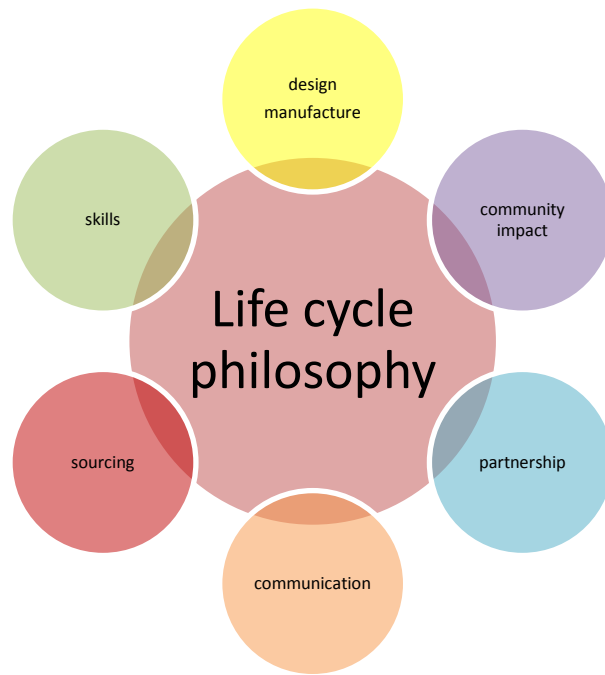


Supporting Small and Medium Enterprises integrating life cycle thinking

# working with **ambitious mindsets**



embedding low carbon thinking  
**through the life of a business**



# introduction

## Why this guide?

This guide aims at presenting some of the great entrepreneurs encountered by the Fusion team whilst sharing with other organisations some of the lessons learnt on how to help the integration of life cycle thinking amongst small and medium businesses.

## What is Fusion?

Fusion is a programme for Entrepreneurs seeking to **start, change and grow** while taking into consideration the environmental and social impact of their business.

## What is life cycle thinking?

*Life Cycle Thinking (LCT) is about going beyond the traditional focus and production site and manufacturing processes to include environmental, social and economic impacts of a product over its entire life cycle.*

*The main goals of LCT are to reduce a products resource use and emissions to the environment as well as improve its socio-economic performance through its life cycle. This may facilitate links between the economic, social and environmental dimensions within an organisation and through its entire value chain.*

*Looking at the industrial sector, taking LCT as an approach means going beyond the more narrow traditional focus on an enterprise's production facility. A product life cycle can begin with the extraction of raw materials from natural resources in the ground and the energy generation. Materials and energy are then part of production, packaging, distribution, use, maintenance, and eventually recycling, reuse, recovery or final disposal*

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## Acknowledgement

The Fusion team met over 1,345 potential beneficiaries in the programme region. Fusion was looking for eco- technology companies and eco-responsible entrepreneurs.

The team would like to thank all of them for their interest in the project and for taking the time to tell us about their business.

A special thank to all our beneficiaries who inputted for the project case studies, to name a few:

- Cyclepods
- Tillieux Menuiserie
- Billard Toulet
- Le PANEF– Parc d'Activites de Neuville En Ferrain
- Leva Poriete
- Survival Arts
- Chequers Kitchen
- Participants of the GreenHack challenge
- ProNatura
- Green Motion Technologies

Thank you to our funders the [Interreg 2seas IV A programme](#) and all our co-financers.

As ever errors and omissions remain ours. Should you notice any, please do not hesitate to contact us.

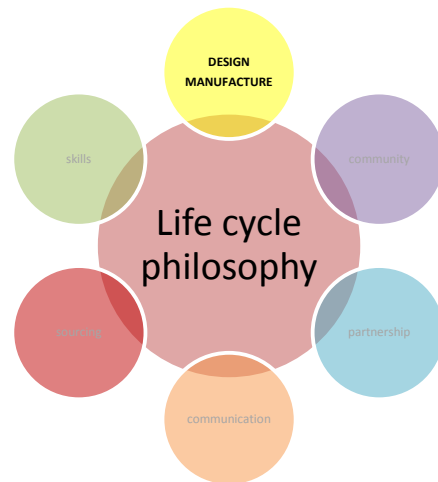
## Product development & Design

### *Spotlight on Cyclepods & Billard Toulet*

Cyclepods is a Carbon neutral company established in Kent. The company's mission is to offer innovative, space-saving, secure and environmentally friendly cycle storage. Visit [cyclepods.co.uk](https://cyclepods.co.uk) for more details

#### Toulet:

Toulet is a long established company located in Northern France. This small company designs and manufacture pool tables.



