

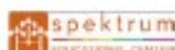


REGENERATE
SHARE
OPTIMISE
LOOP
VIRTUALISE
EXCHANGE



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Introduction

In today's world, we are hitting the limits of our planet, and achieving a climate-neutral and circular economy is one of the key paths to a quality and sustainable life for human society.

However, this path requires the full mobilization of industry. The transformation of industry and all value chains is a long way off, and in order to be ready in 2050, decisions and measures need to be taken as soon as possible.

Global material extraction is growing every year, which poses a major global risk. About half of total greenhouse gas emissions and more than 90% of biodiversity loss and water stress come from the extraction of raw materials and the processing of materials, fuels and food.

Here comes the opportunity for a more responsible and at the same time more effective approach in the form of circular economy. This is one of the reasons for the Green Agreement in Europe. The EU has launched a common strategy for a climate-neutral and competitive, resource-efficient economy. Working together to create a framework for sustainable products will bring new opportunities for businesses inside and outside the EU. This gradual but irreversible transition to a sustainable economic system is an indispensable part of the EU's new industrial strategy.

The circular economy is often talked about only in connection with waste. In reality, however, it has a much broader basis. It is necessary to think about every part of the system - from the extraction of raw materials, through their processing, production to consumption. In all these phases, we must try to reduce our ecological footprint, i.e. manage materials more efficiently, use them better, primarily use materials that are already in the economy, recycle them and, of course, reduce their waste to the maximum.

Circular economy is basically just a return to common sense and the natural cycle. But it is a huge opportunity for Europe to take advantage of its technological sophistication and start bringing new types of innovation to the global market.

Micro-, and family businesses are a driving force for empowerment of young adults – who are active or future entrepreneurs. To apply circular economy to micro firms and start-ups, active or future entrepreneurs need new skills for circular thinking.

The skills to understand the circular business model are essential for low-skilled / low-qualified people for whom creating and running viable (circular) business is significantly more challenging than for highly skilled entrepreneurs. They have difficulties accessing affordable high quality entrepreneurial trainings and lack education tailored to their specific needs in the field of circular economy.

Therefore, the Live Circular Canvas consortium decided to create a detailed modular training program developed for this target group's learning needs. It gives details about the single learning modules specifying the learning outcomes, time frame, methodology used and content needed for its implementation.

Delivery Methodology and Resources

The curriculum is supported by a set of highly innovative educational tools, such as the Live Circular Canvas short films and Digital Educational Product alongside the Live Circular Learning Hub comprising a variety of multimedia training materials. The design of the curriculum also embeds the use of practical tasks and exercises to facilitate learning and to test knowledge levels and can be used to help learners to plan the setting up of their own circular business.

Based on the curriculum the „Circular Thinking in Action“ training program can be delivered using a variety of methodologies including blended learning design comprising face-to-face/classroom-based sessions or even using ‘flipped classroom’ methodology, similarly it can also be delivered as a full on-line training with learning activities designed to develop understanding and to enable learners to plan the setting up of a circular enterprise or the transitioning of an existing business to a circular one.

Target Groups

The curriculum is designed specifically for adult education providers and their students and clients - with special focus on low skilled, low qualified young adults - active and future entrepreneurs - who run or plan to run micro/small business.

Further target groups might be interested in the „Circular Thinking in Action“ training: local businesses willing to improve competences of their own staff members.

Entry and Recruitment

The “Circular Thinking in Action” training program can be offered to students from the age of 18, and it is set at the European Qualification Framework Level 4. The training syllabus does not specify entry requirements for the course, but adult training centres are required to ensure that learners admitted to the training programme have enough capability at the right level to undertake the learning and assessment.

Adult training centres must ensure learners are recruited with integrity in the training ensuring that the Centre is able to:

- Meet the needs of learners (i.e. social, cultural, physical and educational)
- Enable and facilitate learning and achievement
- Provide relevant training information, guidance and advice, to enable informed learner choice
- Demonstrate that Learners are recruited with integrity
- Carry out comprehensive learner induction that:
 - addresses programme and organisational requirements
 - identifies learners' development needs
 - develops an Individual Learning Plan

Adult training centres are free to deliver the training using any mode of delivery that meets the needs of their learners. However, they should consider the learners' complete learning experience when designing the learning programme.

Curriculum Design

The Live Circular Canvas curriculum is based on the recommendations of the research study on the needs for development of key entrepreneurial skills for circular economy thinking developed by the Live Circular Canvas partnership in five European countries and consists of a detailed modular training program developed for the educational needs of the target group. It provides details of individual educational modules, specifying the learning outcomes, time frame, methodology used and the content needed for its implementation.

The training participants will go through a learning process that will help them understand the basics of business modelling techniques and that of circular economy, the idea of a circular business, and how a linear enterprise can adopt circular business model, as well as basics of circular networking and circular financials.

The curriculum consists of five modules:

- YOUR CIRCULAR SOLUTION
- GOING CIRCULAR
- YOUR CIRCULAR ROADMAP
- CIRCULAR NETWORKING
- CIRCULAR FINANCIALS

The curriculum should have a high potential for transferability, as it is in line with the aim of raising awareness of the opportunities offered by the circular economy and thus offering a curriculum for circular entrepreneurship education and upskilling of low skilled and low qualified young adults.

Curriculum Description

Title:	Circular Thinking in Action	
Aim:	<p>The curriculum provides basis for the „Circular Thinking in Action“ training program and aims at developing key entrepreneurial skills for circular economy thinking of those running or planning to run own micro/s, all businesses.</p> <p>The curriculum explores the use of tools and techniques, which can be used to identify opportunities such as: setting up a circular business, shifting the business model from linear to circular or improving the performance of an existing circular enterprise</p>	
Modules		
Module No	Module Title	Module Duration (Hours)
1	Your Circular Solution	4
2	Going Circular	5
3	Your Circular Roadmap	8
4	Circular Networking	5
5	Circular Financials	8
	TOTAL	30



1. YOUR CIRCULAR SOLUTION

- The Nine Pillars of the BMC
- Circular Economy in a nutshell - today and in the future
- Benefits associated with the Circular Economy
- What does circularity mean for your business and for your market?
- Potential benefits of Circular Product/Services for the customers

Module 1 - Your Circular Solution

Objectives

This module is about connecting business modelling techniques with the circular economy approach.

In the following modules, the learner will be trained in how to deploy the tool that mixes the results of both worlds, when getting familiar with and using The Circular Business Model Canvas (CBMC). As such, the learning objectives for the participant in this module are:

- Define the nine building blocks of the Business Model Canvas and its internal connections and dependencies.
- Explain the Circular Economy approach generic impact.
- Understand the benefits associated with the Circular Economy.
- Identify what circularity means for your business and for your market.
- Explain potential benefits and impacts of Circular Economy for individuals, society and the environment.

Upon completion of this learning module participants		
KNOWLEDGE (will have...)	SKILLS (will be able to ...)	RESPONSIBILITY AND AUTONOMY (will...)
Knowledge of facts, principles, processes and general concepts of: <ul style="list-style-type: none"> • Business Model Canvas (Osterwalder and Pigneur) • Circular Business Model Canvas 	<ul style="list-style-type: none"> • Define the building blocks of the BMC (Business Model Canvas) designed by Osterwalder & Pigneur.. • Understand the nature, role, function and relationships of the nine building blocks that make up the Business Model Canvas model • Define the meaning of the Circular Economy concept 	<ul style="list-style-type: none"> • Demonstrate ability in understanding the importance of Business Modelling to reach sustainability and global vision around value creation, value protection and value delivery to the market • Demonstrate ability in

<ul style="list-style-type: none"> • Circular economy principles 	<ul style="list-style-type: none"> • List the characteristics associated with the Circular Economy model • Differentiate between the Circular Economy and the Linear Economy models. • Explain potential benefits and impacts of Circular Economy for individuals, society and the environment. 	<p>identifying why the Circular Economy is important today and in the future.</p>
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Module No.	1	Duration:	4 hours
Module Title:	Module Nr 1: Your Circular Solution		
Aim:	This module is about being able to deploy the Business Model Canvas of a business practice in a micro entrepreneurial context, and later about understanding the concept and benefits of the Circular Economy model applied to the business practice.		

Learning Outcomes:		Assessment Criteria:
1	The Business Model Canvas (Osterwalder & Pigneur)	Business Model and Business Plan: describing the differences and connections between the two tools.
		General Business Strategy and Business Model: differences between Utility driven and Cost driven business models.
2	The Nine Pillars of the BMC	Value Creation Dimension: pillars needed to create the Value Proposal.
		Exchange Dimension: pillars needed to offer and make available the product/service to the targeted market.
3	Understand what the Circular Economy is and its importance today and, in the future	Define the meaning of the Circular Economy concept
		Introduce the basic concepts of the Circular Business Model Canvas (CBMC)

4	Explain the benefits associated with the Circular Economy	Describe the benefits of the Circular Economy for the environment
		Describe the benefits of the Circular Economy for individuals and society

Themes

The module will guide the learner through the process of acquiring and developing the knowledge and skills necessary to adapt the Business Model Canvas into a Circular Economy approach.

The call for a new economic model is getting louder. In the quest for a substantial improvement in resource performance across the economy, businesses have started to explore ways to reuse products or their components and restore more of their precious material, energy and labour inputs. The time is right to take this concept of a 'circular economy' one step further, to analyse its promise for businesses and economies, and to prepare the ground for its adoption. Since the Industrial Revolution, companies and consumers have largely adhered to a linear model of value creation that begins with extraction and concludes with end-of-life disposal. Resources are acquired, processed using energy and labour, and sold as goods - with the expectation that customers will discard those goods and buy more.

