

# *Sustainable Innovation Implementation*

## **D2D METHODOLOGY GUIDEBOOK**

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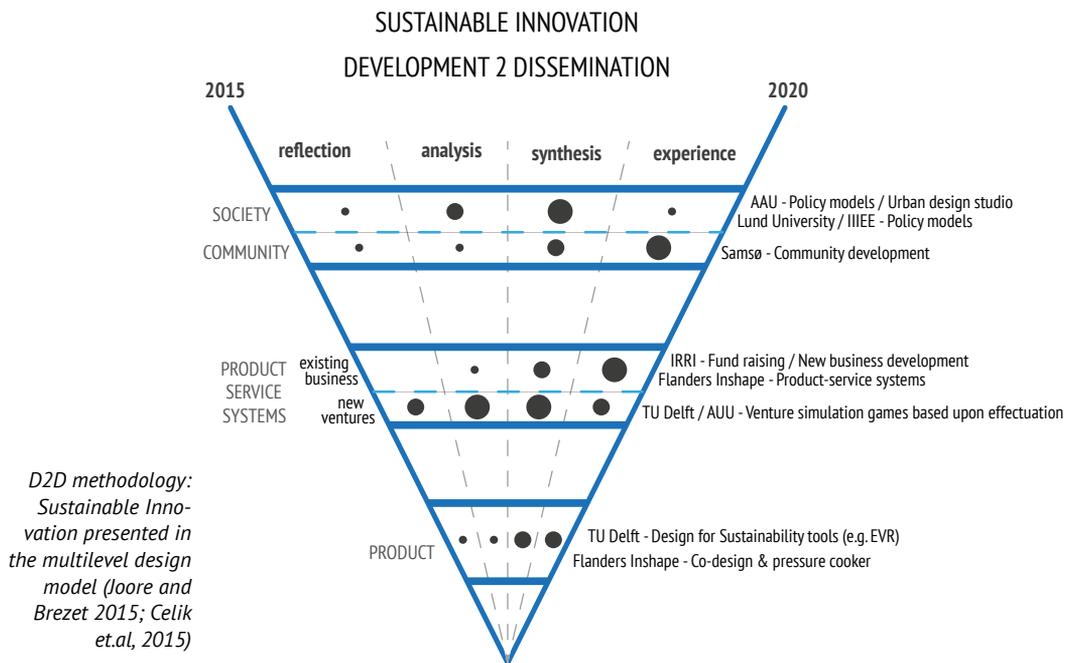
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***Introduction  
to the guide***

## 1.1. GOAL AND SCOPE

The goal of this booklet is to give practitioners in the field of the implementation of Sustainable Innovation an overview of the methods and tools, applied in the Development to Dissemination (D2D) Interreg project by the various partners. Instead of one unifying approach, a “let many flowers bloom in synergy” point of departure has been chosen. The result is summarized in the figure below, using the Multilevel Design Model (MDM) (Joore & Brezet, 2015; Adapted by Celik, Brezet, Wauben and Joore, 2015) as the framework.

The scope of the methodology has been much broader than a “strict” Cradle-to-Cradle® (C2C) approach, including energy efficiency strategies, the inclusion of the social and human aspects of sustainable development, design and life cycle thinking and other “normal” aspects of innovation for a more sustainable development. The lessons learnt from the earlier Cradle-to-Cradle Islands (C2CI) project, in which many of the D2D partners were actively participating, as well as the Second Law of Thermodynamics, have supported this choice. Therefore, the term D2D and the broad concept Sustainable Innovation are used here as equivalents, and are supposed to have the same meaning and contents.



## 1.2. D2D METHODOLOGY

In the MDM model it is assumed that Sustainable Innovations can be developed and implemented at three levels:

- the lowest level of design of physical artifacts (products)
- the middle level of business activities, new venture and institutional creation and the development of new product-services systems (business/PSS)
- the upper level of communities, sectors and society as a whole (society/community)

Going from the bottom to the top-level, from product design to society change aimed at sustainable development, change is considered to be more complex, due to the almost limitless amount of stakeholders involved, governance and power processes, economic interests of big and small companies, etc.

The change process of products, via approaches like Design for Sustainability, are considered to be relatively straightforward in the invention and pioneering phase, however also more complex in their full implementation.

The MDM model depicts a process over time: the ambition could be that the world would reach a more stable sustainability situation in 2050. The consequence would be that processes at all three levels would mutually support each other, to achieve this goal.

The change process is considered to follow four phases:

1. reflection on the existing situation;
2. analysis and creation of new sustainable concepts;
3. synthesis and strict development of the sustainable innovation; and
4. experience and implementation in society.

Through the choice of its partners the D2D project was able to gain experience on all three levels of the MDM model.

For the users of this small guide, it means that they can choose a level and an approach for their own Sustainable Innovation challenge that fit best their particular situation, either more with a micro-product design starting point, meso-business or institutional network opening, or a begin from a more macro-community/society governance starting point. However, Sustainable Innovation activities at all levels have consequences for each other, including non-intended and un-wanted ones. We are looking for synergy and mutual facilitation and acceleration!

### **Community/society level**

The Samsø Energy Academy, Aalborg University (AUU) and IIIIEE-Lund University have mainly been active in sustainable community development, urban design studio's and local policy modeling.

With respect to community aspects, particularly additional experiences have been gained via the Samsø Award mechanism, mainly in the synthesis and experience phase of the innovation cycle.

For society/city development both Aalborg University and IIIIEE have created new knowledge and experience, with the Urban Design Studio approach resp. facilitating local governance concepts for lighting innovations, in the synthesis phase of the innovation cycle.

