

Developing a national ecodesign initiative in Wales

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Abstract

The Welsh Assembly Government (WAG) has recognised that industry and other key stakeholders need to embrace ecodesign thinking and practice. A national ecodesign initiative for small and medium-sized enterprises (SMEs) has been proposed to provide a structured approach of engaging and enabling these stakeholders. Design Wales were commissioned to work on Stage 1 of the initiative, seeking to establish international best practice, along with developing a number of models for implementation. This paper outlines the approach taken in the first six months of Stage 1 and a snapshot of findings along with some recommendations on how to move forward with the ecodesign initiative in Wales.

Keywords

Ecodesign, SME, national initiative, stakeholders

Introduction

The business case for sustainability has been gathering momentum internationally in the last few years. This can be clearly seen in the incorporation of sustainability principles in the

development of corporate brands, processes of innovation and new business development. Ecodesign has become a key approach for business in responding to the sustainability challenge. From an industrial and environmental policy perspective ecodesign is important because many of the environmental impacts of products and services are driven by societal aspirations, lifestyles and patterns of consumption. This shift of focus upstream or ‘front-of-pipe’ has primarily been driven by technological advances and the costs associated with extended producer responsibility and compliance. While the greatest concentration of ecodesign to-date has centred on large, international companies, SMEs represent a key element of national economies throughout the world¹, and they play a significant role in the design, development, and manufacture of new products. In an organisational and business culture context, many SMEs have a greater capacity for radical changes to business models and modes of production, while the cumulative impact of SMEs may contribute more to sustainable development than that offered by the larger organisations. Crucially ecodesign presents SMEs with an opportunity to create a competitive advantage, maximizing benefits for their businesses as well as their stakeholders.

The Welsh context

"Sustainable Development is not an option that will go away – it is the only way forward"

Rhodri Morgan AM, First Minister for Wales.

Since devolution Wales has a statutory obligation, built into Section 121 of the government of Wales Act 1998, to promote Sustainable Development in the exercise of its functions. Wales has produced a number of action plans to facilitate this process. The Business and Environment Action Plan (BEAP) aims to integrate environmental concerns with economic aspirations and sets a strategic vision for environmental best-practice as a competitive device.

¹ SMEs account for more than 90 percent of all firms in Wales.

The WAG is working in partnership with the other key agencies (for example the Carbon Trust and the Environment Agency) to assist Welsh companies gain the most from this strategic vision. The BEAP recognises that sustainable development requires a long-term vision as a balance to the increasingly short-term pressure facing business and has been developed with consideration for the commercial realities of SMEs. Much of the initial focus of the BEAP has been on controlling pollution and waste, technological substitutions and changes and conservation of resources and energy ('end-of-pipe' measures). Wales has no formal product orientated policy although some of the agencies such as Design Wales and Envirowise offer product specific support to Welsh business. The first planned outcome from the BEAP to take a more holistic life cycle thinking approach is an ecodesign initiative. The initiative is seen as a key assistive measure in meeting the statutory obligations in relation to sustainable development through encouraging a long-term strategic approach to ecodesign.

Design Wales

Established in 1994, Design Wales is funded by the WAG to provide free and independent advice on all aspects of design to Welsh industry and to offer strategic design advice to the WAG. Practical support is provided by a team of eight advisors via one-to-one advice and a programme of seminars and workshops to help companies realize and achieve their design-related objectives. In 2004 Design Wales were commissioned by the WAG and the Welsh Development Agency (WDA) to develop a detailed proposal for a Welsh ecodesign initiative (Stage 1). Design Wales believe that ecodesign is essentially just 'good' design.

Stage 1 of the ecodesign initiative

This stage is exploratory and developmental in seeking to establish best practice in ecodesign initiatives, along with developing a number of models for implementation and a detailed proposal for a Welsh based initiative. Such an initiative has to be 'fit' for Wales in terms of the primary economic and environmental objectives of the WAG. Stage 1 also involves an initial exploration of how the initiative could be best integrated with the following key stakeholder groups such as government agencies, business and environment (B&E) support, design consultancies, industry forums and academia. The intention of Stage 1 is to clearly define the scope and realistic outcomes of running an ecodesign initiative in Wales. The initiative should be of practical benefit to industry, self-sustaining, have practicable and transferable outcomes and use the existing B&E support service.

