



SEE DESIGN

Sharing Experience
on Design Support
for SMEs

Case Study of Good Design Support Practice

This case study is a snapshot of activities taking place during the lifespan of the SEEdesign project from 2005 to 2007. For updated information please contact the organisations directly.

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**PROJECT PART-FINANCED
BY THE EUROPEAN UNION**

UK

Creating the Ecodesign Centre Wales

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by Simon O'Rafferty

The Welsh Assembly Government (WAG), devolved since 1999, has a statutory obligation to promote sustainable development in the exercise of its functions.

“Sustainable Development is not an option that will go away – it is the only way forward” Rhodri Morgan AM, First Minister for Wales

Following our sustained programme of ecodesign activity in the last 10 years the WAG has provided funding, through the Materials Action Programme, to establish Ecodesign Centre Wales (EDCW). EDCW is focused on capacity building for ecodesign and the development of environmentally superior products and services in Wales.

The first core activity of EDCW is phase II of the Ecodesign Initiative. This phase of the initiative commenced in September 2006. Along with clearly demonstrating the business and policy case for ecodesign the initiative will promote creative approaches to resource efficiency through enabling and facilitating the required cultural change in industry, education, the Business and Environment (B&E) support network and other key stakeholders. The initiative will lay the foundations for any future capacity building activities of EDCW.

This article outlines our ecodesign journey to-date in Wales. It presents the basis for a joined up multi-stakeholder approach to establishing the business and policy case for ecodesign. It concludes with a brief overview of where EDCW would like Wales to be by 2020.

Context

By ecodesign I mean environmentally, socially and economically responsible

design. My ecodesign journey started properly in the early '90s in Ireland while working for Alps Electric Ltd. as part of a multi-disciplinary design team designing and developing computer devices. This was when I first made that crucial link between marketing, design and end-of-life. I began to investigate how environmental decisions could be integrated into the design and development process, taking a Life Cycle Thinking approach. I had previously undertaken two research projects in Ireland into waste recycling and design for assembly while I had a short stint working as a practitioner recycling electronic waste. This link seems obvious now but at the time it was not part of mainstream discussion or thinking (although a few innovative companies and institutes such as Philips and Delft University of Technology respectively had already begun their journeys). In fact, the ideas proposed by Victor Papanek in his book 'Design for the Real World' in the '70s had largely been discarded, predominantly surviving as an 'interesting' text book for 'alternative' design students. Fascinated by this link I undertook a PhD in ecodesign at the University of Glamorgan in the mid '90s investigating the role of different stakeholders. This research emphasised the need to take a multi-stakeholder approach to ecodesign as design does not happen in isolation.

During a short-term employment at Swansea University in 2000/01 I began to conceptualise how we could start mainstreaming ecodesign in Wales. This



was supported by a pilot study of ecodesign in Wales, including case studies of two Small and Medium Sized Enterprise (SMEs) from the electronics sector. A key outcome of this pilot project was with the exception of a few multinationals (e.g. Panasonic and Sony) and a few niche producers' ecodesign thinking and practice was relatively non-existent in Wales.

In 2001, Gavin Cawood of Design Wales took the proactive step of introducing ecodesign to the service through employing me as a design advisor. Along with working full-time as part of the core Design Wales team to achieve their targets my aim from the outset was to take a long-term strategic approach to ecodesign in Wales through raising awareness and changing behaviour. The core message was, and still is, 'ecodesign is simply good design and simply good business practice'. It was clear that ecodesign was a key strategy in moving towards the WAG vision for sustainability. This was against a backdrop of a lack of a formal Welsh product oriented policy, ever diminishing landfill space, a dominant 'end-of-pipe' culture and SMEs accounting for more than 95% of all firms in Wales. Following an initial focus on industry in the first year I began to recognise that the real key to moving forward was through stakeholder engagement, partnership building and capacity building focusing on five key groups:

- government
- business and environment support
- industry
- education & research
- NGOs and general public

During this time period I also undertook some scoping work with Mark Hilton (Enviros Aspinwall) and Hannah Curtis (Business and Environment Co-ordinator, www.merthyr.gov.uk/Home/Leisure+and+Tourism/default.htm Merthyr Tydfil County Borough Council) into what a Welsh ecodesign programme could involve. In 2003 the Welsh Business and Environment Action Plan was launched by the WAG. The plan sought to stimulate economic growth through innovation and environmental best practice (with a strong emphasis on resource efficiency). Although the focus was predominantly on 'end-of-pipe' clean up the plan gave some initial recognition to ecodesign calling for a Welsh

pilot study to be undertaken by Design Wales and Arena Network. I drafted an initial proposal for a Welsh ecodesign initiative in late 2003. This was supported with strategic advice to the WAG on legislation and related issues. In parallel a pan-Wales University student ecodesign competition was launched and numerous projects were undertaken with industry (through my role as a design advisor). This included the award winning TinyLab™ developed by Riochem™ Ltd – see [HYPERLINK "http://www.riochem.com"](http://www.riochem.com) www.riochem.com for details. This case study clearly demonstrates that small companies can rise to the ecodesign challenge.