### **Business/PSS level**

Flanders Inshape gained new insights on the "Pressure Cooker" methodology for fast invention and implementation of sustainable innovation, particularly focusing on new business for existing SMEs (mainly analysis and experience phase). Likewise, IRRI ap-

plied and adapted financial schemes and new business development methods to create a better fit with Sustainable Innovation concepts, ready for further implementation.

TU Delft (Keskin and Brezet, 2015) developed a whole new approach for the implementation of novel sustainable product-services via new ventures. This “effectuation” approach stresses the significance of (1) synergy creation between sustainable design processes and new venturing; and (2) a focus on appropriate use of means in stead of fixed goals. The project resulted in a PhD on this topic, including serious game tools and design and development rules for teams of designers and entrepreneurs. This part of the methodology concerns mainly the analysis/creation and synthesis/strict development phase in the change process.

The involved German regions/islands created new entities and networks, like the Energynetwork Uthlande, to facilitate Sustainable Innovations’ diffusion conform a consumer driven new local business approach.

### *Product level*

TU Delft further streamlined its existing Design for Sustainability approach, including (1) product innovation and design thinking from the Delft Design Guide (Van Boeijen, Daalhuizen, Zijlstra and van der Schoor, 2014); (2) UNEP Ecodesign Guides and Tools (Crul and Diehl, 2005; Crul, Diehl and Ryan, 2009); and (3) LCA/EVR tools (Vogtländer, 2014 - in Delft Design Guide).

At product level, Flanders Inshape applied Co-design and Pressure Cooker methodology, as generic tools, to accelerate and facilitate sustainable innovation implementation.

These activities mainly concern the synthesis and experience/implementation phase of the change process.

## **1.3. D2D CONCEPTS, METHODS AND TOOLS**

Included within this guidebook:

- Samsø Award scheme
- Aalborg Urban Design Studio
- IRRRI business approach
- Flanders in Shape pressure cooker
- TU Delft Effectuation Approach

See also in separate annex:

- PhD summary (Keskin, 2015)
- Working paper “Gaming as an approach to convey effectuation message” (Keskin and Brezet, 2015)
- Graduation report “Developing an effectuation experince through game design” (van Sinderen, 2015)
- IIIEE Lund University local governance approach
- TU Delft Ecodesign Tools

2

*Samsø Award  
Mechanism*

## 2.1. BACKGROUND

Community initiatives are increasingly being recognized as crucial for achieving sustainable development goals and community led renewable energy projects have been gaining ground in many countries. Denmark has been a leader in this front and a high percentage of its energy is now being generated by local communities and cooperatives.

The island of Samsø is an example of how a community can lead the transition to a low carbon society and make change happen. In 1998, Samsø was awarded an opportunity to make this transition, as a community, from sourcing energy based on fossil fuels to one that is based on renewable sources. In ten years the island of Samsø shifted to 100% RE – a process that was led and managed by the local citizens. The eleven 1MW wind turbines are now owned by local cooperative and individual owners. Besides the wind turbines, the island relies on solar energy (PV and solar panels for water heating), district heating from biomass, and biodiesel production from rapeseed oil. To compensate for the CO<sub>2</sub> emissions from the transport sector, Samsø has recently invested in 10 offshore wind turbines that send more clean electricity to the mainland than the island's total energy consumption, including the three ferries that connect it to the mainland.

As a parallel development, but crucial in shaping the island's vision, the Samsø Energy Academy was established in 2006 to function as a creative nucleus, drawing to it ideas originating from similar values, while acting as a bridge between political, scientific and community interests.

Today, the island is hailed as an example where an exchange of knowledge and expertise between locals and leaders in the field, can propel a community towards achieving a more sustainable society. But Samsø's sustainability pathway does not end here. The community is working continuously in shaping its future to become self-sufficient and pledged to be fossil fuel free by 2030, which means phasing out coal and oil used in transportation and increasing energy efficiency.

Whilst, the tangible achievements are essential, what makes Samsø unique is the passion and engagement demonstrated by the project leaders and the wider community. This not only explains the projects' success so far, but also creates the conditions for it to continue into the future. It is this engagement and inspiration that we want to recognize and reward in the scope of the Samsø Award Mechanism.

## 2.2. PURPOSE

The purpose of the Samsø award is not only to reward a community or group for what they achieved in the past, but especially to recognize the potential for promoting more sustainable communities in the future. In this sense, the objectives of the award are to:

- Identify, recognize and empower community led ideas and projects that:
  - Stimulate a transition towards sustainability,
  - Have a long-term vision and a focus on continuous improvement.
  - Contribute to local development and/or good practices within the community, which encompass social, economic and environmental progress.

- Create connections between communities, in order to establish and foster an expanding network that facilitates the dissemination of knowledge and experiences.

## 2.3. THE SAMSO AWARD MECHANISM

### *Scope*

We welcome a wide variety of community projects and want to be as inclusive as possible. Therefore, we have a flexible definition of community to include not only geographical communities, but also communities of interests. In other words, communities that share experiences, values and a common vision for their future and have a set of responsibilities, some form organization and identifiable objectives.

### *Eligibility*

Communities of all types and sizes, from all European Union member states, are eligible to apply. Nevertheless, the organization has reserved a wildcard if a community project from a country outside the EU is found by the jury to be suitable for the award.

Furthermore, to be eligible the projects should be in one of the following stages of development:

- Seed Project (Ideas).
- Existing Projects (Implemented), but that assume a continuation and are the basis for further community projects in the future.