Themes to be addressed in the module are:

1 What is Business Modeling

In this first module we will look at the basic setup of a business model canvas (BMC)

The main topics are:

- The Business Model Canvas (Osterwalder & Pigneur)
- The Nine Pillars of the BMC

2 What is Circular Economy?

In this part of the module we will introduce the Circular Business Model Canvas (CBMC)

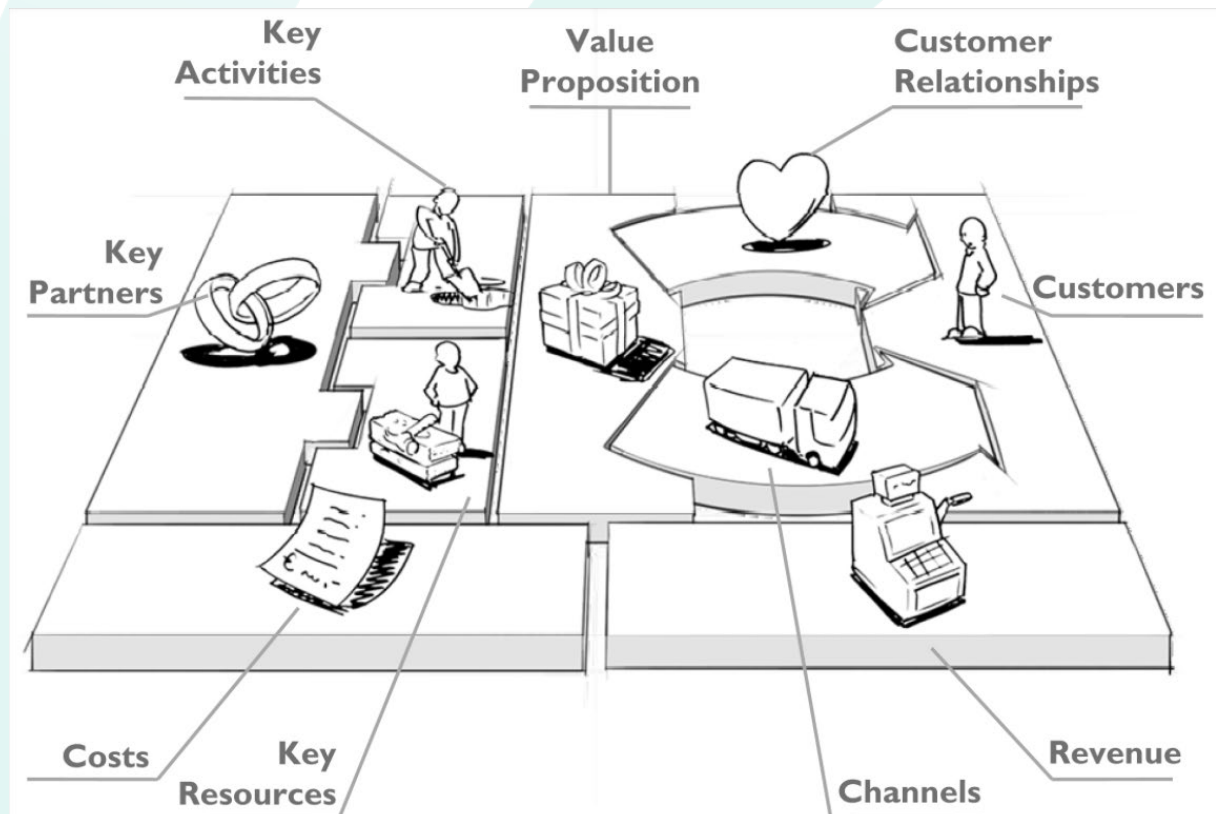
The main topics are:

- Concepts and pillars of the CBMC
- Implementation challenges: Adoption factors
- Benefits for the individuals, society and environment

What is Business Modelling?

-The Business Model Canvas (Osterwalder & Pigneur).

A business model seeks to explain, in a visual and clear way, how a business consists of different parts that are connected to each other. It includes nine pillars, as presented in the picture below.



Business Model Canvas, by Osterwalder & Pigneur

The nine building blocks cover the four main areas of a business, customer, offer, infrastructure and financial viability, and they are the following:

1.Value Proposition: The definition of Value Proposition is that it describes the benefits that customers can expect from a company's products and services. It summarizes all the complexity of the sales pitch into something that customers can easily grasp and remember.

2.Key Resources: Key resources are the assets required to provide and deliver the necessary elements involved in Key Activities, deployed in Distribution Channels, Customer

Relationships, Revenue Stream generation, etc. Key Resources are usually scarce. Key Resources categories are physical, intellectual, human and financial.

3.Key Activities: Key Activities are basically the products or services that the company carries out and offers. They can be of great variety depending on your business.

4.Key Partners: A company often needs to establish relationships with other organizations or individuals to operate efficiently and effectively while reducing risks or costs. Key partners are the network of suppliers and partners who complement each other in helping the company to create its Value Proposition.

5.Costs: The cost structure is linked to the business model. Changing the business model will change the cost structure. The cost structure must be totally aligned with the value proposition. Considering the relation with revenue streams there are two kinds of costs:

Exploitation Costs that allow current revenue flows: Suppliers, Operative costs, Commercial costs.

Exploration Costs that create the conditions for the future and new revenue flows: Research & Development, Marketing.

6.Customer Segments: Customer Segments are the community of customers that a company is aiming to sell its products or services to. It is one of the most important elements in the Business Model Canvas. Customer Segments define the different groups of people or organizations an enterprise pursues to reach and serve. Companies often segment customers according to demographics that include e.g. age, lifestyle or location.

7.Channels: Value propositions are delivered to customers through communication channels, distribution channels and sales channels.

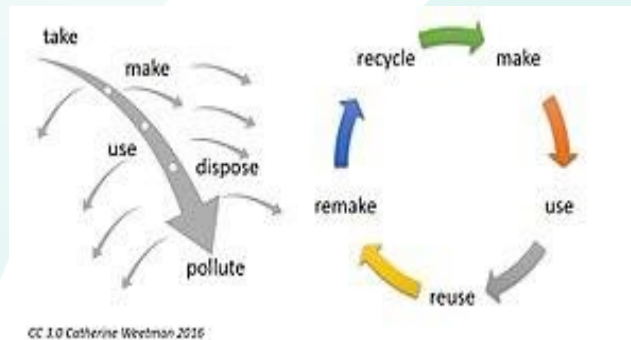
8.Customer Relationships: The Customer Relationships are the contacts with the customers that allow us to make an appropriate transfer of our Value Proposition. Customer Relationships are of three main types: customer acquisition, customer retention and boosting sales (upselling).

9.Revenue Streams: Revenue Streams should be the result of successful value propositions offered to customer segments. It is a way of categorizing the earnings of a company. A business model can involve two different types of Revenue Streams: Transaction Revenues (one-time payments), and Recurring Revenues (i.e.: post-purchase support, etc.). Revenue Streams Generators are: Asset sale (ownership sale), Usage fee, Subscription fees, Lending/Renting/Leasing, Licensing, Brokerage fees, and Advertising.

What is Circular Economy?

Circular economy can be described as a wish to combine successful entrepreneurship with the urgent challenge to stop overconsumption and waste of natural resources. While a

traditional linear economy can be compared to a chain of the concepts: **take, make, use, dispose, pollute**; a circular economy instead focuses on the key activities **make, use, reuse, remake, recycle**. The aim of circular economy is to make sure that materials and their value circulate as long as possible, and that waste is kept to a minimum.



A **circular economy** is based on the principles of designing out waste and pollution, keeping products and materials in use, and regenerating natural systems.

The concept of circular economy

In the circular economy, emphasis is placed on the fact that economic activity, in addition to profit, builds and restores the overall health of the system. The concept recognizes the importance of an economy that needs effective work at all levels - for large and small businesses, for organizations and individuals, globally and locally.

The transition to a circular economy represents a systemic shift that seeks to build long-term resilience, creates business and economic opportunities for the businesses involved, while providing environmental and societal benefits to both the social and environmental environment.

How does this principle work in practice?

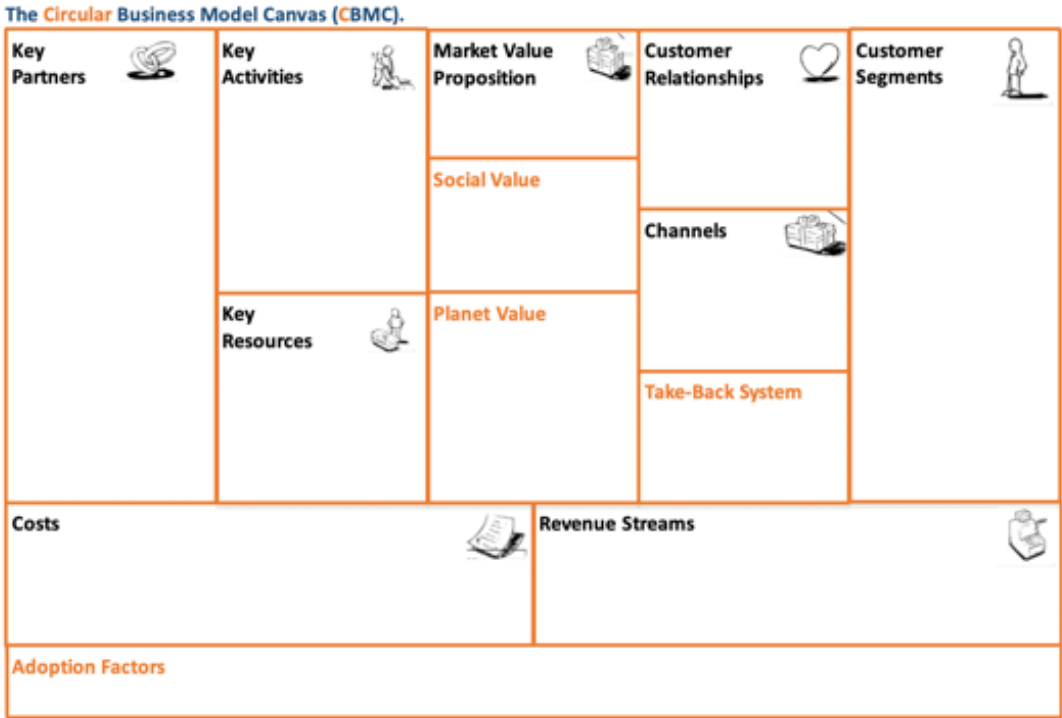
Compared to the linear model, the circular economy separates economic growth from the need to mine new and rare materials. In reality, this is achieved by focusing on material savings, reusing, repairing and changing the eco-design of products or meeting customer needs with new services instead of sales. Ownership is replaced by renting and maximizing the potential of the product.

Examples of companies that apply circular principles in their processes have shown that such steps can bring significant profits. For example, French carmaker Renault has managed to reduce energy and water consumption by 85% by using and repairing old car parts instead of producing new ones. As a result of material and energy savings, Renault has been able to offer its customers a 30-50% cheaper product of the same quality. The circular economy is also bringing promising results at the macroeconomic level. McKinsey & Company estimated in 2015 that by applying the principles of the circular economy, the European Union,

historically dependent on imports of raw materials from around the world, could not only tackle its environmental and social problems, but save € 1.8 trillion by 2030 (McKinsey & Company, 2015).

Concepts and pillars of the CBMC

When comparing The Business Model Canvas (BMC) to The Circular Business Model Canvas (CBMC) four additional pillars in the latter one can be noticed: **Social Value, Planet Value, Take-Back System** and **Adoption Factors**. The concept **Social Value** includes for example the impact of a business, in terms of people and community, on the company's social environment. **Planet value** focuses on ensuring a sustainable future for our planet while reducing waste and reusing/circulating materials for as long as possible. **Take-back Systems**, where companies find a way to take back and reuse their products, will be increasingly important in the future. During the transition from a linear business to a circular one, there are several **Adoption Factors** to consider: everything from changing the packaging material to finding environmentally friendly energy sources. The newly introduced building blocks definitions are:



Implementation challenges (Adoption Factors)

There are some factors that a company needs to be aware of and consider when transitioning to a circular business. These factors could be both internal and external.

The **internal adoption factors** include team motivation, organizational culture, knowledge and transition procedures. The co-workers must feel motivated and know how to carry out the change to a circular business. It is very probable that there will be changes in the organization of the company when shifting to a circular model, so the company's management and staff need to be prepared.