Ecodesign Initiative Phase I

In 2005 the WAG and Welsh Development Agency (WDA), agreed to fund the feasibility study into a Welsh Ecodesign Initiative (Phase I). This involved increasing the ecodesign team to two (recruiting an ecodesign researcher, Simon O'Rafferty) and moving from the service approach (offered by Design Wales) to an initiative proved to be significant steps forward. To support this phase of the initiative a small advisory team, made up of members from the WAG and the WDA was established with an emphasis on joined-up thinking in policy and practice. The input and support of the advisory team, in particular that of Chris Hale and Aled Davies, proved crucial over the next 18 months.

As part of this study we (the ecodesign team) undertook a number of key activities between February 2005 and September 2006. This included mapping the existing B&E support network against a product life cycle and undertaking an international best practice study. Around this time and in partnership with the WAG, we widened the remit of a public/private partnership to include all new and impending EEE legislation.

International best practice study

Over the last decade there have been a number of public sector initiatives and regional interventions seeking to encourage the application of ecodesign by SMEs. It is clear by the low levels of long-term application of ecodesign that these forms of interventions failed to filter through to companies outside the initial scope of the initiatives. Through undertaking an international best-practice study we sought to identify reasons for these failures by analysing the

initiatives and interventions. In the process we identified a number of issues that may have contributed to the lack of long-term ecodesign implementation, including;

inappropriate ecodesign tools and methodologies for SMEs (i.e. resource intensive Life Cycle Assessments)

- a failure to upskill the wider B&E Support Network
- a failure to engage with the indigenous design sector
- a focus on supply-side activities with a lack of clear market signals
- lack of a demonstration phase
- lack of a clear vision and timescale
- fragmented post-initiative support mechanisms
- a failure to embed ecodesign and life cycle thinking in education, government strategies and the wider B&E support network

While there have been a number of interesting case studies generated and other noteworthy achievements it became clear that to overcome previous shortcomings in public sector interventions we would have to take a far more integrated approach.

In late 2005 we set a clear ecodesign vision (Table 1). This vision was supported by an ecodesign initiative model 'fit' for Wales with capacity building tools and two core strategy documents. Following a number of presentations to the WAG and its advisory groups we received ministerial buy-in. This was a key milestone for ecodesign in Wales. From the outset our belief has been that funding would have to come directly from the WAG if ecodesign is to really become part of the long-term mainstream agenda.

Our ecodesign vision

Vision

An internationally renowned ecodesign led nation within the next 15 years ecodesign embedded as a sustainable competitive core value within all relevant government strategies and support services, Welsh industry, the Welsh design community, education and academia

Table 1: vision

We believe that an ecodesign led nation would have a number of characteristics including:

- internationally recognised ecodesign exemplars
- clusters of design led 'growth' companies
- 'sustainable' public/private partnerships
- sustainable public procurement
- upskilled business and environment support network and design community
- sustainable industry-based 'business to business' mentor network

Ecodesign Centre Wales

With a core team of four (Iain Cox, Operations Manager, and Bibiana Estrada Bonilla, Project Officer, joined in autumn 2006) and initial funding for 2 years, EDCW is separate from Design Wales and the other key stakeholders with a clear affiliation to 'Team Wales'. It is crucial that these key stakeholders recognise it is not a new business support, advisory or signpost service. Boundaries have been outlined through a transparent brand and communication strategy and through clearly defining our core proposition to key stakeholders.

Our aim is to deliver an initiative that focuses on capacity building for effective ecodesign to happen across Wales. To achieve this aim EDCW must perform the following functions:

- Continue to establish the business and policy case
- Continue to work with key stakeholders to deliver the ecodesign initiative
- Generate research to inspire wider industry / educational establishments and influence future WAG policy.
- Offer new approaches to intervention by offering creative approaches to resource efficiency
- Offer new holistic ways of project tracking that include both quantitative and qualitative measures

To establish the business case we believe that you need to start on a small scale, understand your market, build the right team and develop appropriate sector specific approaches. We recognise that it will be a slow and challenging journey but we firmly believe that an inclusive, partnership approach can achieve the desired cultural change.

Ecodesign Initiative Phase II

The initiative has four main elements:

Demonstration:

EDCW will encourage the development of environmentally conscious products and/or services. To begin this process EDCW will deliver a series of sector specific workshops (for up to 20 delegates). In addition to these practical workshops EDCW will run ecodesign demonstration projects with 4 companies from priority sectors, including;

- electronics and electrical equipment
- general manufacturing
- food and drink

The demonstration element takes a life cycle team / partnership approach, using the existing B&E support network. Through the demonstration projects EDCW will work with each of the 4 companies on a one-to-one basis to bring them through an ecodesign process tailored to their business needs. It began with a 'Design for Growth' survey - which identified Welsh SMEs whose growth potential will be enhanced through implementing ecodesign. This study, in partnership with the LEED Unit, Cardiff Business School, forms the basis for selecting priority companies for ecodesign intervention along with assisting the process of setting key performance indicators (KPIs). To support this approach EDCW will offer specialist ecodesign upskilling sessions to a small number of B&E organisations and the design sector. These events form the basis for long-term capacity building activities.

