

The Earth Centred Business Design (ECBD) framework tool.

A circular economy tool for first-time founders

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Presenting a key output from the CloudEARTH*i* project, the Earth Centred Business Design (ECBD) framework tool.

The process of developing ECBD tool was iterative and collaborative. The University of Edinburgh commercialisation arm, Edinburgh innovations, worked closely with the academics from the consortium partners together with the team from Edinburgh Data Driven Entrepreneurship and the Venture Builder Incubator program.

ECBD supports the creation of new low-carbon, circular start-up companies with a series of interactive digital resources combined with hands-on exercises. Seven start-ups have received direct support through the CloudEARTH*i* project and twenty-six more have used ECBD as part of the University of Edinburgh Venture Builder Incubator program.

In today's world businesses are still linear and sustainability is considered second to profitability. When a founder creates a business, they often complete a business model canvas and a business plan, but these tools do not include emissions, waste and other environmental and social impacts associated with the production and consumption of goods and services in our economy.

Businesses may revisit these issues when they are more established, but by this stage, it may be harder, and more costly, to amend established processes and to 'retrofit' low carbon, circular thinking into business as usual.

The ECBD aims to change this. Formed of a series of unique exercises and an improved business model canvas, which enables founders to think differently about how they can operate their business to build a more sustainable future. One of the key changes ECBD aims to deliver is helping businesses not only to do 'less bad' but to be driving forces of change and be a net force for good, opening up new markets, customer segments and income potential without environmental harm.

Impacts achieved as a result of ECBD are varied and significant, and benefits vary depending on the nature of the start-up using the tool.

Over £900 000 has been raised between the original 7 start-up companies that used the ECBD during the CloudEARTH*i* project.

Some environmental outcomes:

- **Emissions** - targets set across four key business areas; environmental, social, finance and political. Progress tracked every quarter.
- **Finance** - research to ensure financial partners are sustainable, switching banks if they are not.
- **Supply chain** - creating a transparent supply chain, having control over materials used.
- **Scale and impact** - deliver sustainability training workshops to customers.
- **Material and product** - review material flows, improve design to reduce waste, and enable repair and reuse.
- **Resilience** - improving sustainability in operations to increase resilience in business planning focusing on stimulating local suppliers.

Staff at the University of Edinburgh have had the opportunity to participate in training sessions to learn about ECBD. Our student enterprise team have nominated three champions to embed ECBD in the student entrepreneurial activities. Also, the Venture Builder incubator incorporated ECBD in the twelve weeks program followed by companies from all over UK.

Recently, in April 2024, we facilitated an online workshop between five European institutions where over 100 participants used the ECBD materials to develop their business ideas. Training materials were also made available, to encourage continued learning and reflection after the workshop sessions.

The university has now launched ECBD as a free license for all education institutions (<https://licensing.edinburgh-innovations.ed.ac.uk/product/earth-centred-business-design-tool>).

By ensuring the embedding of sustainability at an early stage of business development, ECBD is a crucial tool for the green transition.

Potential scale of impact from scaling use of ECBD tool

- SMEs generate 44% of the UK's non-household greenhouse gas emissions - enabling these businesses to change their models and reduce emissions is therefore essential to achieving the UK's net-zero target and tackling climate change
- Implementing circular business models can also reduce emissions by 39%
- Research shows that shifting to circular practices in transport, construction and food sectors could offer annual benefits of \$2 trillion.
- Circular companies are more resilient and have a lower risk of defaulting.