### *Required criteria*

- Over 60% of applying community group needs to be permanent residents in the proposed project location.
- The project should include one or more elements that contribute to local development and/or good practices within the community which encompass social, economic and environmental progress.

### *Desirable criteria*

- Outcomes/results should be reinvested/fed back into the same community.
- The project should create synergies with other communities.

### *Assessment Criteria*

The Samsø Award criteria have been designed to select projects which embody the purposes of the award. The criteria seek to identify exemplary projects and project ideas which offer environmental, social and economic benefits to the community, and which will gain value from and contribute to the partner network. These projects should be innovative, demonstrate strong leadership and organization, and can illustrate their ability to continue developing well after achieving recognition.

Projects are evaluated on five themes with open questions to elaborate each theme. Each theme seeks specific objectives:

<i>Assesment criteria</i>	Theme	Informational requirements
	<i>Project overview</i>	Introduce your project through a summary of the key aspects and timeframe. Situating it within the wider context of your community's development.
	<i>Project outcomes</i>	Provide information about how your project benefits or will benefit the community.
	<i>Engagement</i>	Explain who besides the project leaders is or will be frequently involved in the project. Outline how the project will involve the community.
	<i>Management and development</i>	Summarize the leadership and governance structure. Indicate the resources which have already been committed to the project, and also the future resource requirements. Connecting the provision of future resources with expected benefits is also necessary.
	<i>Project compatibility</i>	Reflect upon how your project embodies the purposes of the award, and explain how you can participate in the partner network after receiving recognition.

In addition to completing the five themes of questions, applicants are encouraged to submit supplementary materials. Providing additional materials helps participants to showcase and elaborate upon aspects which have not been showcased in their application forms. Supplemental material can include, but is not limited to: videos, conceptual illustrations, photos, and documentation that support participants' responses to the assessment criteria questions.

## 2.4. THE VALUE OF THE SAMSO AWARD

Recognition within the Samsø Award not only confers prestige, but also allows awardees to access a range of valuable resources, as members of the Samsø Award network. The Samsø Award network is expected to grow into a community of awardees - a platform for connecting members and disseminating knowledge and ideas.

Emphasis is placed on connecting projects and activities so that members can inspire, support and learn from each other's experiences. The following activities are envisioned for this purpose: remote and online communication in the form of a bi-monthly newsletter produced by members conveying their current activities, and at dedicated events held within Samsø and across other locations. These events are planned to include workshops, presentations by members and other opportunities for knowledge sharing. Newsletters will also involve sharing of other resources, including potential external funding sources and upcoming calls for proposals. In the future, awardees' may also receive a monetary prize.

In the future, as the mechanism develops, an additional stage could be implemented. This involves identifying projects that demonstrate strong performance and have experienced project leaders who are committed to mentoring others in the network. They are then nominated to run for mentorship status and, after an internal selection process, some are chosen to become mentors.

Potentially mentors could be eligible for:

- The opportunity to host Samsø Award network events within their communities
- Training in mentorship, fundraising and other key skills
- Funded (by the Samsø Award) opportunities to travel to other communities for the purpose of knowledge and experience sharing

With these benefits in mind it is hoped that, as well as the recognitions endowed by the award itself, the Samsø Award becomes a focal point for members to be able to benefit from the knowledge, experiences and resources of others within the network. In this respect, the structure of the award reflects the principles of interdependence, community and collective support that it seeks to promote. In this way, the mechanism is unique in deriving the value of the award from the community of awardees themselves.

## **2.5. SELECTION PROCESS**

Like the application process, the selection process also aims to support project development. In this spirit, and unlike many other awards, projects deemed inadmissible to the recognition will be contacted and will receive feedback. The goal of this feedback is to improve the project as it moves forward and to encourage application to the next call for applications.

Applications are judged according to a two-step process. During the first stage, all submissions are reviewed for completion and basic compliance to the assessment criteria. Those deemed inadmissible will be notified and given feedback. Some of the projects that are selected for the second stage may be contacted for clarification or additional materials. During the second round of adjudication, projects are evaluated based on their ability to embody the award purposes and how they benefit from and contribute to the network. This is evaluated based on the responses in 'call for entries' forms and any supplemental materials that have been submitted.

## **2.6. WINNERS OF THE FIRST SAMSO AWARD**

The first Samsø Award took place in Samsø on the 5th and 6th May, 2015. The international jury chose three projects to be winners fulfilling the criteria.

### *Windpower as a development tool for life in the town of Hvide Sande*

The wind power project from Ringkøbing-Skjern municipality in Denmark has a very high local involvement. The project is owned by a local foundation that ensures the development of the fishing village of Hvide Sande. The project has inspired other municipalities in Denmark.

<http://www.hvidesande.dk/hvide-sande/de-tre-vindmoeller-i-hvide-sande>

### *Green Valley Flyinge*

Green Valley Flyinge is a green vision connecting local with global, rural with urban, research with practice and people with technology. The goal is to utilize excess energy in a loop/trail containing for example sustainable housing, fossil free energy, local food production in greenhouses, recycling, cleaner water, animal husbandry, etc. and thus create a sustainable trail where new products and services are developed and tested along.

<http://www.flyinge.nu/fu/fou.html>

### *Zero waste for the town of Tversted*

Zero Waste Tversted demonstrates how local enthusiasts can move a society towards sustainable waste behaviour. The project resulted in a stronger awareness of recycling and preventing waste, much more recyclable materials collected, and 80 % more households refusing printed advertising. The project helped the beach village Tversted to brand itself and inspired other, larger towns to start similar projects.

