

This report complements the previous activity reports which have been circulated throughout the course of project and highlights some of the impacts which the project intends to inspire post project funding. There are also a number of other project materials which can be accessed via the IRRI website – www.irri.org.uk all of which are entirely open source.

The D2D project has been utilised and promoted far and wide in the Highlands and Islands. After consultation with our stakeholders across the region, including Highlands and Islands Enterprise, it was decided that an ongoing series of dissemination activities across the region would be held rather than just one workshop.

Our partnership with Highlands and Islands Enterprise enabled us to ensure that the outcomes of the project were also being fed into Scottish Government at a national level, through the Policy Steering Group, for the Circular Economy.

An important aspect of the D2D project was to ensure that as many of the third party stakeholders were made aware of the D2D project, its objectives and links to the previous Cradle to Cradle Islands project and the variety of methodologies which were piloted and implemented throughout the project both in Scotland and elsewhere. This dissemination activity involved regular contact with a wide range of stakeholders, all of whom interact with communities, SME's and entrepreneurs across the Highlands and Islands, thus increasing the circular economy message.

The D2D project (Development to Dissemination) is an Interreg IVB North Sea Region (NSR) project with 9 partners from 6 countries around the North Sea with the main goal to create a process that enables innovations developed during the Cradle to Cradle Islands project (C2CI) to be realised across the NSR.

C2CI project, the predecessor of D2D, achieved excellent results in terms of Cradle to Cradle product concepts and new design of sustainable innovations and provided a solid background and opportunity to achieve more ambitious goals by commercialising the results and promoting the work to a wider audience.

The Cradle to Cradle® (C2C) approach was developed by Michael Braungart and William McDonough as a new way of thinking: we should stop making 'less bad' products and start designing intelligent products and materials, that can be used over and over again in biological or technical cycles. In this vision the concept of waste doesn't exist anymore: 'waste is food'.

The Cradle to Cradle® design process, making use of technical "nutrients", focuses on improving quality, which makes products more commercially successful, healthy for users and beneficial for the environment as well as for future generations.

Biological nutrients should be available for re-use either in the natural environment or for human use but also closing water cycles and making use of solar, wind energy and others fits into this approach with the qualification that the material side still has to be developed. In the Cradle to Cradle Island (C2CI) project all the activities were executed within parameters of the Cradle to Cradle® approach. Where possible, the principles are used and if not in their entirety they function as a guide for the most sustainable present solutions.

The international project Cradle to Cradle Islands took place within the framework of the Interreg IVB North Sea Region program. This European program promotes economic growth and sustainability in the North Sea Region and focuses on economic as well as social integration of the of the European member states around the North Sea. These aims should be worked on by territorial cooperation within the program's priorities. One of the priorities of the Interreg IVB program was promoting environmentally responsible energy production practices.

The islands in the North Sea Region are facing many common problems: geographical isolation, a lack of local resources in the field of energy, materials and water supply, high tourism pressure on resources and the environment by declining populations. The main goal of the Interreg IVB project Cradle to Cradle Islands was to develop innovative solutions in the field of energy, water and materials for a sustainable future, using Cradle to Cradle® principles as a guide. The project was aiming to speed up the development of new energy related technologies and strategies, increase their uptake and through partnership ensure their safe, efficient and sustainable adoption, thus promoting economic growth and sustainability of the North Sea Region. This general objective was pursued through the application of the Cradle to Cradle® approach by 22 partners from six countries around the North Sea. Ten islands located in the peripheral regions of the North Sea area, all lacking resources, cooperated in three development clusters; the three main issues Mobility, Water and Materials, each linked to the Energy issue. The islands all were excellent demonstration sites. Within this project the islands functioned as catalysts for new developments and testing grounds for sustainable innovations. The partners cooperated from January 2009 until the end of 2012 on creating local decentralised solutions, with the Scottish activities being centred on the Shetland Islands.

D2D takes the opportunity to further promote the results through commercialising beyond the islands, in terms of new sustainable products, services options and innovation approaches; creating a special accelerator mechanism for further implementation and dissemination of innovations via the D2D approach.

Main Goal of D2D Project within Highlands and Islands region – There were a number of objectives for the Highlands and Islands region which were looking to be achieved through the project. These include –

- Establish experience in being part of a North Sea Region project
- Establish recognition and build a regional reputation with the NSR programme
- Build collaborations and partnerships
- Seek opportunities for future projects
- Benefit from the accelerator processes developed for commercialising ideas for green products aimed at the circular economy.