The **external adoption factors** concern technological, political, sociocultural, and economic issues. For example, a circular business must pay close attention to material tracking and recycling, be well informed about environmental legislation, have knowledge of customer habits and public opinion, and last but not least, understand the economic forces like predictable demand for future products.

The external factors are sometimes called PEST factors, **Political, Economic, Societal** and **Technological**. These are factors from outside the company that can change the rules, demand, feasibility and costs of producing and selling a product.

Benefits for the individuals, society and environment

"We define a sustainable (circular) business model as the rationale of how an organization creates, delivers and captures economic, environmental and social forms of value simultaneously." (Osterwalder and Pigneur, 2010).

Individuals, society and the environment are, of course, closely connected and therefore benefit from an increase of circular businesses. Recycling, sharing assets, remaking and waste minimizing are ways to care about the environment and focus on sustainability (*"meeting the needs of the present without compromising the ability of future generations to meet their own needs"* (Brundtland, 1987). More awareness of our ecological footprints and the goals of the 2030 Agenda influence both the society and the individuals. Thus, there should be a growing interest in products from circular businesses.

For the individual, the actual benefits might not be evident but there is an increasing interest in caring for the environment. Many of the "circular products" compete on the market and need to tell the consumers that they benefit in many ways when choosing them. Many of the consumers want to buy these products to show that they care about the environment, to make a statement and to be unique.

If more and more individuals strive to consume less “wear and tear-products” and instead discover the potential in re-used materials, our future society will benefit in many ways. Just to mention a few things, raw materials will be re-used, assets will be shared, products will find a new life.

The environmental benefits represent the improvements made to the conditions for life on earth to flourish.

Together, these benefits are the superior, balanced and positive results in terms of economic, social and environmental perspective that a circular business should produce, mainly in the long term.

Methodological indications

Activities:

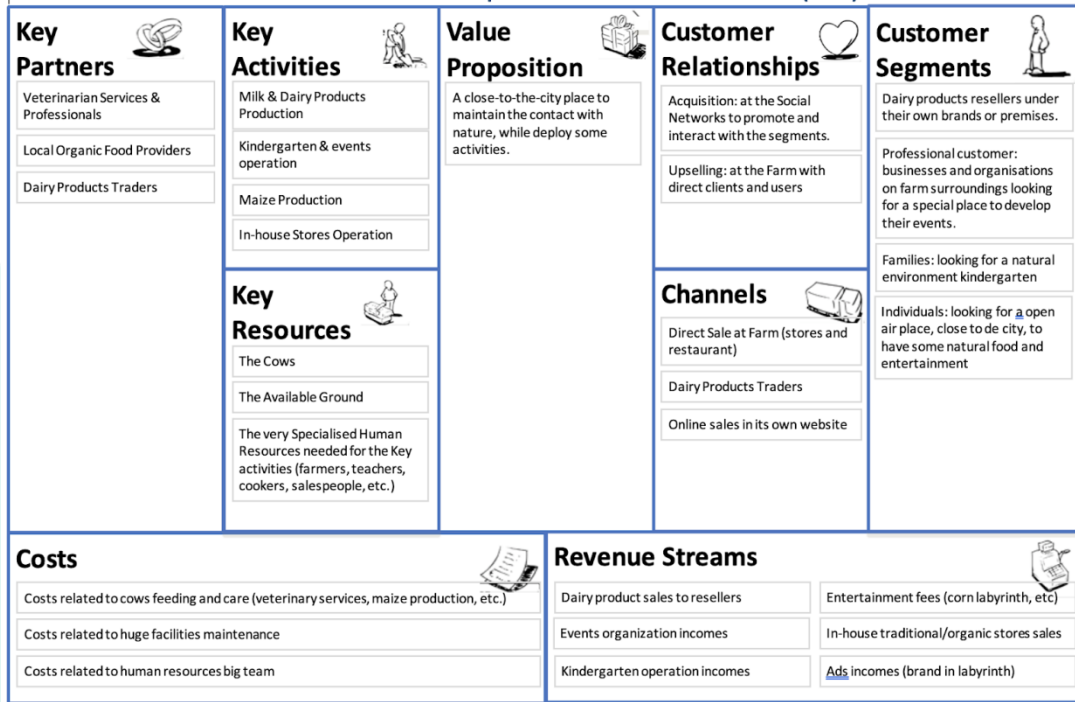
1. Start with a general brain-storming session around circular economy in smaller groups: What do you know about circular economy? What springs to mind when you hear the words circular economy? Can you think of examples of companies that are circular? What are the advantages of a circular economy? Any drawbacks?

The task of the teacher will be to summarize and explain the different ideas and outcomes from the groups.

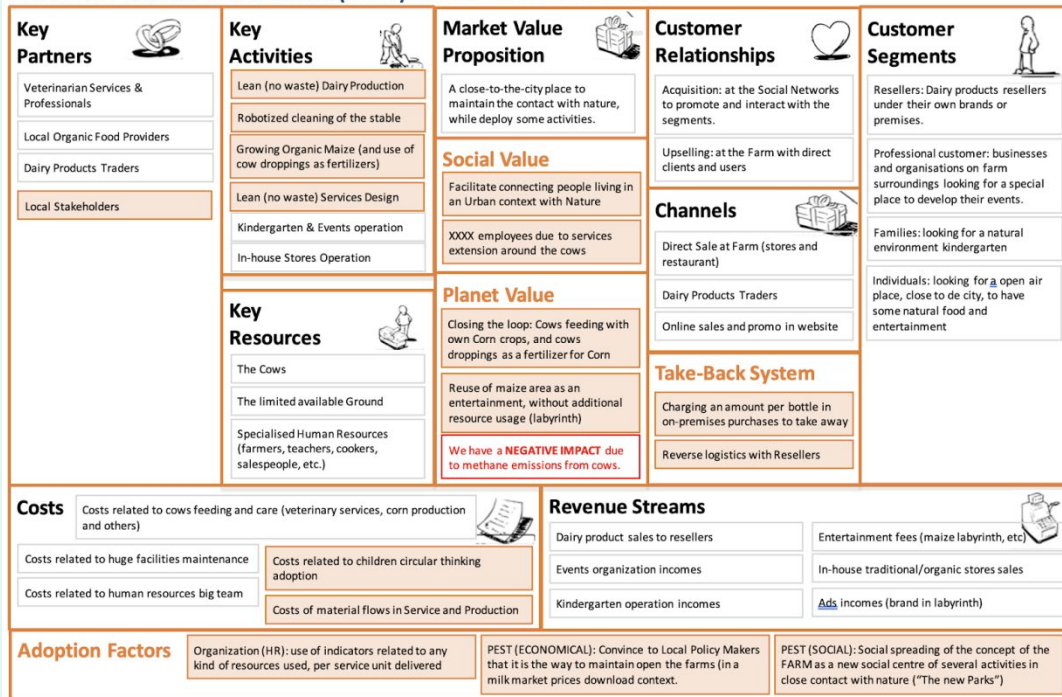
2. Introduce the CBMC and its pillars, preferable with a power-point presentation. Make sure that the learners understand the different concepts and terminology of the pillars. Compare to the BMC and focus on the differences.
3. Case study: Watch the **Farm Near Rotterdam video** produced in the SKILLTOUR Erasmus+ project, accessible directly on YouTube: <https://youtu.be/mLc2DAIjtY>

Farm Near Rotterdam BMC & CBMC:

Case: Farm near Rotterdam. –The Market Value Proposition – Business Model Canvas (BMC)



The Circular Business Model Canvas (CBMC). Farm close to Rotterdam.



4. Discuss and make notes on the different pillars of the CBMC. Do all the pillars of the CBMC apply for the company in the video?

5. In pairs: brainstorm and discuss. Do you already have a real or imaginary circular business idea? What would you produce and how? What resources would be necessary? How circular would your company be? Make a presentation of your ideas to the rest of the group.



2. GOING CIRCULAR

- ReSOLVE
- New building blocks in a CBMC

Module 2 - Going Circular

Objectives

This module is about understanding how businesses can adopt a circular business model and how they can identify potential benefits from adopting a circular business model. Finally, the module aims to show and explain in depth, the new building blocks in the Circular Business Model Canvas.

Learning objectives for the participant in this module are:

- Understand how your enterprises can adopt circular business model (ReSOLVE Framework)
- Identify the concrete benefits for your enterprises by adopting a circular business model
- Identify the new building blocks in a Circular BMC

Upon completion of this learning module participants		
KNOWLEDGE (will have...)	SKILLS (will be able to ...)	RESPONSIBILITY AND AUTONOMY (will...)
Knowledge of facts, principles, processes and general concepts of: <ul style="list-style-type: none"> • ReSOLVE Framework (Regenerate, Share, Optimise, Loop, Virtualise, and Exchange) • Benefits for enterprises of adopting a circular business model • new building blocks in a Circular Business Model Canvas (CBMC) 	<ul style="list-style-type: none"> • Know of strategies that companies can adopt to develop a circular business model • Define the ReSOLVE Framework • Identify the potential economic, social and environmental benefits associated with each of the main strategies that a company can use to create a circular business model • Identify and explain the new building blocks of a CBMC 	<ul style="list-style-type: none"> • Demonstrate ability in explaining the purpose of each of the main strategies an enterprise can use to develop a circular business model • Demonstrate ability in exploring strategies that facilitate the company's transition to CBMC • Take responsibility for exploring and describing the new CBMC building blocks and their significance

Module No.	2	Duration:	5 hours
Module Title:	How to go circular?		
Aim:	This Module will focus on the extended business model canvas - circular business model canvas and on a tool called ReSOLVE Framework, which allows you to understand how to adopt a circular business model.		

Learning Outcomes:		Assessment Criteria:
1	Understand how enterprises can adopt circular business model (ReSOLVE Framework)	Describe methods that will facilitate your transition to CBMC
		Describe the individual parts of the so-called ReSOLVE Framework
2	Identify the potential benefits for enterprises of adopting a circular business model	Describe the potential benefits for businesses of adopting a circular business model in specific cases
3	Exploring the new building blocks in a Circular BMC	Describe the new CMBS building blocks and their significance

Themes

The module will guide the students through a process that will help them to better understand how to adapt the Business Model Canvas to the circular economy approach. Thanks to the acquired knowledge, they will be able to decipher all parts of the Circular Business Model Canvas (CBMC).

The circular economy represents a huge opportunity. Not only for the environment, but above all for the creation of a completely new industry. The removal of certain types of disposable plastics recently decided by the European Union is only a small part of the overall change. The key is to return materials and waste into the production, which provides many ways for companies to save not only the environment but also energy costs and materials, by implementing circular principles.

The scope of the circular economy is very broad, and it is important to realize that it is not about discovering anything new, but rather returning to traditional frugality. Small and family businesses have always used and reused all their resources, whether they are material or human, with care, and a longer return on investment is not an obstacle for them. In addition, for family companies, maintaining the business for the next generation is the engine, so the issue of investing in cleaner and more environmental friendly production is often a natural part of strategic development.

This also provides an opportunity for start-up entrepreneurs who can look for the opportunities that the return of waste and materials brings from the very outset of building their business.