### *How companies can be supported through the design phase?*

#### **Why design is part of the life cycle philosophy?**

It is estimated that an average of 70% of a product environmental impacts can be improved at the product design phase.

Resource management is a key pillar of eco-design; La Chambre du Commerce de d'Industrie Grand Lille worked very closely with Toulet to identify the impact arrears and successfully reduced water consumption by 40% . The teams also decreased gas consumption by more than 50% and eliminated waste treatment costs.

Product designing can be costly, time consuming and risk; thanks to the help of 3D printing and rapid prototyping principles, Cyclepods was able to get in 1 day's use of a 3D printer to design a new cycle storage prototype. They then went on to get funding to purchase their own 3D printer for future prototyping.

### *Lessons learnt*

It is important that all the staff of the supported organisation gained sufficient knowledge on life cycle principles, this often means starting by the CEO.

### *Partners involved*

Kent county council supported Cyclepods

La Chambre du Commerce de d'Industrie Grand Lille guided Billard Toulet.





# Product development & Design

## *Spotlight on the GreenHack Challenge*

Devised by The Centre for Sustainable Design (CfSD) using open innovation principles, the GreenHack challenge brought together small businesses, academics, designers and students to solve companies' environmental challenges.

## *How companies were supported through the GreenHack Challenge*

The GHC starts by finding companies with a real sustainable product design challenge and comfortable with open innovation. Seven companies presented real sustainable design challenges related to their products and services. Thirty-three GHC delegates organised themselves into teams and took part in a two day 'open-innovation' workshop led CfSD to devise design solutions to each challenge. Each team presented their solutions to an expert panel and at least one of the solutions is now in the later stages of product development.

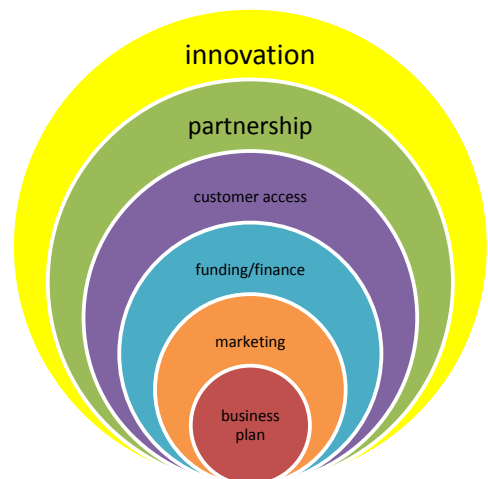


## *Lessons learnt*

Success starts by spending quality time and effort in the design brief preparation. Creating a positive atmosphere is key to "open innovation", think about the equipment needed, room layout and working space, access to internet for research. Don't forget to cultivate a fun working environment when designing the workshop.

## *Partners involved*

The Centre for Sustainable Design® at the University of the Creative Arts (UCA)  
Visit [#Greenhack Challenge](#) to view the video.



*"GHC offered an excellent opportunity to work collaboratively with students and experts from many disciplines. GHC proved that imaginative, sustainable answers to problems can not only be easily achieved with collaborative thinking in a very short space of time, but it can also be great fun in the process."*

**Ben Smart, MA Design student, one of the fifteen student delegates supported by CfSD under its Fusion pre-startup programme**

## ***What is open innovation?***

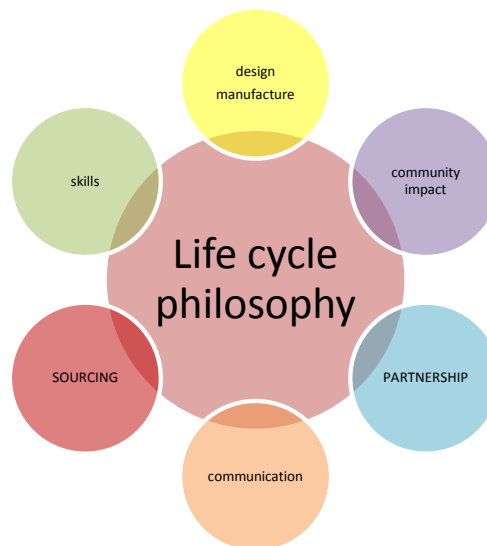
Open Innovation is the use of internal and external ideas to develop new business solutions.