<https://www.facebook.com/nulskrald?fref=photo>



*Samsø Award  
winners  
(2015)*

3

*Aalborg Urban  
Design Studio*

### 3.1. BACKGROUND

The contemporary city is no longer one unit with a clearly and firmly defined centre and limit. The city is a key area for innovation, experience, culture, and management. This results in increasingly complex challenges within the city (flows of resources, sustainability, quality of life, overpopulation) as well as outside the city (depopulation of rural areas, expensive public services). Within the context of an integrated and sustainable urban approach, there is a requirement for new, efficient, and user-friendly technologies and services, in particular in areas of energy, transport, and ICT. These solutions however require integrated approaches, both at the level of research and development of advanced technological solutions, as well as at the level of deployment. The first part concerns enhancing the development and validation of the technology as such, whereas the second part concerns the need for validation of new business cases and financing models, standardisation, scalability and reliability of the solutions, user acceptance and engagement.

The key challenges for Smart City 2.0 are to be “smart” on all aspects of transport, waste, and energy management, in order to significantly increase the overall energy efficiency of cities, to better utilise the local resources both in terms of energy supply as well as through demand management. This implies the use of energy efficiency measures optimising at the level of districts, the use of renewable energy, the sustainability of urban transport, and drastic reduction of greenhouse gas emissions in urban areas.

The “breakdown of the pillars” is the biggest challenge for Smart City 2.0 and it requires a willingness to experiment in new forms of public administration. Local (public) participation has to be promoted and new potentials experienced. New cooperation and partnerships between citizens, private companies, public organisations and educational institutions are therefore necessary to find sustainable solutions and answers to the complexity. We need to go from development to dissemination and deployment.

### 3.2. THE FIRST URBAN DESIGN STUDIO

The first Urban Design Studio (2014) focused on Urban Space along the Light Rail Corridor in Aalborg. The Studio took place in September-October 2014, and the work consisted of lectures, literature review, onsite data collection, analysis and presentation of results in written, graphic and verbal formats. The Studio participants developed concrete proposals and plans, and/or interventions for urban/peri-urban development formed in collaboration with a multitude of stakeholders.

The participating students came from Africa, the Americas, Asia, Australia, and Europe thereby bringing a trans-disciplinary and multi-cultural focus to the Studio. Social and natural scientists, architects and engineers will work in teams to tackle crosscutting issues of Mobility & Transport, Environmental Impact, Public Space, Industrial Symbiosis, ICT & Data, and Behaviour.

#### *Intervention Sites*

One site has been chosen in which the work predominantly took place: Western Aalborg. The site represents different challenges and opportunities for urban development and quality of life.



*The light rail line, Aalborg West*

Aalborg West is a cluster of diverse identities; the eastern part is a business, cultural and knowledge centre, while the western part is mainly residential and located near large green recreational areas. Important development and urban regeneration schemes are planned for the district.

The main project was the light rail line that runs central to Aalborg West, along Kastetvej. This new transport modality requires planning to integrate different types of mobility, and planning for the integration of the stops in the urban environment. Further projects include for example the dismantlement of the University Hospital (Sygehus Nord) leaving space for new businesses to be established, and the regeneration of Aalborg Distilleries into a new cultural centre.

The Distilleries along with a number of office buildings are located on the waterfront making them sensitive to rising water level. A further expected consequence of climate change is the increase in rainfall, which will put pressure on the drainage system requiring new rainwater management solutions.

Furthermore, due to the different demographics that characterize the district, the creation of social sites is fundamental to increase integration. Key to this scope is to facilitate easier access to existing green spaces located close to the residential areas and social spots, such as the Yacht Harbour and Fjordbyen, and potentially develop further blue and green infrastructure.

The light rail, in combination with the new development, is supposed to link the city and increase equalities throughout Aalborg. On the other hand, the district's renewal is a potential source of gentrification and it is, therefore, necessary to carefully study the demographics and investigate the potential consequences of the arranged changes for Aalborg West.

In a dialogue with stakeholders, the following issues and questions have been identified for further investigation during the course of the studio:

#### *Impact on business and retail*

One of the characteristics of Aalborg Vestby is that the area is home to several smaller business and retail locations, which are essential to the community's public life and provide both services and meeting places for the people living there. The planned limitations on car traffic might reduce accessibility to these for some while the light rail might improve it for others. Can the light rail be used to ensure the continued presence of local business and retail?

#### *Infrastructure as urban development*

An oft-used planning argument for preferring light rail systems over bus rapid transit is that the former integrates better with the urban landscape and allows for other types of urban development than a bus system. How/where in the corridor from Vesterbro to Norden can the light rail be used to improve the quality of the built environment or allow for new functions in the public space?

#### *Creating meeting places and community cohesion*

An important part of a good community is the internal cohesion and availability of meeting places. These are valued assets in Aalborg Vestby and a large project like the light rail both challenges these assets and opens up for new opportunities. How can the light rail help to ensure continued cohesion, create new meeting places and new connections to existing recreational and service functions?

#### *A changed streetscape*

The proposed light rail alignment along Kastetvej will require some changes to the existing layout of the street. This offers an opportunity to change the existing streetscape and give the area a new identity. How might corridor's streetscape be organised to synergise with the light rail project?

#### *Car traffic and parking*

The light rail will likely be accompanied by a policy to remove car access to Kastetvej. This will benefit public transit active transport users, but also have a detrimental effect on the accessibility to and through the area for car drivers. How is this change likely to affect the traffic load and parking demands on arterial and residential streets in the area?