Themes to be addressed in the module are:

1 Going circular

This module will introduce the ReSOLVE Framework as a way of structuring the different Circular aspects a business can work on in order to become more circular.

The main topics are:

- The ReSOLVE framework
- How can companies use the ReSOLVE Framework

2 Circular Business Model Canvas

We will also cover the circular aspects of all of the building blocks of the CBMC

The main topics are:

- Exploring the new building blocks in a CBMC
- What are the benefits of circular business for companies?

Going circular

In The Circular Economy: The Transition from Theory to Practice A special issue, October 2016 presents 3 basic principles of Circular Economy.

- **P1** Preserve and enhance natural capital by controlling finite stocks and balancing renewable resource flows ReSOLVE tool: regenerate, virtualise, exchange
- **P2** Optimise resource yields by circulating products, components and materials in use at the highest utility at all times in both technical and biological cycles ReSOLVE levers: regenerate, share, optimise, loop

- **P3** Foster system effectiveness by revealing and designing out negative externalities
All ReSOLVE lever

Introducing the ReSOLVE framework

McKinsey & Company In The Circular Economics: The Transition from Theory to Practice A special issue, October 2016 states that these 3 principles of the circular economy can be divided into six business actions: Regenerate, Share, Optimise, Loop, Virtualise, and Exchange – together they make out the ReSOLVE framework.

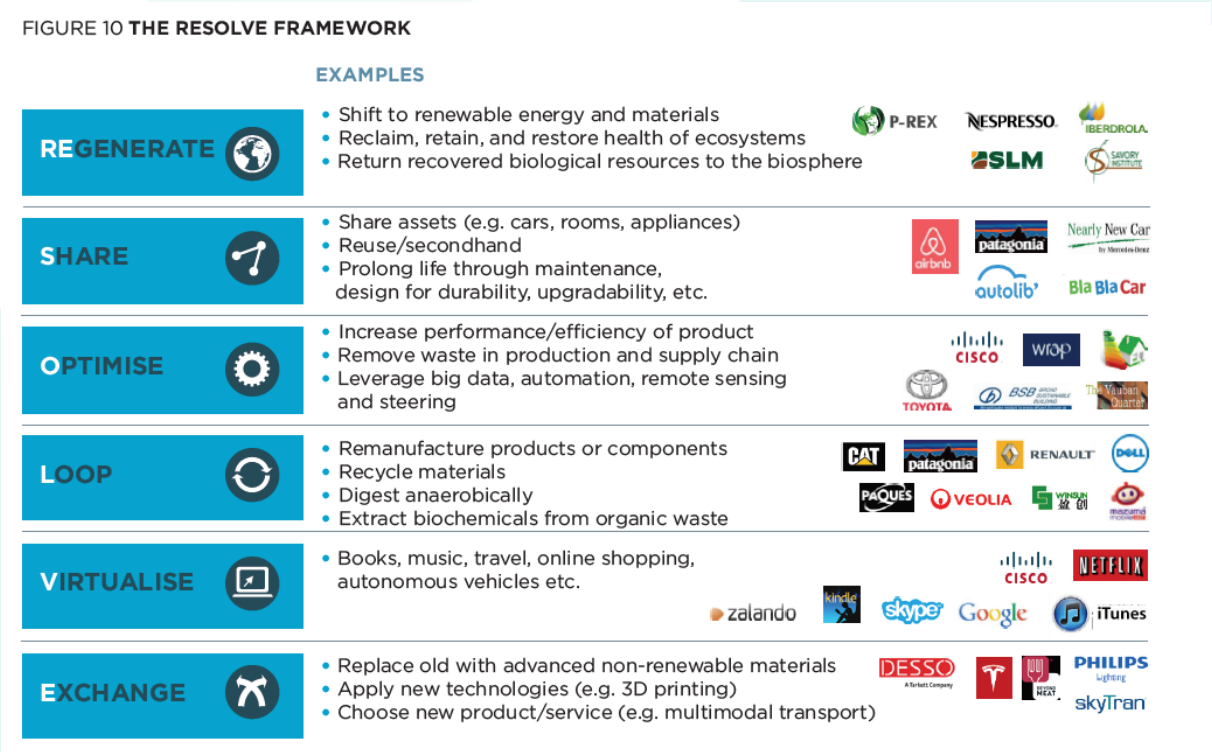
- **Regenerate.** *Transition to renewable energy and materials in order to cultivate, maintain and regenerate the health of ecosystems and return the acquired biological resources to our biosphere. For example, support for the Savory Institute's comprehensive land management has affected the regeneration of more than 2.5 million hectares of commercial land worldwide.*
- **Share.** *Maximize the use of products through the mutual sharing of private or public sharing of products with a minimal emphasis on their re-use throughout their technical life. Extend the life of products with maintenance, repairs and design for long life. Examples are business models for sharing cars, but also for computers, tools and more.*
- **Optimize.** *Improve product performance and efficiency and eliminate waste from their supply chains. Leverage big data, automation and more. None of these actions require a change in products or technologies.*
- **Loop.** *Keeping components and materials in closed loops and prioritizing those that allow it. For final materials, this means refurbishing products or components and (as a last resort) recycling materials, as Michelin, Patagonia, Škoda do.*
- **Virtualize.** *Deliver utility virtually—books or music, online shopping, fleets of autonomous vehicles, and virtual offices.*
- **Exchange.** *Replacing old materials with new advanced and renewable materials that can be applied to new technologies such as 3-D printing and electric motors.*

How can companies use the ReSOLVE Framework

The ReSOLVE framework offers companies a tool to help them generate circular strategies and new growth initiatives. Today, many world leaders base their success on innovation in only one of these areas, with most industries already having profitable opportunities in all

areas (Ellen MacArthur, GROWTH WITHIN: A CIRCULAR ECONOMY VISION FOR A COMPETITIVE EUROPE).

Examples of individual principles in selected companies:

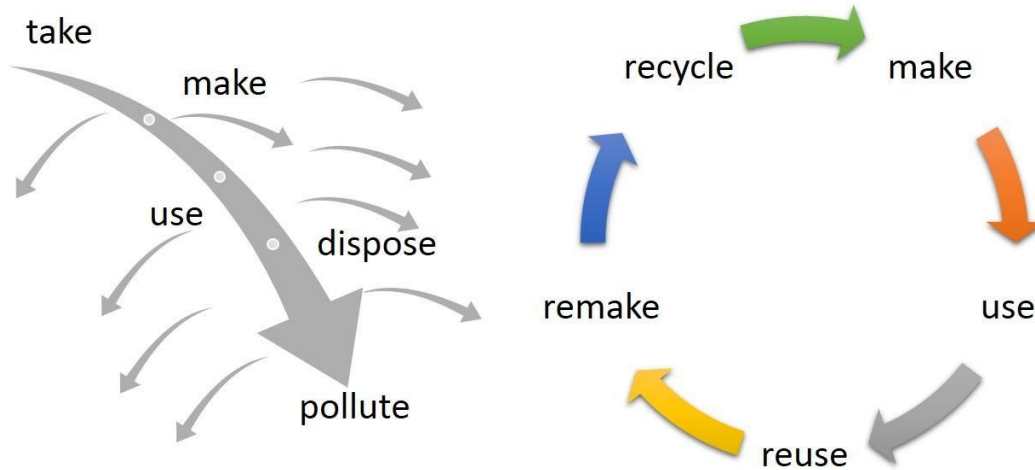


Source: Company interviews; Web search. S. Heck and M. Rogers, *Resource revolution: How to capture the biggest business opportunity in a century*, 2014.

Circular Business Model Canvas

The canvas of the business model tries to explain in a visual and clear way what the individual parts consist of, all these parts being interconnected and interdependent.

Osterwalder & Pigneur states that the circular economy can be described as an effort to combine successful business with the reduction of consumption and waste of natural resources. We consider the traditional economy to be a linear process and we perceive the circular economy as a cycle to which we return externalities that, in the case of a linear approach, would only be waste.



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As we saw in **Module 1: Your Circular Solution** for the linear economy, we can use the BMC. But to capture the needs of circular economy we had to expand it into the so-called Circular Business Model Canvas - CBMC.

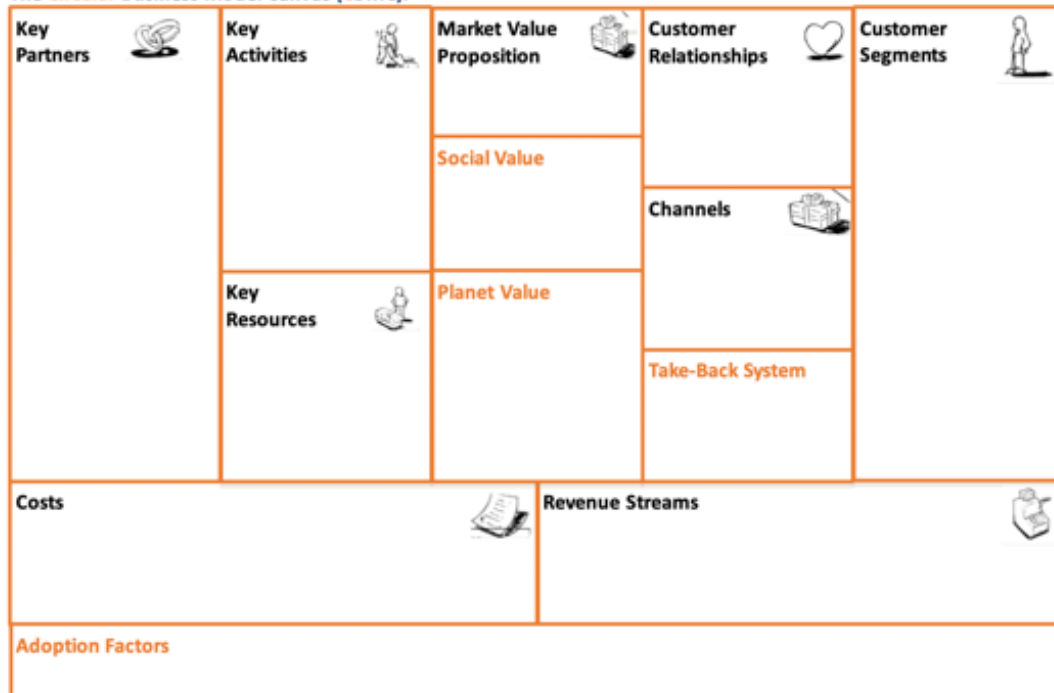
Exploring the new building blocks in a CBM

When comparing the Business Model Canvas (BMC) to The Circular Business Model Canvas (CBMC) four additional pillars can be noticed in the latter one (Lewandowski, 2016):

Social Value, Planet Value, Take-Back System and **Adoption Factors**.

In the following picture, according to Osterwalder and Pigneur, 2010 we can see the division of the Value proposition section into the mentioned subsections - planet value and social value

The Circular Business Model Canvas (CBMC).



While we introduced these new circular building blocks in Module 1, all of the CBMC building blocks will in fact be affected by going from a linear business model to a circular one.