Engagement with Stakeholders across the Highlands and Islands Region of Scotland - The names of the stakeholders we have worked / interacted with are –

Highlands and Islands Enterprise
Business Gateway
Inverness Chamber of Commerce

NHS Highland
Highland Council

Enterprise Europe
Inverness College (UHI)

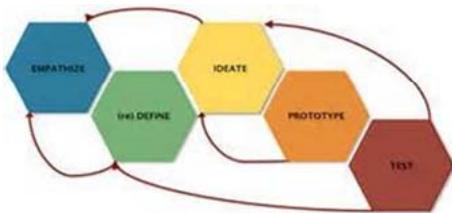


Developing relationship between HIE, Wetsus and Province of Fryslan

Since participating in the D2D project, further relationships and collaborations have been developed between **Highlands and Islands Enterprise, Wetsus and the Province of Fryslan**. This increased collaboration has led to development of potential future activity and project opportunities in the Water, Low Carbon and Circular Economy sectors.



Business Methodologies – D2D has trialled a number of different business methodologies within Scotland during the period of the project – such as the Design Thinking Process Model and the Business Model Canvas Methodology - with existing and new start businesses across the project region. Here are some examples:

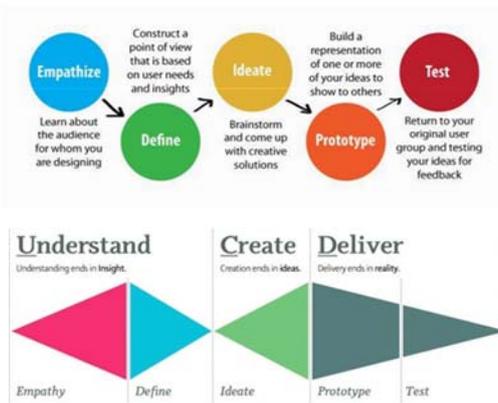


Design Thinking Process Model

Design thinking is a formal method for practical, creative resolution of problems and creation of solutions, with the intent of an improved future result. In this regard it is a form of solution-based, or solution focused thinking – starting with a goal (a better future situation) instead of solving a specific problem. By considering both present and future conditions and parameters of the problem, alternative solutions may be explored simultaneously. This type of thinking most often happens in the built, or artificial, environment.

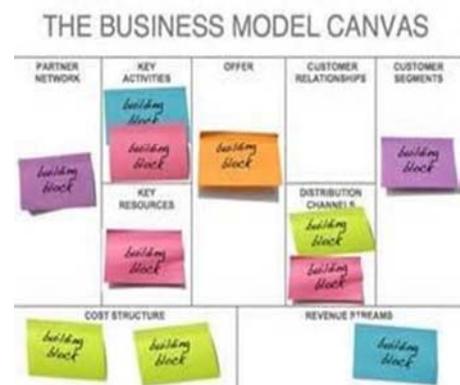
This approach differs from the analytical scientific method, which begins with thoroughly defining all the parameters of the problem in order to create a solution.

Design thinking identifies and investigates with both known and ambiguous aspects of the current situation in order to discover hidden parameters and open alternative paths which may lead to the goal. Because design thinking is iterative, intermediate "solutions" are also potential starting points of alternative paths, including redefining of the initial problem.