#### *Making space for new infrastructure*

Building and expanding infrastructure in areas of with a large concentration of existing buildings is challenging. The available space is limited and the cost of changing the built environment is high. There are some clear challenges about the technical implementation of a rail system in a narrow street such as Borgergade should be handled. How can this area accommodate a light rail station?

#### *Regulations for a new type of traffic*

Denmark, like many other countries, abandoned its streetcars many decades ago and now seek to implement a modern alternative in the form of light rail. Currently there are no operational light rail systems in Denmark and clear guidelines for how to regulate them in traffic are still being developed. How should the traffic across Vesterbro be handled once the light rail is implemented?

**4**

***IRRI***

***Business***

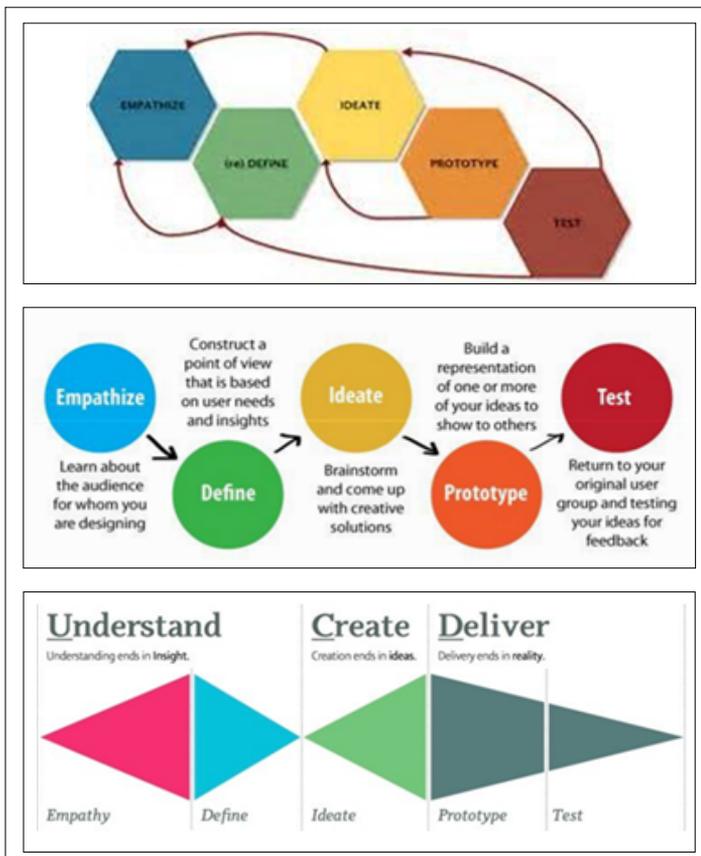
***Approach***

## 4.1. BACKGROUND

IRRI has focused on the aspects of implementation and commercialisation, i.e. fund raising, new venturing and new business development, by making use of D2D methodology. In this respect, IRRI has engaged in extensive networking with local, regional and international stakeholders to discuss opportunities with respect to funding and new business development based upon the D2D methodology. Some different business methodologies IRRI trialled within Scotland during the period of the project include Design Thinking Process Model, Business Model Canvas Methodology, Technical Medical Innovation Partnership and Triple Bottom Line, with existing and new start businesses across the project region.

## 4.2. 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 process models*

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.

### 4.3. 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:

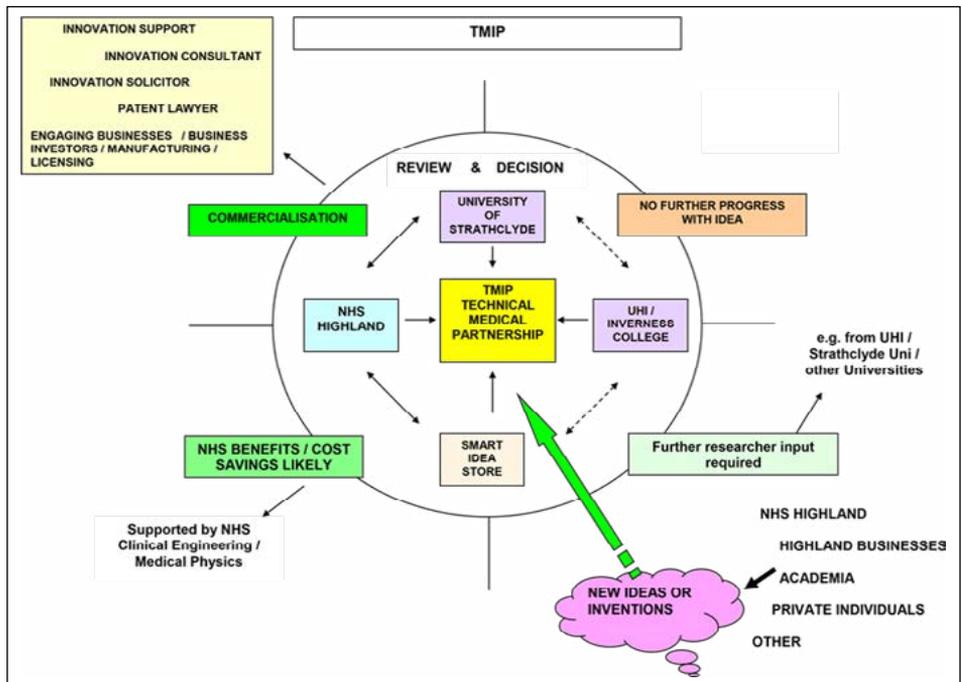
<http://www.flandersinshape.be/nl/diensten/workshops/businessmodelgeneratie>



*The business model canvas*

#### 4.4. TECHNICAL MEDICAL INNOVATION PARTNERSHIP (TMIP)

The TMIP 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.