## Resources– Going beyond your company boundaries

### *Spotlight on Survival Arts*

Survival Arts crafts decorative objects and produces textiles inspired by wild fauna and flora. This start up has a long term ambition to have £1m turnover by 2020. Survival Arts' mission is to tell through design the stories of quirky and inspiring species.

Visit [Survival Arts](#) for more details.



#### ***Why going and thinking beyond?***

Going beyond your organisation can have a bigger environmental impact and can bring more stable relationship whilst reducing potential risks.

You might consider talking to the company managing your waste, recyclers, primary manufacturers, your distributors, retails, your transport organisation, and your end customers.

#### *Support provided*

Finding the right supplier and establishing **partner-ship** when being a start up can be challenging.

Business coaching for sustainable partner begins with working with the entrepreneurs to establish a profile taking into consideration the ethos sought and even includes the assessment of the location to consider the transport environmental impact of the material.

In addition to searching potential partners, supporting organisations may also provide pre-meeting and negotiation coaching.

#### *Lessons learnt*

Success is in the preparation.

#### *Partners involved*

University of Kent, Enterprise Hub. (England)



## Resources– Going beyond your company boundaries

### *Spotlight on PANEF- Parc d'Activite de Neuville en Ferrain*

PANEF is an industrial estate of 120 acres located in Neuville-en-Ferrain, 20km North-east of Lille. There are 54 companies of all sizes (from Small, to Medium and corporate groups) established in the industrial area and working in a wide range of industries: boat construction, storage provider, transport and distribution, services, manufacturing....

### *Support provided*

The support mechanism used was initiated by engaging with the entities located in the industrial park.

Once tenants agreed to be involved in the project they benefited from 3 levels of guidance:

- Firstly—the Fusion team looked at the tenant waste to identify efficiency and potential new markets for the waste.
- Secondly, map **synergies** between tenants. The team worked to translate one companies' waste into another tenant raw material and into driving efficiencies by sharing waste recycling contracts.
- Thirdly , setting up a waste disposal zone, resulting in new jobs and reducing the number of waste trucks travelling in the industrial park.

### **Why?**

This initiative objective is to reduce the costs of waste management in the industrial park and increase the park attractiveness to potential tenants.

By participating in the project, tenants decrease their waste management costs, generate new source of potential revenues by selling their waste; all in all encouraging entrepreneurs to change their perception of resource management by giving them a first step positive experience.

### *Lessons learnt*

Having an overarching organisation to introduce the project team to the various entities located in the business park is helpful.

Any tenants regardless if its size ( number of employees, turnover) can join the programme, the core requirements are motivation and willingness to collaborate



### *Partners involved*

La Chambre du Commerce de d'Industrie Grand Lille—CCIGL (France)



## Innovation process

### *Spotlight on Tillieux Menuiserie*

Tillieux Menuiserie, established over 110 years ago, is a family business which manufactures and installs traditional windows and doors with passive performance using only eco-materials such as PEFC wood\*, cork, wood fiber and sheep wool.

Visit [Tillieux Menuiserie](https://www.tillieux-menuiserie.com) for more details.

#### **What does passive performance mean?**

This term refers to building products with a energy consumption that is at least 50% lower than the current building regulation in France (44% in 2013 in the UK).

#### **What does PEFC mean?**

The Programme for the Endorsement of Forest Certification (PEFC) is an international non-profit, non-governmental organisation dedicated to promoting Sustainable Forest Management (SFM) through independent third-party certification.

