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Design for a Circular Economy

An Action Plan



pdr.

Design Council

Summary

PDR, the International Design Research Centre at Cardiff Metropolitan University, and the Design Council, the UK Government's advisor on design, are pleased to present our recommendations for the action plan 'Design for a Circular Economy' to Zero Waste Scotland.

Design is an approach to problem-solving that can be applied across the private and public sectors to drive innovation in products, services and society by putting people first. More than three out of four decisions directly influencing materials selection and manufacturing processes are determined in the design phase and over 80% of the ecological costs are determined before the product is even created. The circular economy represents an 'upgrade' from the current 'normal' take-make-dispose linear economy in which society wastes huge amounts of material and value.

The Scottish Government has shown a desire to accelerate progress towards a more circular economy by 2050 through the actions put forward in 'Safeguarding Scotland's Resources'. However, until now a considered assessment of the role of design in this movement to a circular economy in Scotland has not been forthcoming.

The challenge is to mainstream circular economy principles into existing industry, education and policy interventions so that it is not seen as an add-on but an integral part of how companies think about design. For this to happen it's essential to build both capability in the design community as well as the appetite amongst business to stimulate innovation in the design and manufacture of products and packaging.

From February to April 2015, Zero Waste Scotland tasked PDR and the Design Council with developing an action plan 'Design for a Circular Economy'. Through interviews, workshops and a peer-review panel, a set of 12 actions have been developed focusing on the themes of 1) business support and finance, 2) skills and education, 3) promotion and awareness and 4) policy and regulation. In this document we present a summary of the full report.

We have taken a design approach to this project by engaging a range of stakeholders across industry, the design sector, academia and public policy to jointly develop an action plan that is tangible, realistic and corresponds to market and policy needs.

As part of the process, we created a stakeholder map 'Design for the Circular Economy' to provide a snapshot of design, industry and education initiatives in Scotland. The stakeholder map informed the selection of participants for interviews and workshops to provide insight from the design sector, enterprises, education and policy. Through two workshops, a series of proposals were jointly generated with key stakeholders. This work resulted in a long list of ideas which we have translated into a range of actions that Zero Waste Scotland could potentially instigate to lay the groundwork, build capability and create incentives.

Often the most powerful role is to act as an 'enabler' or convenor to bring together interested parties to work together using a design approach to solve societal problems. Therefore to take a strategic approach to prioritising these actions we advise that focus is initially placed on acting as a catalyst of change by mobilising the networks across Scotland in the design community, higher education, business support and industry to share best practice and develop new projects across priority action lines. This network of enablers can then help take forward other potentially more resource intensive ideas in the action plan such as new awards or developing toolkits and educational materials.

In addition, Zero Waste Scotland has the ability to campaign for the Scottish Government and European Union to mainstream circular economy principles into existing policy levers such as the industrial sector strategies and innovation support programmes and in the longer-term achieving systemic change in how resources are used sustainably.

We look forward to seeing the plan moving from ideas into action.

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DESIGN FOR CIRCULAR ECONOMY

ACTION PLAN FOR ZERO WASTE SCOTLAND

BUSINESS SUPPORT & FUNDING

1. Build capacity in design for a circular economy among business support advisors

Provide online support materials and train business advisors in Scottish Enterprise, Highlands and Islands Enterprise, Business Gateway, Resource Efficient Scotland, local authorities and Interface in designing for circularity.

2. Develop an online toolkit for the design community, industry and business support personnel

Develop an open source repository for circular design and ecodesign toolkits on the ZWS website including examples of products, services and business models that embrace design for circularity and educational materials.

3. Promote the circular economy in design support programmes such as vouchers and mentoring

Promote design for circularity within the Scottish Enterprise 'By Design Vouchers' and 'Design Mentor' programmes and engage with Highlands and Islands Enterprise to extend the vouchers to these areas. Examine the feasibility of establishing an in-depth intervention programme such as 'Design Mentor' or 'Better by Design' focused on design for the circular economy.

4. Develop tangible working links between design researchers in HEIs and SMEs

Provide grants for companies to fund a doctoral or post-doctoral researcher in design to engage on systems thinking. Establish Knowledge Transfer Partnerships (or similar instrument), engaging with Interface, to facilitate knowledge exchange between academia, design agencies and industry

SKILLS, EDUCATION & RESEARCH

5. Develop educational materials for cross-university use to increase importance of sustainability in Scottish design undergraduate degrees

Develop a set of materials or guidelines that encourage undergraduate designers to consider lifecycle thinking and sustainability as a core aspect of all their projects, and a key criterion for assessment.

6. Embed circular design thinking in the primary and secondary education system

Integrate circular economy and systems thinking into the design and technology curriculum in Education Scotland's 25 'Pilot Schools'. Provide continuous professional development opportunities for teachers in designing for circularity. Sponsor a design for a circular economy competition for school pupils.

PROMOTION & AWARENESS

7. Facilitate a network to foster design for a circular economy in Scotland

Bring together key 'enablers' in the design community, higher education, education support, policy and industry and foster links between them through creative events. Use these connections as the basis of developing new pilot projects in key industries.

8. Integrate design for circular economy into awards criteria

Engage with award providers to establish a 'Design for a Circular Economy' award within existing design awards such as Lighthouse Design Impact Awards and Scottish Design Awards.