International best practice

The assessment of international best practice in relation to ecodesign initiatives involved assessing national and company level initiatives and programmes. Data was collected from a number of sources such as journals, expert opinion, published studies and reports as well as through an online questionnaire (www.designwales.org/questionnaire).

National initiatives were assessed under a number of strategic aspects including the project delivery team(s), financing of the project, stakeholder management and project assessment criteria. This allowed for a mix of quantitative and qualitative assessment under a number of key criteria such as sectors targeted, funding arrangements, partnership arrangements, review process, motivations, general results and key success criteria.

Company level programmes were addressed as a key indicator of the operational considerations to be incorporated with the initiative. The majority of these programmes have taken place in larger companies and care is being taken in terms of understanding the

transferability of procedures to SMEs. The opportunities for mentorship and product specific knowledge transfer have been identified.

National situation

Wales has an extensive network of B&E support with a high degree of regional penetration. Through a mapping exercise Design Wales re-orientated the B&E support network in the context of a product life cycle, including other key stakeholders such as academia and industry, Figure 1. This exercise was to assist the formulation of a multi-stakeholder B&E support group to assist the initiative.

Design Wales are using the WAG Electronic and Electrical Equipment (EEE) focus group, which attracts representatives from government, local authority, industry, academia and NGO's, as a platform for exploring multi-stakeholder partnerships.

Engagement with the existing design community in Wales was an early priority. Design Wales ran an initial briefing event for design consultancies and educators from the three Welsh university based design schools on the future of ecodesign. The process of engagement was continued through a comprehensive study of the Welsh design sector. Similar events are being planned targeting other key business sectors and the B&E support network.

Industry sectors that are well represented in Wales include electronics and electrical equipment, automotive, environmental goods and services, fashion and textiles, food and drink and packaging. For maximum impact these sectors will be prioritised using indicators such as the potential for economic growth, waste categorisation and legislative pressures.

Snapshot of findings

Over 30 national ecodesign initiatives were examined. The majority of these have been completed and include SME level applications in a range of sectors. Academic institutions have been key partners in a number of these.

Many of the previous ecodesign initiatives identified were primarily concerned with supply-side activities. This may have led to some of the difficulties in post-initiative continuity, especially in SMEs. A move to include demand-side stimulants and sustainable procurement may overcome this².

Key factors that strengthened the initiatives included top management commitment and integration with existing management systems, a clear business case communicated to companies, appointed environmental champions, involvement of wider design community, inter-agency and B&E support service endorsement and a project team with the right skills and commitment.

A demonstration phase strengthened some initiatives through creating ‘market pull’ along with providing ecodesign benchmarks, gaining insight into specific tools and understanding how to incorporate ecodesign into SMEs.

Initiative success criteria were not consistent across all of the initiatives. Even though some of the initiatives were tied to long-term strategic objectives they rarely set quantitative targets. A lack of a formalised measurement procedure was frequently linked to the initial project framework and the level of financial and operational support available to the project team.

Some of the larger funding streams in Wales are beyond the reach of SMEs due to their particular objectives and targets. This does not necessarily reflect the financial requirements of the SMEs and may require a review of targeting and objectives.

² The WAG has a sustainable procurement strategy in place.

The recruitment process is essential to the success of the initiative. This suggests that an initiative should be resource efficient (financial and operational) and practical while the interface with the companies needs to be as clear as possible.

The use of ecodesign tools and methodologies was not consistent. There is no conclusive answer on the best tool-box of measures to be used, choice being dependent on a range of factors including the company size and culture and existing management structures. Much of the feedback indicates there is a need for ‘simplified, yet not simplistic’, tools when implementing ecodesign in SMEs. The diverse availability of tools and methodologies represents a significant barrier to the implementation of ecodesign, especially in SMEs.