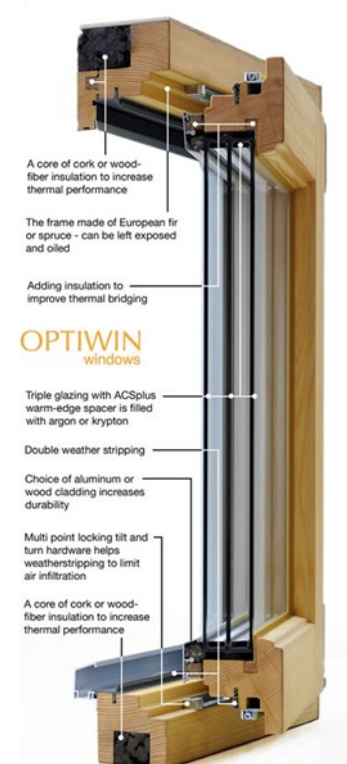
### *Supporting Innovation*

There are several elements in guiding a company through an innovation journey.

- **Innovation monitoring.** Throughout its journey the company will need help to research, identify and monitor potential sources of information, competitors, or partners.
- **Finding the right technology and financial partners** are critical for the idea to result in a successful product. At this stage business support organisations should consider researching and evaluating partners.
- **Protect innovation.** This will include mapping the best approach to protecting the product and guiding the company through the various registration steps
- **Product promotion.** Using events, press, videos or awards to promote new products allows companies to enter the market and collect feedbacks on their new product.

### *Partners involved*

CD2E– Creation Developpement EcoEntreprises (France)



### *Lessons learnt*

The innovation phase for a company can sometimes be lengthy and offering support require continuous contact with the small business to respond to the beneficiary's needs.





## Innovation process– 3D printing

### *Spotlight on Green Motion Technologies (GMT)*

Green Motion Technologies (GMT) is a technical innovation company that develops sustainable and efficient high-tech solutions for Original Equipment Manufacturers' and other industrial suppliers. Their goal is to change current industrial standards and provide it with new ones. All their products are designed in-house by their team of scientists and engineers. "Pushing boundaries in technological development with creative and scientific knowledge to develop sustainable and high efficient products for industrial suppliers".

Visit [Green Motion Technologies](#) for more details.

### *Support provided*

GMT was engaged in the following key steps.

- 1– Fully capture the business' needs
- 2– Offer technical coaching to design the prototype wanted.
- 3– Offer design expertise on the printability of the product
- 4– Increase beneficiaries' knowledge through training on 3D printing and rapid prototyping.
- 5– Provide contact of entities already using similar combination of lost wax and 3D printing.

All resulted in a big cash saving for GMT.

### ***What is rapid prototyping?***

**Rapid prototyping** is a group of techniques used to quickly fabricate a scale model of a physical part or assembly using three-dimensional [computer aided design](#) data. Construction of the part or assembly is usually done using [3D printing](#) or "additive layer manufacturing" technology



### *Lessons learnt*

Raise awareness about the possibilities that 3D printing and other digital manufacturing solutions can offer. Coupling rapid prototyping with Lean start up approach is a powerful combination to kickstart innovative projects.

Once the companies have caught the bug of digital manufacturing, they will seek further guidance.

*Thanks to the time and effort RDM Makerspace could invest in our initial idea we had a wonderful 1:1 model of the final product.*

### *Partners involved*

Delft Technical University & RDM Makerspace

## Social enterprises– Managing your audience

### *Spotlight on ProNatura*

ProNatura, is a Belgian company offering ecological solutions to other organisations through social entrepreneurship. The company recruits people struggling to find a regular employment to take on the delivery of green jobs.

Visit [ProNatura](#) for more details.

### *Supporting Social enterprises*

ProNatura was part of a group of companies working on sustainability reporting.

The beneficiary gained knowledge thanks to events such as Life cycle thinking (18th December 2012) or Cost of ownership Low carbon Mobility ( June 2014).

Thanks to the support from VOKA, ProNatura translated sustainable principles into actions and importantly developed via indicators and communication tools to engage with stakeholders.



*ProNatura – Linde Brewaeys*

*“The sessions were very enlightening and motivating.”*

### *Lessons learnt*

Even companies working on ecological issues can improve their environmental impacts.

Engage your stakeholders, discuss your draft sustainable policy and action plan with key stakeholders and share the final version with all your stakeholders.

Use visual indicators and share in your newsletter and if needed set up a campaign to involve your employees

### ***What is a social enterprise ?***

Social enterprises are positioned between the traditional private and public sectors.

Although there is no universally accepted definition of a social enterprise, their key distinguishing characteristics are the social and societal purpose combined with an entrepreneurial spirit of the private sector. Social enterprises devote their activities and reinvest their surpluses to achieving a wider social or community objective either in their members' or a wider interest.