Value propositions—offered by circular products enabling product-life extension, product-service system, virtualized services, and/or collaborative consumption. Moreover, this component comprises the incentives and benefits offered to the customers for bringing back used products.

As showed in **Module 1** the Value Proposition is subdivided into two more blocks, allowing for measuring:

Social Value: the impact, in terms of people and community, of your business on your social environment.

Planet value: focuses on ensuring a sustainable future for our planet while reducing waste and reusing/circulating materials for as long as possible.

Customer segments—directly linked with the value proposition component. Value proposition design depicts the fit between value proposition and customer segments. This is where we look for the types of customers that are willing to pay extra for a product with a high social or planet value i.e. Circularity.

Channels - possibly virtualized through selling virtualized value proposition and delivering it also virtually, selling non-virtualized value propositions via virtual channels, and communicating with customers virtually. Virtualization is an important way to reduce carbon footprint, and still reach a large segment of customers.

Customer relationships - Producing on order or to the customers wishes, and social-marketing strategies and relationships with community partners when recycling 2.0 is implemented. This way the products reflect the demand from the actual customers, and waste or surplus products are minimized.

Revenue streams - Based on the extended value propositions (**Social** and **Planet** value) payments for a circular product or service can be set at a higher level. And payments for delivered availability and usage can also be an option. A Circular product can be taken back after usage, or it can be rented out for a period. Revenues may also pertain to the value of resources retrieved from material loops since waste is now also considered a resource.

Key resources - choosing suppliers offering circular materials, virtualization, resources allowing to regenerate and restore natural capital and resources obtained from customers or third parties meant to circulate in material loops.

Key activities - focus on increasing performance through efficient production, better process control, equipment modification and technology changes, sharing and virtualization, and on improving the design of the product, to make it ready for material loops and becoming more eco-friendly. Key activities might also comprise lobbying.

Key partnerships - based on choosing and cooperating with partners, along the value chain and supply chain, which support the circular economy.

Cost structure - reflecting financial changes made in other components of CBM, including the value of incentives for customers. Special evaluation criteria and accounting principles must be applied to this component.

Take-Back system - the design of the take-back management system including channels and customer relations related to this system.

Adoption factors - transition towards circular business model must be supported by various organizational capabilities and external factors - See a more detailed description of the adoption factors in **Module 1**

As shown in this figure all of the Building Blocks of the CBMC are in play when you are designing a Circular business.

Partners <ul style="list-style-type: none"> Cooperative networks Types of collaboration 	Activities <ul style="list-style-type: none"> Optimising performance Product Design Lobbying Remanufacturing, recycling Technology exchange 	Value Proposition <ul style="list-style-type: none"> PSS Circular Product Virtual service Incentives for customers in Take-Back System 	Customer Relations <ul style="list-style-type: none"> Produce on order Customer vote (design) Social-marketing strategies and relationships with community partners in Recycling 2.0 	Customer Segments <ul style="list-style-type: none"> Customer types
	Key Resources <ul style="list-style-type: none"> Better-performing materials Regeneration and restoring of natural capital Virtualization of materials Retrieved Resources (products, components, materials) 		Channels <ul style="list-style-type: none"> Virtualization 	
Cost Structure <ul style="list-style-type: none"> Evaluation criteria Value of incentives for customers Guidelines to account the costs of material flow 		Revenue Streams <ul style="list-style-type: none"> Input-based Availability-based Usage-based Performance-based Value of retrieved resources 		
Adoption Factors <ul style="list-style-type: none"> Organizational capabilities PEST factors 				

In the “Farm near Rotterdam” example some real-life examples of Circular considerations set in the CBMC can be followed.

The Circular Business Model Canvas (CBMC). Farm close to Rotterdam.

Key Partners <ul style="list-style-type: none"> Veterinarian Services & Professionals Local Organic Food Providers Dairy Products Traders Local Stakeholders 	Key Activities <ul style="list-style-type: none"> Lean (no waste) Dairy Production Robotized cleaning of the stable Growing Organic Maize (and use of cow droppings as fertilizers) Lean (no waste) Services Design Kindergarten & Events operation In-house Stores Operation 	Market Value Proposition <p>A close-to-the-city place to maintain the contact with nature, while deploy some activities.</p>	Customer Relationships <ul style="list-style-type: none"> Acquisition: at the Social Networks to promote and interact with the segments. Upselling: at the Farm with direct clients and users 	Customer Segments <ul style="list-style-type: none"> Resellers: Dairy products resellers under their own brands or premises. Professional customer: businesses and organisations on farm surroundings looking for a special place to develop their events. Families: looking for a natural environment kindergarten Individuals: looking for a open air place, close to de city, to have some natural food and entertainment
	Key Resources <ul style="list-style-type: none"> The Cows The limited available Ground Specialised Human Resources (farmers, teachers, cooks, salespeople, etc.) 	Social Value <p>Facilitate connecting people living in an Urban context with Nature</p> <p>XXXX employees due to services extension around the cows</p>	Channels <ul style="list-style-type: none"> Direct Sale at Farm (stores and restaurant) Dairy Products Traders Online sales and promo in website 	
		Planet Value <p>Closing the loop: Cows feeding with own Corn crops, and cows droppings as a fertilizer for Corn</p> <p>Reuse of maize area as an entertainment, without additional resource usage (labyrinth)</p> <p>We have a NEGATIVE IMPACT due to methane emissions from cows.</p>	Take-Back System <ul style="list-style-type: none"> Charging an amount per bottle in on-premises purchases to take away Reverse logistics with Resellers 	
Costs <ul style="list-style-type: none"> Costs related to cows feeding and care (veterinary services, corn production and others) Costs related to huge facilities maintenance Costs related to human resources big team 	<ul style="list-style-type: none"> Costs related to children circular thinking adoption Costs of material flows in Service and Production 	Revenue Streams <ul style="list-style-type: none"> Dairy product sales to resellers Events organization incomes Kindergarten operation incomes Entertainment fees (maize labyrinth, etc) In-house traditional/organic stores sales Ads incomes (brand in labyrinth) 		
Adoption Factors <ul style="list-style-type: none"> Organization (HR): use of indicators related to any kind of resources used, per service unit delivered 		PEST (ECONOMICAL): Convince to Local Policy Makers that it is the way to maintain open the farms (in a milk market prices download context.	PEST (SOCIAL): Social spreading of the concept of the FARM as a new social centre of several activities in close contact with nature (“The new Parks”)	

Connectivity of ReSOLVE framework and CBMC

According to Lewandowski (2016), it is also possible to identify how the principles of the circular economy can be applied to the nine components of the business model - ReSOLVE framework. This overview shows the interconnectedness of all ReSOLVE components and their application to the CBMC pillars.

BM Components	Regenerate	Share	Optimize Loop	Virtualize	Exchange
Partners		X		X	
Activities	X		X	X	X
Resources	X		X	X	X
Value proposition and Customer segments		X		X	X
Customer relations					
Channels				X	
Cost structure	X		X	X	X
Revenue streams		X		X	
Potential to develop the BM framework					
Take-back system				X	
Adoption factors	X	X	X	X	X

What are the benefits of circular business for companies?

Today, more and more companies are interested in circular innovation. Companies realize that no producer can be successful on a failed planet. In addition, however, companies also think quite pragmatically and ask: “How much will global change affect my production and target markets? Will I still have somebody to sell to? How will carbon taxation affect my production?”

Businesses are realizing that the behaviour of consumers is changing, who no longer have such a need to own goods, but only need to rent them. Due to the loss of primary raw materials, companies also perceive a growing need for material self-sufficiency and are therefore starting to use recycled materials.

What are the benefits for companies?

1. The transition to a circular economy does not require higher investment.
2. Reduction of waste disposal costs.
3. Possibility to sell some types of waste as a raw material.
4. Companies that are able to incorporate their waste back into production are becoming more independent of suppliers.

5. Gaining a competitive advantage over the competition
6. and many others.

Benefits for all

1. McKinsey & Company has calculated that adopting the principles of the circular economy could generate annual savings of 1.8 trillion in Europe from 2030. EUR and revenues of EUR 600 billion per year.
2. According to the European Commission, the circular economy should bring 2 million new jobs.
3. 80% of greenhouse gases come from the supply chain, which is partially eliminated by the circular economy.
4. There is no doubt about the benefits of recycling: producing one tonne of recycled plastic will save 5 barrels of oil and the equivalent of 1.6 tonnes of CO₂.
5. According to the CSR & Reputation Research 2016 survey, 68% of people in the Czech Republic are willing to pay extra for an environmentally friendly product.
6. Thanks to carsharing, smart materials, autonomous driving and electric mobility, the price per kilometre could be reduced by up to 75% by 2030. In agriculture, new technologies could increase the efficiency of fertilizer and water use by up to 30%.
7. The Czech Republic is already meeting the target for the take-back of PET bottles, set for 7725 at 77%. According to EKO-KOM data, in 2018 81% of PET bottles that were placed on the market were sorted in the Czech Republic in 2018.

Methodological indications

The learning module begins with the introduction of a circular enterprise - a successful example in which you can show all the information about the approach of the company, its CBMC and also the completed ReSOLVE Framework. Ideally, watch a business-specific video (if available) before providing any important information.

Possible video for the lesson: <https://www.youtube.com/watch?v=zp8TiV7ScoA>

After a short introduction and a discussion about the benefits of the company, students will receive information about another, this time fictitious company. However, the second company will operate on the basis of a linear economy and the task of the students will be to create both the ReSOLVE Framework and the Circular Business Model Canvas. Students can work with a pre-filled BMC, or work from scratch to swallow all parts of this tool.

In order to be able to answer all activities, students should have stimulating questions that will make it easier for them to answer all parts of the CMBC.

Upon completion of this module, students will gain a basic understanding of circular economy and will be able to create and begin to create their own circular BMC.



3. YOUR CIRCULAR ROADMAP

- Practical exercise for setting up a CBMC, fine tuning of CBMC definition

Module 3 - Your Circular Roadmap

Objectives

This module is an introduction to a practical way of combining your circular projects ideas with your Circular Business Model Canvas (CBMC) using the ReSOLVEmeter tool.

Module 3 is a practical module, the aim of which is the verification of the Learning Outcomes of Module 1 (CBMC) and Module 2 (ReSOLVE Framework).

The learning objectives of the present module are:

- Be able to use the ReSOLVEmeter Tool to establish current and the potential levels of the ReSOLVE framework of a business at a given point in time.
- Create the Roadmap of the ReSOLVE evolution from NOW to NEXT and FUTURE.
- Be able to use the CBMC Roadmapping Tool, that combines the ReSOLVE projects with the relevant CMBC Building blocks, and facilitate the project planning (with evolutionary scenarios, for NOW, NEXT and FUTURE).
- Define the Plans and Resources needed to advance in the Roadmap from NOW to the FUTURE.

