was supported by the Welsh Assembly Government (WAG). This was part of the government's statutory commitment to sustainable development. EDC was designated a Centre of Expertise by the WAG in 2008 and is recognised as the 'voice' of, and knowledge base for, ecodesign in Wales.

EDC's primary goal is to conduct international best practice research in ecodesign and eco-innovation, to disseminate and implement the results to industry and other key stakeholders (e.g. educators, policy-makers), using a variety of approaches. EDC is unique within the UK and has already established an international reputation for its innovative approaches to capacity building for ecodesign, being frequently cited as best practice. EDC create ecodesign knowledge through applied research, participation in UK and international networks and collaborative projects and international best practice scanning. A key role of EDC is to translate policy into practice.

The EDC team

The EDC director and senior management staff have more than 40 years of combined experience working in or as advisors to multinationals, SMEs, regional and national governments, public sector organisations and higher education institutions in ecodesign and related fields. Clients range from international organisations to small Welsh manufacturers. Some recent examples include:

- Product Design – Running a pan-Wales network for designers to build their capacity to ecodesign
- United Nations Industrial Development Organization (UNIDO)-United Nations Environment Programme (UNEP) - Advice on how ecodesign thinking can be introduced to developing and transition countries
- Welsh Assembly Government – Advice on industry sector plans to deliver on resource efficiency policy
- Higher Education - A collaborative project across 4 Welsh Universities to co-develop ecodesign resources and embed ecodesign thinking in mainstream curricula
- Industry – Embedding ecodesign at the heart of the business strategy of SMEs in 4 sectors, i.e. manufacturing, electronics, low carbon technology and food and drink.

EDC have developed a broad range of contacts and partners in national and international organisations including the European Commission, UNIDO, UNEP, PREPARE network, DEFRA, Fraunhofer Institute, Technology Strategy Board, Kaospilots, Sustainable Development Commission, Constructing Excellence, WRAP and Envirowise to name but a few.

EDC is part of the University of Wales Institute, Cardiff (UWIC) and is located off-campus. For more information about EDC and the EDC team please visit www.edcw.org.

About Ecodesign

Ecodesign is a strategic design management process that considers the full life-cycle impacts of packaging, products, processes and services (e.g. energy, materials, distribution, packaging, use and end-of-life treatment). As a process, ecodesign can help provide practical and creative solutions to complex problems, especially with respect to sustainability. Ecodesign is an integrated, cross-functional systems activity and thus there is no 'silver bullet' for its implementation. Ecodesign thinking is a collaborative, multi-stakeholder approach to problem solving.

Ecodesign can directly make a difference to the bottom line through giving competitive advantage, reducing costs, assisting with legislative compliance (e.g. ecodesign directive), increasing innovation, attracting investment, improving brand position and enhancing business communications.

While not all sustainability problems are related to design, ecodesign methodologies and processes can allow for consideration of multiple issues and stakeholder interests. These methodologies are iterative and require a broad range of data and inputs. Some of the key principles of ecodesign include:

- full life cycles are considered (cradle to cradle)
- focus activities on areas of greatest impact
- all sustainability issues taken into consideration (inc. social impacts)
- no shift of environmental pressure between stages of life cycle (systems perspective, legacy waste etc.)
- creation of higher overall quality and value

There are a wide assortment of tools and methodologies available to support ecodesign implementation. These tools include software, guidelines, checklists and handbooks, environmental management assistance tools, screening and benchmarking tools, LCA methodologies, LCA databases and full-scale LCA tools. There are also tools and methodologies available for ecodesign planning, environmental assessment, ideas generation, solutions design, cost assessment and on-market product review and assessment.

Ecodesign & Welsh Policy

Ecodesign is a central driver of a low-carbon economy. A low carbon economy is one in which products and services are designed to minimise the environmental impact of their manufacture, use and disposal, in particular energy consumption.

Ecodesign is key to the effective delivery of priority WAG policies and plans including the Environment Strategy for Wales (2006), Green Jobs Strategy for Wales (2009), One Wales: One Planet: A new sustainable development scheme for Wales (2009), Waste Strategy 2009 - 2050: Towards Zero Waste (2009), draft Waste Strategy Sector Plans, draft Wales Climate Change Strategy (2009) and the draft Manufacturing Strategy (2008).

Ecodesign can be viewed as a thread that runs through each of these policies. It is cross cutting and takes a holistic, systems life cycle perspective with a key objective being superior resource management through waste prevention.

Ecodesign can directly support the WAG in successfully meeting their objectives and effectively delivering their policies and plans.

EDC & WAG

EDC receive core funding annually from WAG Department of Environment, Sustainability & Housing (DESH) to provide support to their key policy-makers and the Flexible Support for Business (FS4B) Environment & Sustainability (E&S) team, undertake evaluation of ecodesign interventions, maintain a website, send e-newsletter updates to all key national and international stakeholders, identify international best practice and run 3 demonstration projects; public sector procurement, high value manufacturing and construction.

EDC also received recently funding from the WAG Department of Economy & Transport (DE&T) through the A4B programme to run a network for designers for 18 months.

EDC Case study – Orangebox

"Our environmental ambition has forced our business to change for the better and we're proud of that. Our customers are aware of the responsibilities we have as a manufacturer so we have to provide intelligent solutions to meet their business needs. Our environmental agenda and ecodesign plays a critical role in that process. Our ongoing relationship with the Ecodesign Centre is crucial to this."

Luke Palmer, Senior Designer, Orangebox Ltd
www.orangebox.com

Orangebox is a UK market leader in the R&D, manufacture and service of seating for the commercial environment. Office furniture production tends to require material and components from a range of suppliers. This poses challenges when determining the full life-cycle impacts of the products. Working with EDC to adopt ecodesign helped Orangebox to gain competitive advantage in their market along with:

- become the first European company in their sector to achieve Cradle to Cradle (C2C) accreditation
- divert large volumes of waste material from landfill, through setting up an in-house recycling centre, thus making significant cost savings
- win a number of design awards including the 2009 Mixology furniture product of the year award
- go beyond compliance in terms of product remanufacturing
- achieve significant product launch sales for the ecodesigned Ara chair - 5% of sales of ARA chairs was attributed by Orangebox to ecodesign/C2C aspects
- influence 60 companies towards greening their supply chain
- accelerate the process of changing their business model
- receive significant PR and improved brand position
- safeguard jobs

A number of collaborations and strategic partnerships with other companies have followed.

A 3-year PhD studentship, focusing on materials, chemistry and design, in partnership with the Ecodesign Centre is commencing in April 2010.