Technical Medical Innovation Partnership (TMIP)

#### 4.5. 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 it, 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.



*Triple bottom line*

**5**

***Flanders***

***Inshape***

***Pressure***

***Cooker***

## 5.1. BACKGROUND

As an intermediate organization, mainly working within the context of SME's (non start-ups, mostly family owned businesses, 2<sup>nd</sup> or 3<sup>rd</sup> generation CEO), Flanders Inshape have historically been investing a lot of energy into trying to make their interventions in these company innovation processes short but accurate. The SME company DNA (small innovation budget, multiple responsibilities and functions combined in a limited amount of people, small capabilities to conduct activities "on top of" ongoing processes) form a recipe that is not very conducive to achieve maximum result on innovation efforts.

To tackle these circumstances Flanders Inshape has developed and productized a framework called a "pressure cooker". In max three days of coaching by hired professionals the company is assisted through an succinct but highly effective "intervention", injecting lacking knowledge and methods in the project.

This project approach is loosely inspired by the project "Co-design in a pressure cooker", a joint initiative of Syntens, Utrecht University of Applied Sciences and the Province of Utrecht, conducted Christine De Lille from Delft University of Technology.

## 5.2. APPROACH OF THE PRESSURE COOKER

### Before the pressure cooker starts

**1) Probe:** A company seeking assistance in their innovation project starts by filling in an offline questionnaire, i.e. an initial probe, in which they are asked to plot their project. In this Probe we wish to find what the current status of the project is, what activities have been conducted to reach this point, and what the company envisions it needs too complete the project. Furthermore, using elements of the "lean canvas", we try to gain an insight into how the company sees its business potential, user groups, value proposition, etc.

The probe is filled in alone by the company, so that Flanders Inshape receives an unbiased overview of the current "as is" situation, uninterfered by the coaches and their interpretation.

Initial probe

The image displays two versions of a project probe form titled "Mijn project" by INSHAPE and tandem. The left version shows a process flow diagram with handwritten notes. The right version shows a grid of boxes for project details with handwritten text.

**Left Form (Initial Probe):**

- Title: **Mijn project**
- Subtitle: *de mogelijkheden waagden om een "gouden" (om het bestaan te) behouden te houden - innovatie, creativiteit, leren*
- Section: **Stapplan** (Timeline)
- Timeline: A sequence of steps: **NU** (Now), **Stapplan**, **Stapplan**, **Stapplan**, **Stapplan**, **Stapplan**.
- Handwritten notes: "Stapplan: 1. Analyse van de huidige situatie", "2. Definiëren van de toekomstige situatie", "3. Ontwikkelen van een strategie", "4. Implementeren van de strategie", "5. Evalueren van de voortgang".
- Bottom section: "Waar heb je nu mee bezig? Beschrijf de huidige situatie", "Waar wil je naartoe? Beschrijf de toekomstige situatie".

**Right Form (Detailed Probe):**

- Title: **Mijn project**
- Section: **Waar is de uitdaging?** (What is the challenge?)
- Section: **Waar heb je nu mee bezig?** (What are you currently doing?)
- Section: **Waar wil je naartoe?** (Where do you want to go?)
- Section: **Waarom is dit belangrijk?** (Why is this important?)
- Section: **Waar heb je nu mee bezig?** (What are you currently doing?)
- Section: **Waar wil je naartoe?** (Where do you want to go?)
- Section: **Waarom is dit belangrijk?** (Why is this important?)
- Section: **Waar heb je nu mee bezig?** (What are you currently doing?)
- Section: **Waar wil je naartoe?** (Where do you want to go?)
- Section: **Waarom is dit belangrijk?** (Why is this important?)

**Pressure cooker**

The pressure cooker approach has three steps:

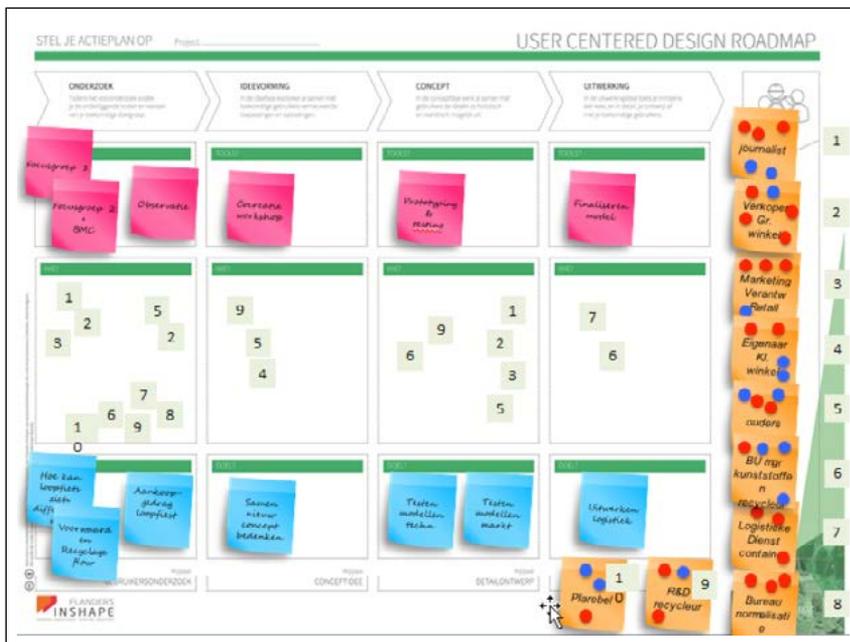
1. Building up pressure
2. Under pressure
3. Blowing of steam

**1) Building up pressure:** In this phase the “intervention” is prepared and planned in a “preshoot”. A Flanders Inshape coach/consultant –together with a senior manager of the SME- draws up a plan for the pressure cooker in a 90 minutes meeting.