Upon completion of this learning module participants		
KNOWLEDGE (will have...)	SKILLS (will be able to ...)	RESPONSIBILITY AND AUTONOMY (will...)
Knowledge of facts, principles, processes and general concepts related to: <ul style="list-style-type: none"> • the ReSOLVEmeter Tool • establishing a starting point for the ReSOLVE levels of your business • the aim and scope of each of the ReSOLVE categories 	<ul style="list-style-type: none"> • List the circular concepts and ReSOLVE categories • Identify circular projects adoptable by the company • Plan the circular projects, their funding and resources needed. 	<ul style="list-style-type: none"> • Demonstrate ability in structuring the CBMC into a working roadmap using the ReSOLVEmeter Tool • Take responsibility for creating the Roadmap of the ReSOLVE evolution from NOW to NEXT and FUTURE

<ul style="list-style-type: none"> potential project ideas (circular projects) that may help businesses become more circular within the scope of each ReSOLVE category creating a Roadmap to plan the implementation and benefit of each ReSOLVE project planning the ReSOLVE projects on a NOW, NEXT and FUTURE timeframe Using the ReSOLVEmeter Tool to match the tasks for each ReSOLVE project with the CBMC Building Blocks using the ReSOLVE Roadmap to create the CBMC Roadmap 	<ul style="list-style-type: none"> Assess if a circular project can increase revenue due to higher demand on the market, to make the project viable Use the ReSOLVEmeter Tool Create the Roadmap of the ReSOLVE evolution Define the plans and resources needed to advance in the CBMC Roadmap from NOW to the FUTURE Understand how the ReSOLVE projects can affect the CBMC building Blocks Reflect on how the CBMC Roadmap descriptions are related to the CBMC Building Blocks 	<ul style="list-style-type: none"> Take responsibility for using the CBMC Roadmapping Tool within a time horizon (NOW, NEXT and FUTURE)
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Module No.	3	Duration:	8 hours
Module Title:	Your Circular Roadmap		
Aim:	The aim of this module is to understand the different parts of the ReSOLVEmeter tool and to know how they work together, in order to use the tool to set up a CBMC.		

Learning Outcomes:		Assessment Criteria:
1	Understanding the connection between ReSOLVE and CBMC	Circular Business plan: Describing the ReSOLVE profile.
		CBMC: Describing the Building Block of the Circular Business model Canvas.
2	Understanding Roadmapping	Project lifecycles: Understanding the basics of Project phases, budgeting
		Capitalization: Decide if Circular Projects can be viable for the business case.
3	Introduction to the ReSOLVEmeter tool	Project planning: Describe the projects lifetime, budget and benefits. Decide which projects to go through with.
		Project Implementation: Make detailed plans for the projects. What CBMC building Blocks are affected by the projects and why? Are they the same throughout the project lifetime?
4	Using ReSOLVEmeter to build a CBMC	Making sense of the Plan: Have you chosen the right Building Blocks? Does it make sense in your business?
		Project milestones: Have you used the best descriptions for the Project phases? Do they match with your idea of your CBMC?

Themes

The module will guide the learner through the process of acquiring and developing the knowledge and skills necessary to make the connection between the ReSOLVE categories and the building blocks of the CBMC. In the LiveCircularCanvas project we have developed a tool to plan and implement circular projects in a practical way. The ReSOLVEmeter tool will help a business create a roadmap for the different ReSOLVE projects, and to integrate them into the CBMC.

Themes to be addressed in the module are:

1. Connecting the ReSOLVE profile to the BMC (Business Model Canvas)

This module section will guide the student through understanding how to connect the development of the CBMC, as shown in **Module 1**, and how to construct the ReSOLVE

profile for the company, as shown in **Module 2**, to get a better understanding of how they are interconnected.

To this end, different examples will be defined and worked on, in a practical way, that will help the student to an understanding of the correlation between the ReSOLVE categories and the CBMC.

The main topics are:

- Connection between ReSOLVE and BMC Pillars or Building Blocks
- Going from BMC to CBMC

2. Introducing the ReSOLVEmeter

This part of the module will guide the learner through the process of acquiring and developing the knowledge, skills and competences necessary to understand and use the ReSOLVE meter.

The main topics are:

- The ReSOLVE Profile
- ReSOLVEmeter tool
- Circular Roadmapping
- Combining the ReSOLVE Roadmap with the CBMC Roadmap

Connecting the ReSOLVE profile to the CBMC

There is a link between the different “Building Blocks” or “Pillars” in the “normal” linear BMC as shown in the table (*BM Components*) and the different ways of using Circular principles in a company, as referenced in the ReSOLVE categories (in the columns of the table). These links may not be locked to each other in the form shown, but they represent likely synergies between the ReSOLVE practices and the Building Blocks of the CBMC.

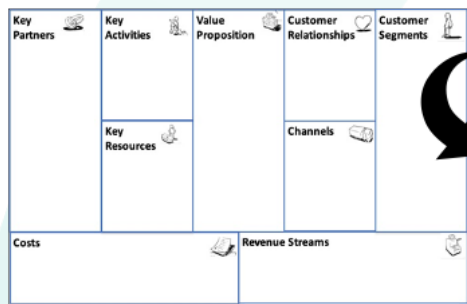


Table 4. How the circular economy principles apply to the components of business model.

BM Components	Regenerate	Share	Optimize Loop	Virtualize	Exchange
Partners		X	X	X	
Activities	X		X	X	X
Resources	X		X	X	X
Value proposition and Customer segments		X	X	X	
Customer relations				X	
Channels				X	
Cost structure	X		X	X	X
Revenue streams		X	X	X	
Potential to develop the BM framework					
Take-back system			X	X	
Adoption factors	X	X	X	X	X

Note: X indicates that the circular economy principles apply to the particular component of business model.

Partners <ul style="list-style-type: none"> Cooperative networks Types of collaboration 	Activities <ul style="list-style-type: none"> Optimising performance Product Design Lobbying Remanufacturing, recycling Technology exchange 	Value Proposition <ul style="list-style-type: none"> PSS Circular Product Virtual service Incentives for customers in Take-Back System 	Customer Relations <ul style="list-style-type: none"> Produce in order Customer vote (design) Social-marketing strategies and relationships with community partners in Recycling 2.0 	Customer Segments <ul style="list-style-type: none"> Customer types
Key Resources <ul style="list-style-type: none"> Better-performing materials Regeneration and restoring of natural capital Virtualization of materials Retrieved Resources (products, components, materials) 		Channels <ul style="list-style-type: none"> Virtualization 		Take-Back System <ul style="list-style-type: none"> Take-back management Channels Customer relations
Cost Structure <ul style="list-style-type: none"> Evaluation criteria Value of incentives for customers Guidelines to account the costs of material flow 		Revenue Streams <ul style="list-style-type: none"> Input-based Availability-based Usage-based Performance-based Value of retrieved resources 		
Adoption Factors <ul style="list-style-type: none"> Organizational capabilities PEST factors 				

Explanation of the connection between ReSOLVE and BMC Building Blocks

The link between a ReSOLVE project and a given Building Block might differ from the ones in the Table, in the following we will explain why they are likely to be connected.

Regenerate:

A company might implement a project that focuses on Regeneration. This can be in the form of a switch to renewable energy sources or focus on returning the waste safely to the biosphere. A project like this will most likely affect the Activities and the Resources Building blocks of the BMC, but probably also the Cost structure.

Share:

If a company goes from selling a product to leasing or sharing it, proper adjustments to partners and/or customer segments, as well as Value proposition are needed to be made.

Optimize:

If an enterprise improves an existing product or makes improvements in the productions line or waste management, consequently activities, resources and cost blocks will be affected - but the incentive for these initiatives will often come from external adoption factors like new technology or legislation, or inner adoption factors like a change of mindset of the company's team, its partners or customers.

Loop:

But some of the initiatives where a business decides to Loop the products or raw materials for the production, either by manufacturing items from pre-used materials, or refurbish products for reselling, some sort of Take-back system will be likely to be implemented, and now we are moving into CBMC territory.

Virtualize:

If a company decides to move into digitalization of its products, or the shopping experience, various changes will be faced in the company. Both in the company's Activities and Resources Blocks, but also in its Value proposition and Customer segments, and its customer relation channels.

Exchange:

Exchanging materials with new renewable ones or changing the production line to new technologies will most likely affect the Costs building block.

Other effects of ReSOLVE projects on the BMC

The results of ReSOLVE initiatives like these, will most likely affect the normal BMC building blocks quite a bit, but since ReSOLVE projects are inherently circular they are likely to have other effects as well. Effects that cannot be measured in a linear BMC. It is likely that positive side effects like Social Value and Planet Value will be obtained and we need these Blocks to take these effects into the planning in the business model. As we explained in Module 1 this is where we use the CBMC.

Going from BMC to CBMC

The new Building Blocks in the CBMC (Planet Value and Social Value) are needed to be modelled and planned for the positive benefits that are likely outcomes of a ReSOLVE project.

The drivers for these ReSOLVE initiatives are also not necessarily found in the classical Building Blocks of the BMC. Incentives and inspiration for a ReSOLVE project is likely to come from a new set of adoption factors from outside like: New legislation, increased customer demand for circular products, green funding or just new or cheaper technology that can facilitate the change in the mindset of the business owner. Also, Inner adoption factors may affect the decision like: The appealing idea of becoming a circular business or the mindset of the co-workers or the partners.

These Adoption factors are not only restraints or opportunities coming from the outside environment, but are also factors that a circular business can actively affect, plan for and help create.

This is why the old BMC is not quite enough to fully explain the inner workings of the decision to go circular, but we need the new Building Blocks of the CBMC to model and plan for all of the effects of implementing a ReSOLVE project.