European Commission.

### *Partners involved*

VOKA– Kamer Van Koophandel, Oost Vlaanderen (Belgium)



## Social enterprises– Managing your audience

### *Spotlight on Cinque Port Community Kitchen.*

Cinque Port Community Kitchen is a Community Interest Company established in East Kent. Using its profits from its commercial restaurant to run a cookery school teaching basic cooking skills to local residents struggling to prepare healthy meals for the family.

Visit [Cinque Port Kitchen](#) for more details.

### *Support provided*

Selecting Cinque Port Community Kitchen to be a beneficiary for its coaching support was an easy decision for BSK-CIC, the team was motivated with a clear vision to work practically in improving the well-being of its local community and was also thinking about its environmental impact via local food supply and renewable energy.

After discussing the business legal status, the guidance was dedicated to set up, find the route for funding and keep on track the crowdfunding campaign.



### ***Social enterprises in the UK***

In 2005, there were already 15,000 social enterprises and the British parliament signed of a new legal form Community Interest Companies in 2004, 2 years later there were already over 1,000 CIC registered.

*“The support from Jane Ollis was invaluable in helping us prepare our crowd-funding campaign. Jane kept us on track, challenged assumptions where they needed to be identified, and helped with the initial research that led to key decisions in the process. As a result we raised over £4,000 directly via the campaign but also drew in a further £10,000 in donations and c£3,000 in donations in kind. None of this income would have been available to us without the campaign.”*

### *Lessons learnt*

Crowdfunding can raise interest not only cash. So talk clearly about your project and aspiration.

Crowdfunding can be a lengthy and expensive process so future support for social enterprise should integrate this in their support package.

will seek further guidance.

By selecting highly motivated entrepreneurs with real ambition means that the impact of the coaching is much greater.

### *Partners involved*

[BSK-CIC– Business Support Kent-cic \(England\)](#)



## Creative enterprises– Sustainable business plan

### *Spotlight on Leva Poriete Design*

Leva Poriete, a fashion graduate from Southampton Solent University always had a passion for making clothes. It all started when she was very young with her interest growing from designing clothes for her dolls to creating her own clothes as a teenager, experimenting with different fabrics from her mother's storage cupboard.

This experience encouraged her to make and design her own clothes and publish a book called Poriete Designs. With a driving desire to be her own boss and launch her own label leva worked hard during her time at university, not only achieving a BA (Hons) Fashion Design degree, but also taking up the opportunity to join a new, optional Business Start Up module Supported by Fusion and aimed at encouraging and supporting pre-start-up entrepreneurs the **Creative Entrepreneurial Freelance Practice** programme resulted in the launch of leva's own business.

Graduating with a sustainable Business Plan and a handful of clients who enjoyed wearing her bespoke pieces, leva moved to London and opened her first shop, '**leva Poriete Designs**' earlier this year in Eton, where she now designs dresses for the high end fashion market and works on her own collections. Visit [Poriete Designs](#) for more details.

### *Support provided*

The Fusion team from WSX collaborated with Southampton Solent University on the Creative Entrepreneurial Freelance Practice (CEFP) to develop and test a package for start up covering various topics such as Marketing to life cycle thinking. Through mentoring, programme beneficiaries like Leva were help to move from a business idea into a real business plan. Thanks to her solid business plan, Leva successfully secured £2,000 start up funding and incubation space.

CEFP enabled Leva to source a manufacturing partner to launch her new collection whilst allowing to focus on her design skills.

### *Lessons learnt*

A vital element of the success of the programme was encouraging student businesses to take up the range of other opportunities available to student start-ups; incubator space, micro grants, business assignments and mentoring, providing start-ups like leva with an all-round package of business support so they could 'hit the ground running'.

### *Partners involved*

WSX Enterprise Ltd (England)



#### ***The creative sector***

In 2006, the creative and cultural sector represented 6.5 million jobs with 7.2% located in the Southampton area.





For further information on the Fusion support please contact the relevant partner

**Use of this data.** We would ask that you credit the Fusion project and the Interreg IVA 2 Seas Cross Border Programme when using or publishing any extracts from the data included within this report.



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[www.cfsd.org.uk](http://www.cfsd.org.uk)



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