The initial probe is used by the coach to prepare this meeting. The aim of the meeting is to re-scope the project by mirroring the “as is” of the probe with the knowledge and best practices put forward by the coach. Most times the re-scoping results in a drastically changed (approach to) the project. A focus is determined, and if additional expertise or knowledge is required, the profile of potential experts is established.

This meeting also contains an elaborate stakeholder-mapping exercise, so we can determine which stakeholders can be valuable for co-creation purposes. At the end of this phase the result is a contract containing a plan and a budget (of maximum three days or €3000).

**2) Under pressure:** The under pressure phase is different for every project. In this phase the before mentioned plan is carried out in a short series of two to three in house sessions. Depending on the specific project some kind of co-creation methodology is introduced, and additional stakeholders and experts are invited to participate in the process. A framework used to conduct these sessions is the “roadmap human-centered design”, a tool that allows for the gestion of stakeholder integration in co-creation processes, which is directly linked to the stakeholder-mapping exercise in the previous phase.



Roadmap human-centered design

Roadmap human centered design determines which stakeholders will be present in co-creation sessions, which methodology will be applied and what will be the suspected outcome of this phase in the innovation process.

The results of the various workshops are captured in a succinct action oriented report. This report is mostly visual (interactive powerpoint linked to the generated content within the project.)

Goals and deadlines are set for the company to start integrating “what they have learnt” into “what they were doing”.

**3) *Blowing off steam:*** This phase depends on the SMEs. Because there is a real threat that reality takes over once the company resumes “business as usual” and the innovation efforts fail to get integrated into the development. Flanders Inshape leaves the company to digest what has been generated, but plans a follow up meeting about three weeks after the last workshop.

The results of the various workshops are captured in a succinct action oriented report. This report is mostly visual (interactive powerpoint linked to the generated content within the project.) and is hand delivered in a 90 min debriefing conversation. Last minute doubts and hurdles are discussed so the company has all they need to continue on their project.

### 5.3. SUCCESS STORY

One of the companies that was assisted through the pressure cooker approach is PDC brush. This SME produces private label cleaning utensils that are sold in High street shops and supermarkets. A previous development of a cleaning “flatplate” (CFR Swiffer) failed in the prototyping stage, due to problems in the use of the product and due to difficulties concerning market acceptance.

Within the “pressure cooker” a focus group with buyers of retail organisations was conducted and some HCD-research was done with end users using existing and competing products. After this “intervention” all that was learnt was integrated in the design brief of the new product. Inmould labeling allows for different product appearances depending of the retail channel, the consumables were rendered unique so a new business model emerged in the sale of consumables. The new product “omnisweep” scored very well at market introduction and is currently being distributed through several channels.



Case:  
PDC brush

6

*TU Delft*

*Effectuation*

*Approach*

## 6.1. BACKGROUND

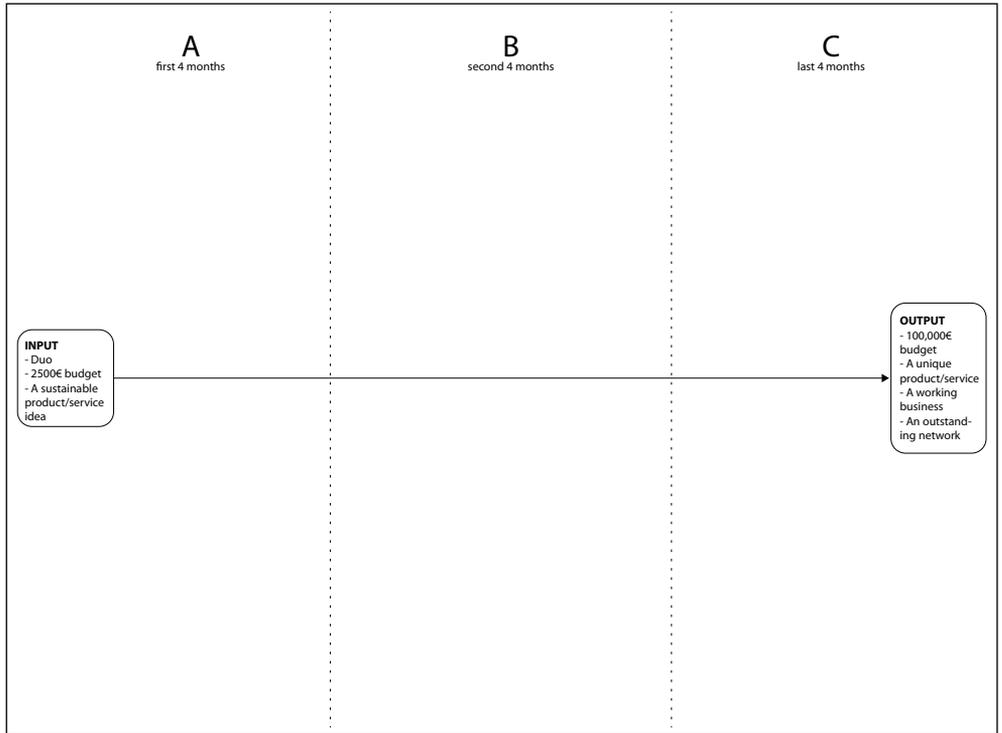
TU Delft has contributed to the D2D methodology by developing two new venture simulation games with a target audience of design and entrepreneurship practitioners and students. The games are called **'play effectual'** and **'effectuation on the roll'**. The first game, 'play effectual' has been developed with the intention to make design and entrepreneurship students and practitioners aware of alternative decision-making logics (i.e. managerial/causal versus entrepreneurial/effectual logics) in designing and developing innovative sustainable product-services and businesses. The second game, 'effectuation on the roll' has been designed with the goal of teaching the principles of effectuation (i.e. an emerging theory within the field of entrepreneurship) in a fast, effective and joyful way to those who are not familiar with the concept of effectuation. Both games have been tested in several occasions throughout the D2D project by involving university staff and students from the Aalborg University, Lund University and TU Delft, as well as the local stakeholders of the Province of Fryslân. Aalborg University collaborated with TU Delft for the initial test of the games. The outcome of tests revealed that gaming as an approach was successful at creating awareness for alternative decision-making logics and reaching specific learning objectives in relation to effectuation. Furthermore, the participants lukewarmly welcomed the game with important feedback for the improvement of the game. Each of these tests as design iterations has enabled the games' various aspects, such as playability, fun, learning and usefulness.