It was established that the use of formalised design methodologies by Welsh design consultancies was often ad-hoc and this reflected their concerns in relation to risk when implementing ‘unproven’ methodologies. Concern was also raised that ecodesign methodologies could hinder the creative process through being overly cumbersome, technical and time consuming.

The issues of perception of risk and misconceptions of sustainability were raised by the Welsh design consultancies as a barrier to client demand for ecodesign. This raised the question of who is responsible for including ecodesign in the initial project brief. The design consultancies felt that without clear regulatory and market signals these misconceptions and shifting of responsibilities will remain.

Way forward

Design Wales have proposed a number of tailored programme models for the initiative with a mix of delivery mechanisms to meet these objectives. The models offer scalable programmes of training, bespoke 1 to 1 advice and mentorship, promotion and research. These models will be delivered through a multi-stakeholder life cycle team including the existing B&E support

network and a core ecodesign group. The models highlight the need for ‘joined-up thinking’ in relation to targets and intended outcomes of the B&E support network.

Along with setting an ecodesign vision for Wales, the initiative will aim to achieve a ‘critical mass’ of commitment to ecodesign and develop a framework to maintain a long-term dynamic of ecodesign within Welsh SMEs. The ecodesign initiative will assist the WAG in delivering the BEAP through proactive legislative compliance, shifting waste priorities upstream and assisting Welsh SMEs to take advantage of the many commercial benefits that economic and environmental best practice can bring.

Conclusions

The first six months of Stage 1 has proved invaluable in establishing international best practice, enabling Design Wales to develop initiative models that are ‘fit’ for Wales using a life cycle team approach. The proposed models are currently under consultation and refinement. This period of consultation will allow for further engagement with key stakeholders and the selection of priority company sectors. This selection process will be facilitated through a cross sectoral survey. It is anticipated that the final proposal for a Welsh based ecodesign initiative will be presented to the WAG and the WDA early 2006.