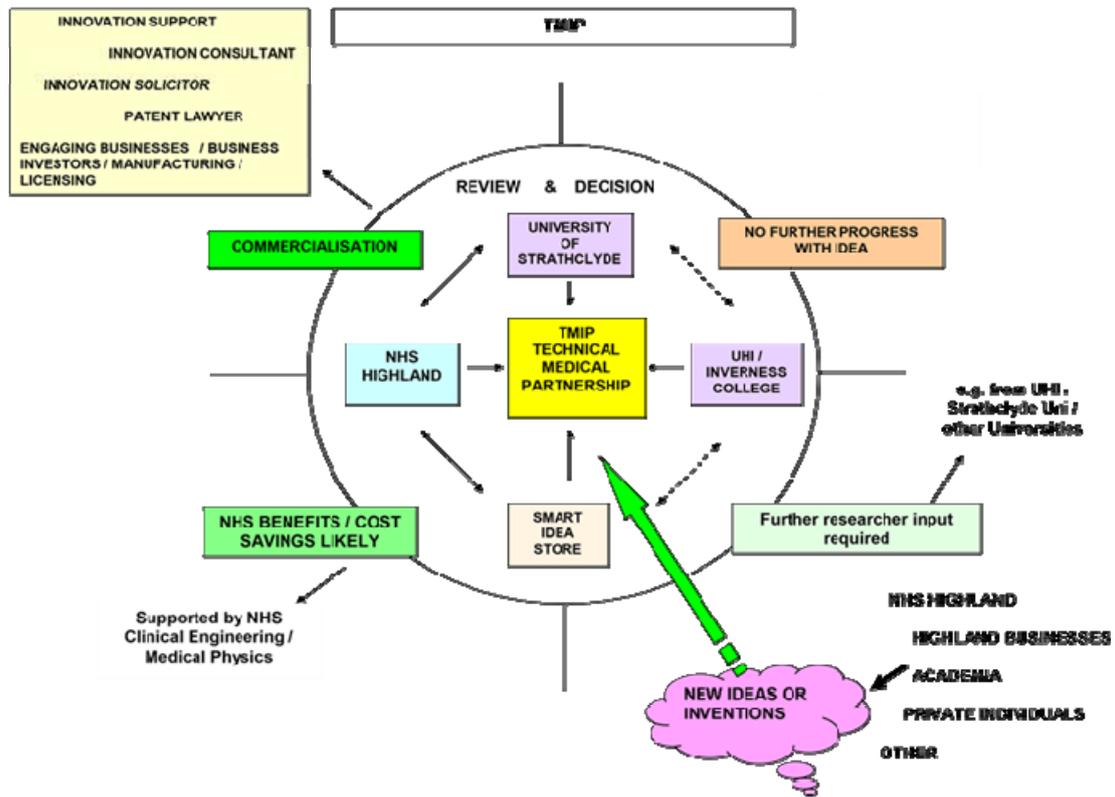
Business Model Canvas

The Business Model Canvas is a strategic management and lean start-up template for developing new or documenting existing business models. It is a visual chart with elements describing a firms’ or product's value proposition, infrastructure, customers, and finances. It assists firms in aligning their activities by illustrating potential trade-offs. This is a business methodology which a number of the partners have been trialling with new innovations and entrepreneurs in the Low Carbon sector. A two minute video clearly setting out a step by step guide to the Business Model Canvas can be found at: <http://www.flandersinshape.be/nl/diensten/workshops/business-modelgeneratie>



Technical Medical Innovation Partnership (TMIP)

The TMIP model as was originally intended sought to take new ideas and inventions from NHS Highland, Highlands businesses or Academia through a process model to commercialisation providing advice and support where required from different partners and reviewing groups. This process also highlights potential synergies with other activities in the region allowing collaboration and innovation to commercial ideas and inventions. The D2D process model has aided and enhanced this process. This process model has also led to transnational collaboration with organisations outside the D2D partnership identifying future opportunities ensuring that the D2D process model continues to be utilised and add value to the partnership/region as well as leaving a standing legacy for the project.



Triple Bottom Line Methodology

The Triple Bottom Line is one of the main systems being used by businesses to assess the profits they are making through their corporate sustainability solutions. The Triple Bottom Line method asks you to see beyond the traditional bottom line of business to the profits that your business makes socially, environmentally, and economically. Measuring your business using the Triple Bottom Line is one of the best markers of how sustainable your business is, and how profitable it really is.

Incorporating sustainability into your corporate strategy can raise a lot of questions:

- How do you measure sustainability?
- How do you make sustainability work for your business?
- How do you define sustainability for your corporation?

Social Sustainability

The Social bottom line measures your business' profits in human capital, including your position within your local society. Your social bottom line is increased by having fair and beneficial labour practices and through corporate community involvement. After all, if your business is not nurturing positive relationships with your community, your client base and employee pool shrinks accordingly. The social bottom line questions the belief that the less a business pays its work force the longer it can afford to operate. Instead, the social bottom line measures the long-term sustainability of business human capital, with the understanding that a business that is also a desirable workplace will always be able to operate. Essentially, corporate interests and labour interests are seen as *interdependent*.

Like most subjective public relations efforts or intangible benefits, your social bottom line can be difficult to measure. However the Global Reporting Initiative (GRI) has developed guidelines to enable businesses to report and measure their social impact.

Environmental Sustainability

The Triple Bottom Line approach to sustainability takes the view that the less impact your business has on the environment and the fewer natural resources you consume, the longer and more successful your business will be. Controlling your Environmental bottom line means managing, monitoring, and reporting your consumption and waste and emissions. This is typically the work of your EHS department, though most sustainable business models also make waste reduction and green policies corporate-wide values across all levels of management. A sustainability committee is usually required to communicate your sustainability solution to all departments.

Measuring and reporting your environmental bottom line is certainly possible, though depending on the size of your business, it can be a time-consuming and difficult process. However, EHS or corporate sustainability software can make the process much quicker and cost effective.

Economic Sustainability

In the Triple Bottom Line approach, economic sustainability is not simply your traditional corporate capital in addition to you environmental and human capital. Your economic capital must be measured in terms of how much of an impact your business has on its economic environment. The business that strengthens the economy it is part of is one that will continue to succeed in the future. Of course, a business needs to be aware of its traditional profits as well, and the Triple Bottom Line accounts for this as well.

By using the Triple Bottom Line method, your business can expand how it understands its position in the economy and its ability to survive in the future. Corporate sustainability measures your ability to be in business indefinitely, based on your impact on the environment, your relationship to your community, and contribution to your economy. Unlike the traditional method, the Triple Bottom Line allows you to see your business as a social and environmental entity and measure it long these parameters.



D2D has been one of the tools available to Highlands and Islands Enterprise to act as a catalyst for additional circular economy activity within the region going forward. HIE are developing a detailed Regional EU Funding & Engagement Strategy for the 2014 – 2020 programming period of which Circular Economy activity is a significant part – Water, Energy and Materials. In previous programmes each of the stakeholders essentially did their own thing but D2D could contribute to developing a new “joined up” approach for the new programme.