9. Assess potential for a Scottish product/service ecolabel that encourages sustainable design

Review the strengths, weaknesses and up-take of existing ecolabels (der Blaue Engel, EcoLogo, EU Ecolabel, Bluedesign) to assess the benefits of a Scottish label. Identify the accreditation criteria and the cost of accreditation to business. Conduct market research on the potential value of the label to businesses.

POLICY & REGULATION

10. Identify the key legislative barriers to, and opportunities for, circular design in Scotland

Examine legislative barriers to design (both products and services) for a circular economy across key sectors. Scope out where Scotland could have an early mover advantage against incoming EU legislation. Explore feasibility of voluntary extended producer responsibility schemes in niche Scottish manufacturing industries.

11. Engage with European Commission to position Scottish examples as best practice in design for a circular economy in Europe

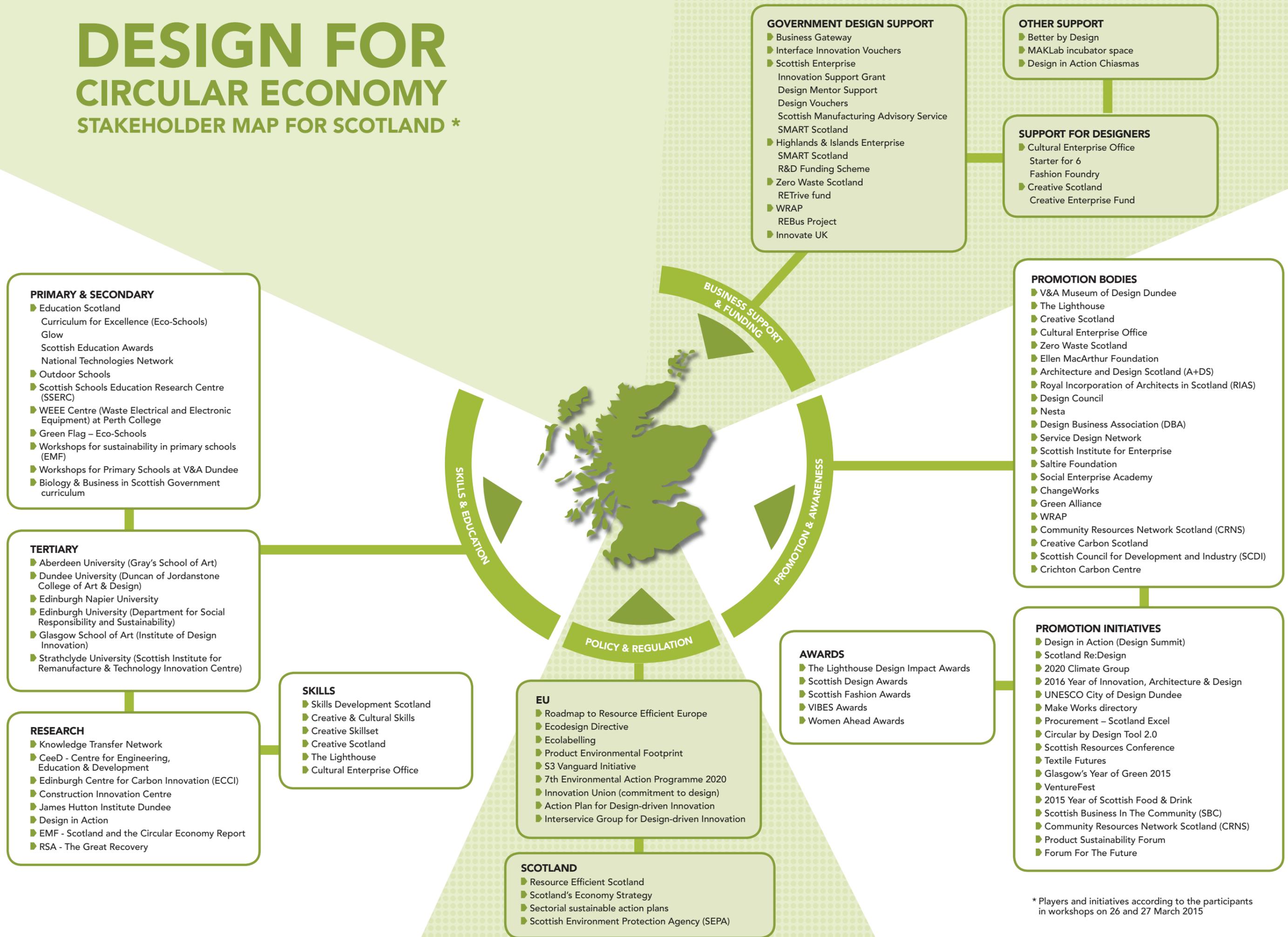
Engage with the Innovation Policy for Growth Unit and Sustainable Industrial Policy Unit within DG GROW to promote Scottish initiatives as examples of best practice and provide input for working documents, policy initiatives and funding calls on design and innovation.

12. Encourage the inclusion of ecodesign/design for a circular economy in sector strategies

Engage with the Creative Industries Partnership Group to make design for a circular economy a priority in the creative industries strategy. Engage with sector representative developing sectoral action plans and strategies to encourage life-cycle thinking.

DESIGN FOR CIRCULAR ECONOMY

STAKEHOLDER MAP FOR SCOTLAND *



* Players and initiatives according to the participants in workshops on 26 and 27 March 2015