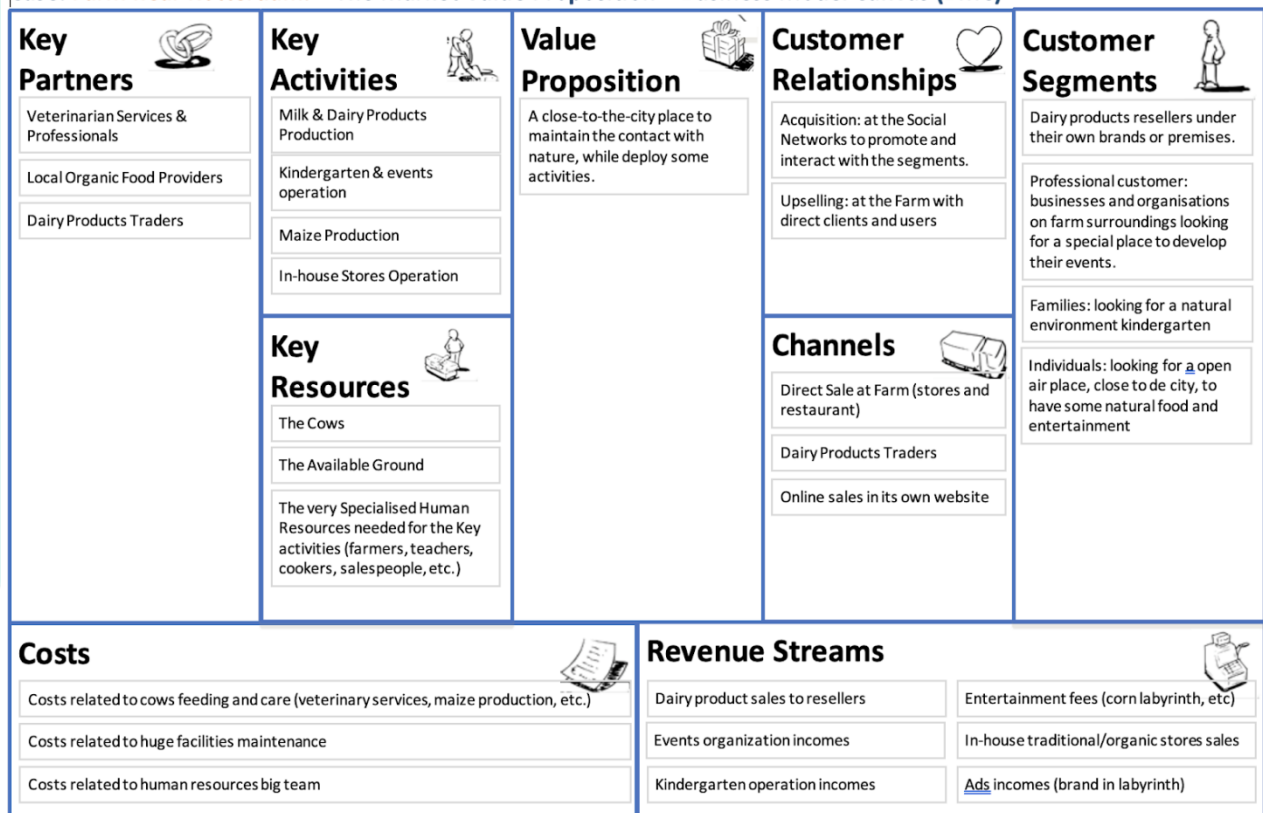
In conclusion

The Social Value and Planet Value are needed to measure the real effect of any circular improvements in the business, and the Adoption factors are the drivers that push this development.

Example: Farm near Rotterdam

The Example of a “Farm near Rotterdam” has been used in module 1 and 2 to illustrate some real-life examples of a business that is trying to be more circular. This is the pre-circular Business Model Canvas (BMC). It represents a snapshot of the company before the various ReSOLVE projects has been implemented or planned.

Case: **Farm near Rotterdam.** –The Market Value Proposition – Business Model Canvas (BMC)



All the Building Blocks are referencing conventional linear building blocks. In the next section we will take a look at how ReSOLVE projects can be mapped out using the ReSOLVEmeter tool, and how they can be included in a new CBMC for the Company.

Introducing the ReSOLVEmeter

In this section we introduce the new tool developed by the LiveCircularCanvas project called ReSOLVEmeter. With this tool it is possible to map the relevant ReSOLVE project in a business that would like to move towards circularity. The ReSOLVEmeter also helps with the process of structuring a CBMC for a circular business.

The ReSOLVE Profile

The ReSOLVE profile for a company is a list of the different ReSOLVE projects that they could implement to reach a higher level of circularity. A ReSOLVE project is an idea that can improve the circularity of a company that can be listed under a ReSOLVE category.

Regenerate	It is using renewable energy power sources
	It is using reusable materials
	Contributes to sustain or improve the health of their ecosystem
	Recovers and re-enter the biological resources to biosphere
Share	It is sharing assets (cars, spaces, machinery, etc.)
	Reuses their assets or acquires them second-hand from others.
	Extends the product life, through maintenance, design to last, for upgradability, etc.
Optimise	Increases the result / efficiency of the product (resources used versus performance)
	Eliminates waste / garbage in production and in the supply chain
	Takes advantage of big data, automation, remote sensing and acting.
Loop	Reprocesses the products or components
	Recycled materials
	Applies Anaerobic Digestion (wastewater treatment, biogas production, fertilizer, etc.)
	Extracts biochemicals from organic waste for later use (concentrated fertilizers, etc.)
Virtualise	Uses Direct Dematerialization (Books, CDs, DBDs, travel ...)
	Uses Indirect Dematerialization (online shopping, etc.)
Exchange	It replaces old non-renewable materials with advanced renewable materials.

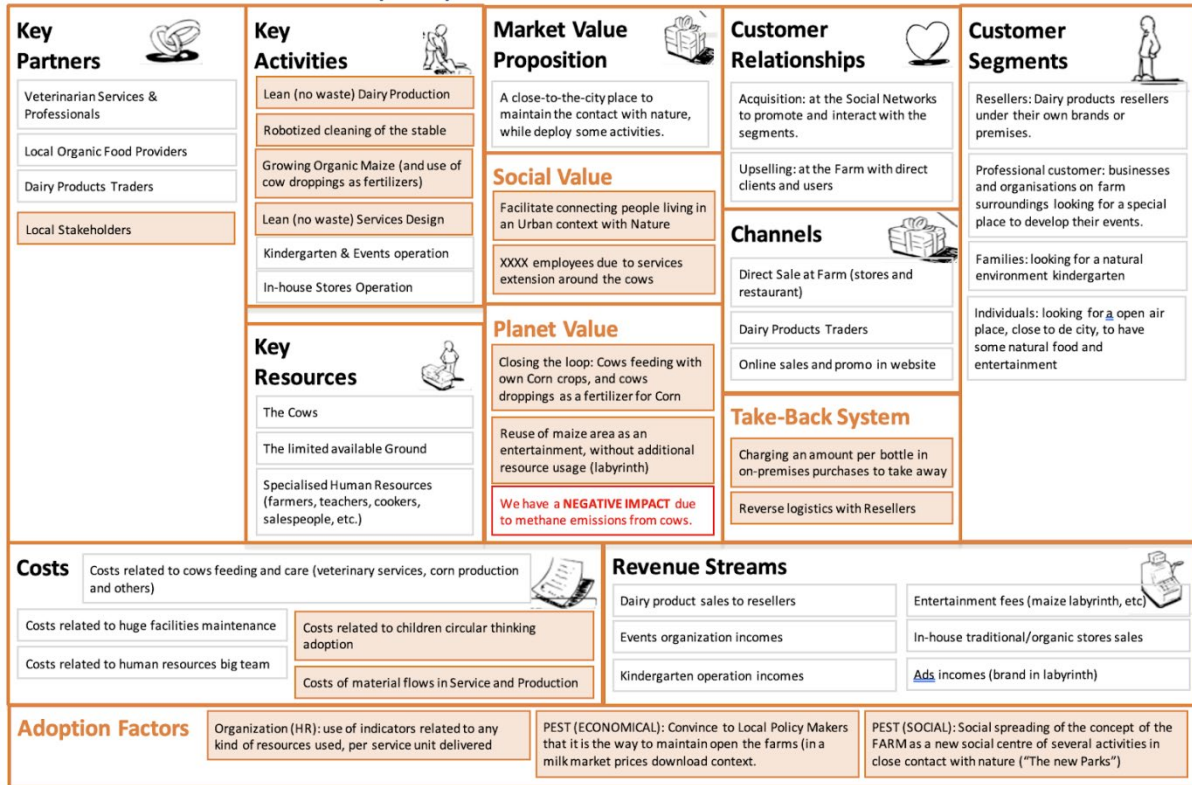
Applies new, more efficient technologies (3D printing, electric motors, etc.)
Opts for new products more efficient services (for example, multimodal transport)

If these ReSOLVE projects are carried out, they would impact the conventional BMC building blocks in a way that resembles the connections shown below.

BM Components	Regenerate	Share	Optimize Loop	Virtualize	Exchange
Partners		X		X	
Activities	X		X	X	
Resources	X		X	X	
Value proposition and Customer segments		X		X	
Customer relations					
Channels				X	
Cost structure	X		X	X	X
Revenue streams		X		X	
Potential to develop the BM framework					
Take-back system				X	
Adoption factors	X	X	X	X	X

But to accurately model all of the benefits from these projects, we need to take into account the new building blocks of the Circular Business Model Canvas (CBMC). Especially regarding projects that include waste reduction aspects or minimise the use of resources, the Planet Value and Social Value Blocks are needed to accurately model the benefits.

The Circular Business Model Canvas (CBMC). Farm close to Rotterdam.



Introducing the ReSOLVEmeter tool

The Live Circular Canvas project has developed a tool to create a better understanding of the connection between the ReSOLVE initiatives and the building blocks in the CBMC as well as mapping out the steps needed to reach the goals set up in the ReSOLVE profile.

ReSOLVEmeter is a self-assessment spreadsheet tool that allows a company to plan and map out each ReSOLVE project, connecting it to the affected CBMC Building Blocks, and thereby facilitate a more precise Circular Business Model Canvas (CBMC).

The ReSOLVE meter contains a Roadmapping feature that allows the user to set up milestones, resources and budget for each desired project, in the NOW, NEXT and FUTURE perspective. It also features a CBMC Roadmap feature, where the different projects are shown as items in the relevant CBMC Building Blocks.

The ReSOLVEmeter will help visualize the planned projects and build a realistic Roadmap for going forward.

Regenerate	Contributes to sustain or improve the health of their ecosystem	Environmental Projects	0%	End water
		100% Change from Estándar Maize crop to Organic one	0%	sl

ReSOLVEmeter & ReSOLVERoadmap | Resources Auxiliar Table | CBMC Roadmap | BMC & ReSOLVE IMPACT MATRIX ...

The first tab in the ReSOLVEmeter spreadsheet is called ReSOLVEmeter & ReSOLVERoadmap. In the first column down the ReSOLVE categories can be found

- REgenerate
- Share
- Optimize
- Loop
- Virtualize
- Exchange

Under each category the different ReSOLVE project ideas can be specified. For each initiative the company specifies the highest achievable level of implementation of that project idea as well as the starting point.

In this example, our “Farm near Rotterdam” case wants to switch to renewable energy power sources by setting up solar panels on the roof of the buildings, instead of using energy from conventional energy companies. They believe that they could reach 100% renewable energy, but they are starting out with only 10% being from renewable sources.

It is using renewable energy power sources	100% of Renewable Power	10,00%	Solar Pannels for Warehouse I
--------------------------------------------	-------------------------	--------	-------------------------------

They also believe that they could reuse more of their packing materials, like the milk bottles they sell from the farm shop. For the bottles to be reused that would require some incentive like a bottle deposit system and some kind of Take Back system is required.

Another goal could be to sustain or improve the health of their ecosystem. To this end, they would like to support other organisations that work towards circularity. This is not directly something that the business does itself, but it still counts in the CSR (Corporate Social Responsibility) budget. This could be done through buying CO2 certificates to offset carbon emissions, or as in this case supporting a local association that is working with circularity. They might also switch from a conventional grain type to an organic one.

In the ReSOLVEmeter they can now set all the desired (end)goals and then set an intermediate goal (NOW goal) combined with a specific project, and how far towards the end goal this will take them.