Education:

EDCW will provide specialist support to Welsh Universities currently offering product design degrees. This support will be delivered through guest lectures

for students, tailored ecodesign modules and support documents, upskilling events for lecturers and through international knowledge transfer events. The long-term aim of the education element is the mainstreaming of ecodesign and life-cycle thinking in design education across Wales. To achieve the vision of Wales being an ecodesign led country, all Welsh design graduates should be literate in the principles of sustainability, ecodesign and life cycle thinking.

Research / international best-practice:

To maintain the relevance and competence of EDCW, a programme of continuous research has been embedded in our activities. The research activities fall into three categories; strategic, academic and practical. The strategic research provides an up-to-date analysis of international activity related to ecodesign and environmental product policy developments. This will help to inform the broad activities of EDCW and inform policy makers. The academic research aims to produce journal and conference papers related to the activities of EDCW thereby raising it's profile and assisting knowledge transfer. The practical research acts as support to the demonstration projects and upskilling activities.

Promotion:

EDCW will communicate the benefits of ecodesign to Welsh industry and other key stakeholders and raise the profile of Wales' ecodesign activities to international stakeholders. The focus of this element will be on raising awareness of ecodesign concepts and benefits of capacity building and not focussed on promoting EDCW.

Tracking

EDCW is developing KPIs to track the demonstration projects. These will be a mix of qualitative and quantitative measures. The quantitative measure will reflect the sector specific priorities, for example legislative requirements. The qualitative measures will reflect "soft" issues in terms of growth potential and managerial attitudes to design-led environmental best practice.

EDCW will also be tracking the success of other aspects of the initiative such as public sector and education upskilling through longitudinal analysis and workshop evaluations. Some expected outputs include final SME case study

reports, prototypes of ecodesign exemplars, policy and resource allocation recommendations, future enhancements and recommendations for an ecodesign policy and intervention agenda beyond 2008.

The immediate future

We are confident that ecodesign thinking and practice will be embedded in the next phase of strategy documents following the Business and Environment Action Plan. We are also confident that other policy documents such as the WAG waste strategy will begin to take a more holistic life cycle perspective. We recognise that while our vision is mix of idealism and passion we firmly believe that it can be achieved if an inclusive joined-up approach is taken, from policy through to developing practical sustainable solutions (Team Wales). Everyone must take individual responsibility to achieve the desired change. Phase II of the ecodesign initiative is clearly about putting the initial foundations in place for embedding ecodesign as a sustainable competitive core value. We believe that we have the right internal and external team to do this. We recognise that whilst it is a huge challenge the opportunities are great. Through working in partnership we believe Wales can lead the way.

Conclusion

EDCW believes that ecodesign has a critical role to play in our long term vision for sustainability. Government and all other key stakeholders need to take a long-term approach if we are to achieve the desired change. We recognise that we need a lot more practical SME case studies (particularly from micro-sized and small companies) to clearly demonstrate the business case for sustainability. We also recognise that for every success there will also be failures. You can not change everyone. There is no obvious 'silver bullet' for engagement in ecodesign. The key message is to take time to reflect and learn from these journeys, bringing the key lessons forward to other situations, but also always continue to believe that anything is possible! We need appropriate intervention, 'fit for purpose' that focuses on qualitative as well as quantitative indicators. Our ecodesign achievements to-date have been built on a shared belief that we can make a real difference. With a new mission and a strong team this is the start of the next phase of our ecodesign journey! Let's enjoy it.

Acknowledgement

The people and organisations we should acknowledge are numerous, many are mentioned already, but we are especially grateful to the Welsh Assembly Government for their ongoing support and belief in our novel complimentary approaches to intervention and capacity building.

The Materials Action Programme (MAP), operational from April 2005, is a three year funding scheme for business covering aspects of waste minimisation and exchange, research and design activities and new work to find markets for recyclable materials produced by business.

Capacity building aims to develop and enhance institutional and individual capabilities, in this case, to effectively address ecodesign and life cycle thinking.

Funded by the WAG Design Wales provides free and independent design advice to Welsh industry. Design Wales is based at the National Centre for Product Design & Development Research (PDR) at the University of Wales Institute, Cardiff (UWIC).

The Welsh Development Agency are now part of the Welsh Assembly Government.

To prepare for WEEE and RoHS legislation the WAG set-up a multi-stakeholder focus group in 2004.

Research has indicated that the success of EDCW relies on it being perceived as independent by those stakeholders it seeks to work alongside.

"Team Wales" is the WAG strategic approach to streamlining business support and public sector interventions. As much as possible it seeks to involve the public, private, academic and voluntary sectors in economic development activities.

For further information go to: www.ecodesigncentrewales.org