## 6.2. PLAY EFFECTUAL

'Play effectual' is a simulation game that has been designed to explore the effectiveness of games to teach effectuation. The aim of the game is to introduce effectuation to an audience that is more familiar with causal approaches. Although both causal and effectual approaches might be adopted on the basis of different levels of uncertainty linked to an opportunity, the game is designed to favor an effectual approach in order to create an atmosphere for discussion among the participants.

The game is designed to simulate the first year of a business development process, and consists of a playing board and number of actions. A behavioral approach has been adopted for the game design, i.e. the cognitive aspects of causation and effectuation have been translated into a number of observable actions. Based on a review of the foundational papers on effectuation, 25 casual and 25 effectual actions have been identified that are likely to be undertaken in a venture development process. The actions are randomly numbered and provided on small cards, in order to allow game participants to decide on a number of actions for their business development process. The game allows the use of 25 actions out of a total of 50 actions.





Playing board



Game tests

### 6.3. EFFECTUATION ON THE ROLL

'Effectuation on the roll' is a workshop format that has been designed to teach the principles of effectuation in a fast, joyful, and effective way to those who are not familiar with the concept of effectuation. The workshop consists of a paper roll that emphasizes the iterative nature of the venture development process. After completing the first cycle, participants are encouraged to conduct a second a cycle, based on what they have learned from the first cycle. The paper roll consists of a number of small exercises for each principle of effectuation: bird in hand, affordable loss, crazy quilt, and lemonade.



Paper roll

The steps of a cycle is as follows:

#### Step 1 Develop a number of actionable opportunities (bird in hand)

In the first step participants work with a means-wheel, in order to develop a number of business ideas. The wheel consists of three layers, in which participants can write a set of means available to them. The inner circle gives direction to the opportunity. The participants are asked to choose an umbrella term such as sustainability, education, or arts; this term is the basis of which they would like to begin their business. The wheel is made up of smaller inner wheels, so that the participants can rotate the layers of the wheel to align words, and combine different means for developing alternative opportunities.



An empty (left) and filled in (right) means-wheel

### Step 2 Pick the best opportunity (affordable loss)

The opportunities that were identified in the previous step are ranked in step 2 based on the affordable loss principle. Accordingly, a number of matrices are provided in which the participants can evaluate their ideas based upon, for instance, the time and financial resources required, the level of market and technological uncertainties, and perceived social and environmental consequences. During this exercise, the participants are encouraged to answer the questions: "How much time and money are you willing to spend, and can afford to lose?"



### Step 3 Interact with potential stakeholders (crazy quilt and lemonade)

This step forces participants to move into action and interact with potential stakeholders. The participants are asked to leave the room (literally) and interact with the outside world. For this purpose, an overview of potential stakeholders, and how the participants could approach them are provided. They are asked to contact at least two potential stakeholders (e.g. another participant in the workshop or someone outside the workshop) for feedback, information, advice or support. In this step, they also get the chance to experience what it means to be confronted with unexpected contingencies, and revise their business ideas based upon the feedback they have received.

An overview of stakeholders to contact

Find	A	Friend(s)	For feedback
Speak to	A random	Investor(s)	For commitment
Pitch to	3	Family member(s)	For an investment
Mail	At least 3	Supplier(s)	For information
Drink coffee with	As many as possible	Expert(s)	For advice
Hang out with	Acquainted	Person(s)	For support
Call	A group of	Designers	For new ideas
.....	.....	.....	.....

#### Step 4 Report and discuss findings (reflecting and lemonade)

The last step of the cycle is an evaluation of the feedback from stakeholders that participants had contacted. In this step, participants discuss their approach to stakeholder interactions, the type of stakeholders they contacted, and the feedback they received. Finally, they make a pitch of their business based upon this feedback.



An example of a participant's reflection on the feedback

Once all the assignments in each step have been executed, the first cycle of the workshop is completed. On the basis of the learning and feedback from the first cycle, the participants are asked to adjust their goals and start a second cycle; however, in this cycle the wheel looks different with additional set of means.

The game has been tested on a number of occasions with students and professionals. Preliminary findings suggest that the game was a successful awareness tool in conveying the effectuation message; the players enjoyed it and found it educational. The game introduced the players in a fast, joyful and effective way to the theory of effectuation. Besides learning effectuation as an alternative approach, the participants could directly apply it, and learn what the implications are in practice.

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