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Author's Vitae

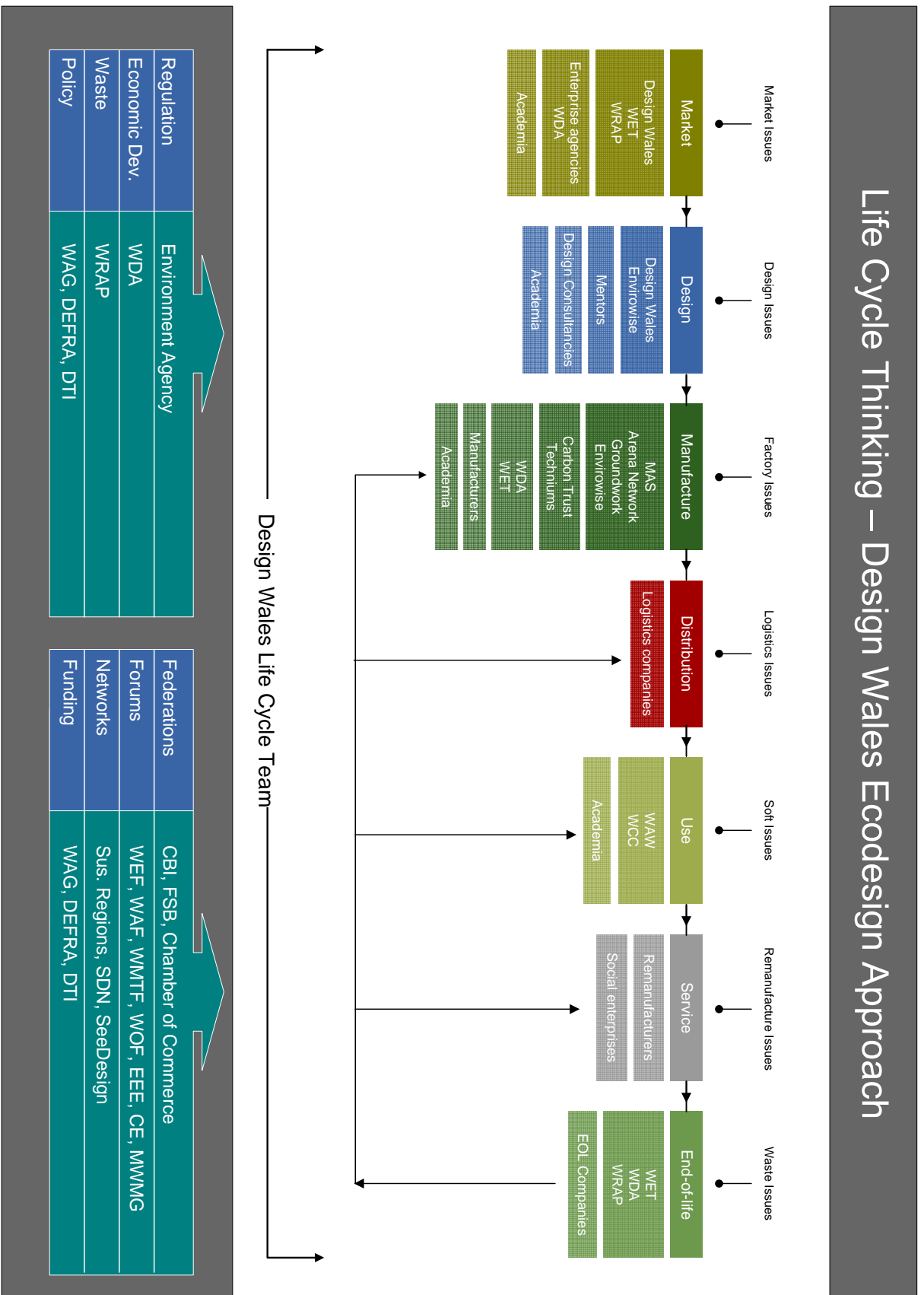
Simon O'Rafferty originally trained as an industrial designer, with a BDes Hons from Carlow Institute of Technology. Having worked in branding and graphic design for a number of years, he acquired an MSc in sustainable development from Dublin Institute of Technology. He currently works as a full time ecodesign researcher with Design Wales. His research in ecodesign is currently focused on assisting the WAG on strategic objectives in relation to sustainable development and ecodesign. His other interests relate to design, social equity and sustainable development.

Dr Frank O'Connor is the ecodesign specialist at Design Wales. He has over 15 years experience in product development, a Masters in Advanced Manufacturing and a PhD in ecodesign. Frank has lectured and worked as an advisor to multinationals, government organisations, academia, NGOs and SMEs in ecodesign and related issues for over 12 years. He has over 15 publications in ecodesign and related fields.

Life Cycle Thinking – Design Wales Ecodesign Approach

Illustrations and Tables

Figure 1: Draft Map of a Design Wales Ecodesign Life Cycle Team



Regulation	Environment Agency
Economic Dev.	WDA
Waste	WRAP
Policy	WAG, DEFRA, DTI

Federations	CBI, FSB, Chamber of Commerce
Forums	WEF, WAF, WMTF, WOF, EEE, CE, MWMG
Networks	Sus. Regions, SDN, SeedDesign
Funding	WAG, DEFRA, DTI

Glossary of organisations

CBI – Confederation of British Industry
CE – Club Europeen
DEFRA – Department for Environment, Food and Rural Affairs
DTI – Department of Trade and Industry
EEE – EEE Focus Group
FSB – Federation of Small Businesses
MAS – Manufacturing Advisory Service
MWMG – Mid Wales Manufacturing Group
SDN – Sustainable Design Network
SeeDesign – Sharing Experience in Design Support
WAF – Welsh Automotive Forum
WAW – Waste Awareness Wales
WCC – Welsh Consumer Council
WDA – Welsh Development Agency
WEF – Welsh Electronics Forum
WET – Welsh Environment Trust
WMTF – Welsh Materials Technology Forum
WOF – Welsh Opto-electronics Forum
WRAP – Waste & Resources Action Programme