ReSOLVE-meter		Highest Achievable Level for Us	Starting Point	NOW Goal	Project / Initiative
Regenerate	It is using renewable energy power sources	100% of Renewable Power	10,00%	20,00%	Solar Pannels for Warehouse I
	It is using reusable materials	100% Bottles Take-Back	0%	20,00%	Per Bottle 50 cents deposit
	Contributes to sustain or improve the health of their ecosystem	5% Profit to RSC Environmental Projects	0%	2,00%	Bird watching financial suport
		100% Change from Estándar Maize crop to Organic one	0%		
		75% Methane Free Program	0%		
	Recovers and re-enter the biological resources to biosphere				

In the ReSOLVE roadmap we can see the most important points of the first phase (NOW - 1st year) of each of the proposed projects outlined: what resources are needed, the proposed budget for each project, what CBMC Building Block that will be (primarily) affected and why, and a small Gantt diagram that shows how much time the first phase of the project will take.

NOW Goal	Project / Initiative	Resources Allocation				Budget Allocated (for extra internal work or external resources)	Main CBMC Building Block implied		Year 1			
		PROCESS	INTEFNAL	EXTERNAL	Building Blocks		Change Description	Quarter 1	Quarter 2	Quarter 3	Quarter 4	
20,00%	Solar Pannels for Warehouse I	Operations	Engineers	Machinery Providers	50,000,00	Key Resources	Saving use of non-renewable power source (CO2)	[Gantt bar: Q1-Q3]				
20,00%	Per Bottle 50 cents deposit	Operations	Workforce	None	10,000,00	Key Activities	Taking back bottles for reusing from individual customers of the Take Away service	[Gantt bar: Q1-Q2]				
2,00%	Bird watching financial suport	Financial	Management	None	3,000,00	Social Value	Create a network with organizations/stakeholders at the environmental field	[Gantt bar: Q1-Q2]				
10,00%	Open Warehouse I	Logistic	Management	Consultancy Providers	5,000,00	Key Partners	Optimizing by sharing the Conditioned Dairy Products Warehouse and new revenues pouring	[Gantt bar: Q1-Q3]				
30,00%	Renting/Reused Lifts (I)	Operations	Management	None	10,000,00	Costs	Optimizing Operational costs with pre-owned machines and extending their use lifespan.	[Gantt bar: Q1-Q2]				
80 months	Happy Cows	Operations	Workforce	None	2,000,00	Planet Value	Program of Daily free walks for cows to enhance health and reduce cows stress	[Gantt bar: Q1-Q2]				
8 out of 10	Lean in Dairy Production	Manufacturing	Workforce	Consultancy Providers	20,000,00	Costs	Eliminate waste of time and resources at the Dairy products production line	[Gantt bar: Q1-Q3]				

This plan is extended to the NEXT (2nd and 3rd year) and to the FUTURE (4th and 5th year).

Some of the projects will not have a 5-year lifespan, but then might require some upkeep, maintenance or upgrades along the way, those can be noted in the NEXT and FUTURE roadmaps.

Circular Roadmapping - NOW, NEXT AND FUTURE: Targeting, Planning and Controlling

The goal of Roadmapping is to inform all the stakeholders (and internally in the organization as well), about the circularity plans, and how this is reflected in the CBMC Circular Business Model Canvas. In the ReSOLVEmeter tool there are 2 Roadmaps, one for the ReSOLVE projects (ReSOLVE Roadmap), and the CBMC Roadmap, where the Projects are listed in the order of the CBMC Building Blocks to make it easier to fill them into the CBMC.

There are three timeframes in a ROADMAP:

NOW: is the first step to be taken to move on from the starting position. The timeframe here is about a year into the future. In the NOW we define the starting position and the action plans (if any) in each building block. What can be done within the first year? What resources are needed? And what are the costs? The NOW time frame is measured in Quarters (Q) (3 months period).

NEXT: is the nearest future of projects, 2 to 3 years out. Some projects can't be finalized in 1 year, and maybe we need to evaluate the project after a couple of years. If a project is working well, then maybe it should be elaborated, if not, it may have to be scaled down or cancelled. There might be some upgrades, or maintenance, or maybe the prerequisites for the project changes over time. In the NEXT timeline, each project is evaluated and action plans are amended. Sometimes the project's impact might require a shift in the main CBMC Building Block that is affected. The timeframe in the NEXT is measured in Half Years (H) (6 months period).

FUTURE: is the long-term plan for the project, 4 to 5 years out into the future. This far into the future planning, concrete action plans will not be feasible, but rather focus on the GOALS of the project. Are the projects reaching the desired levels of circularity? Is the budget holding up? Is there a need to adjust to new technology or rules (adoption factors)? Is the lifecycle of the project running out, or can it be extended? The content of the FUTURE time frame is described in whole Years (Y) (12 months period).

The exercise here is to be conscious of the circularity level of each building block of the CBMC and to map out goals and plans for the future.

Roadmapping is a tool to create an overview of the projects a company wants to implement. It is a reflective document, and not an airtight planning tool. Each of the projects will have to be planned and managed separately, but the roadmap gives a bird's eye view of all the projects in the pipeline.

Resource allocation of a ReSOLVE project

In mapping out a ReSOLVE project, the ReSOLVEmeter allows the company to set what types of resources will be needed for the different phases of the project.

Project / Iniciative	Resources Allocation			Budget Allocated (for extra internal work or external resources)
	PROCESS	INTERNAL	EXTERNAL	
Solar Pannels for Warehouse I	Operations	Engineers	Machinery Providers	50.000,00 €
Per Bottle 50 cents deposit	<div style="border: 1px solid black; padding: 2px;"> Operations Manufacturing Organization Logistic TIC Financial Marketing Communication </div>	Workforce	None	10.000,00 €
Bird watching financial suport	Financial	Management	None	3.000,00 €

For each of the Resource columns (Process, Internal, External) the company can select from a set of pre-entered categories.

Customize the CBMC data (Resources Auxiliar Table)

In the tab Resources Auxiliar Table we can add or edit the items on the lists (Process, Internal, External).

Combining the ReSOLVE Roadmap with the CBMC Roadmap

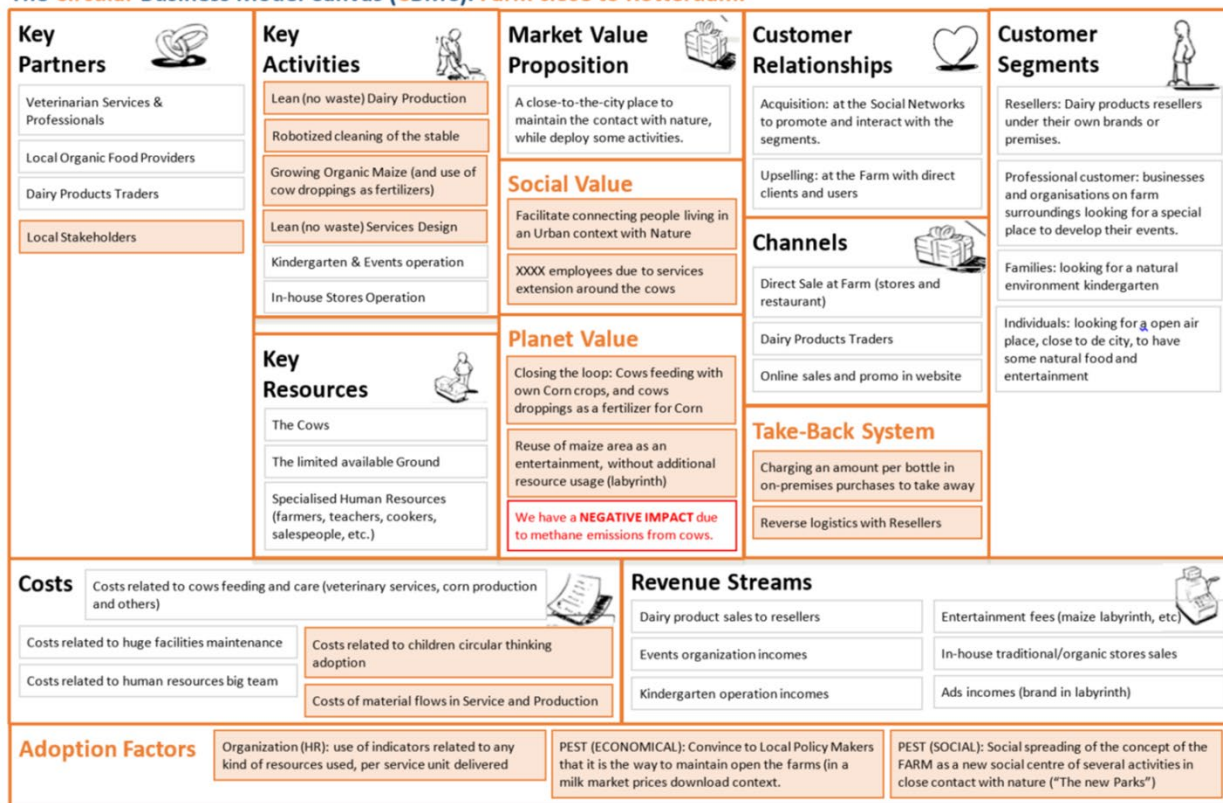
Filling out data in the ReSOLVE roadmap provides an overview of the projects, especially if the projects have NOW, NEXT and FUTURE timeframes filled out with resources and budget listed.

The CBMC roadmap automatically collects the ReSOLVE project data and organises it according to the CBMC Building Blocks.

Circular ANVAS		Rotterdam Farm (example case)			
CBMC Roadmap					
CBMC Building Blocks	Help text (explanation)	ReSOLVE Project/Initiative	NOW	NEXT	FUTURE
Key Partners	The Key Partners are actors who perform key activities to our business model, but who for various reasons do not belong to our organization, and they are not subject to our management. Unique relationships must be established with them to ensure their necessary contribution.	Open Warehouse I	Optimizing by sharing the Conditioned Dairy Products Warehouse and new revenues sourcing	Create a network with organizations/stakeholders at the environmental field	
Key Activities	Activities very linked to the value proposition that we offer, and that need special monitoring and management. Very often, they have to do with the use of key and/or scarce resources of the business.	Per Bottle 50 cents deposit Robotized Stable I) Cows droppings for nurturing Maize crops	Taking back bottles for reusing from individual customers of the Take Away service Efficiency Program by Repetitive Tasks Automation Closing the loop using the cow droppings for maize crop nurturing that will feed the cows	Optimizing by sharing the Conditioned Dairy Products Warehouse and new revenues sourcing Eliminate waste of time and resources at the Dairy products production line Yogurt Line for milk excedents reprocessing	Optimizing by sharing the Conditioned Dairy Products Warehouse and new revenues sourcing
Key Resources	They can be raw materials, economic resources, financial, process/transformation, knowledge/skill, or management resources that our model uses in value creation. Key resources are often scarce and should be managed and prioritized for specific use.	Solar Panels for Warehouse I Yogurt Line I)	Saving use of non-renewable power source (CO2) Yogurt Line for milk excedents reprocessing		

The project descriptions NOW, NEXT and in the FUTURE are presented in the relevant CBMC Building Blocks, and this makes it easier to fill out and update the CBMC.

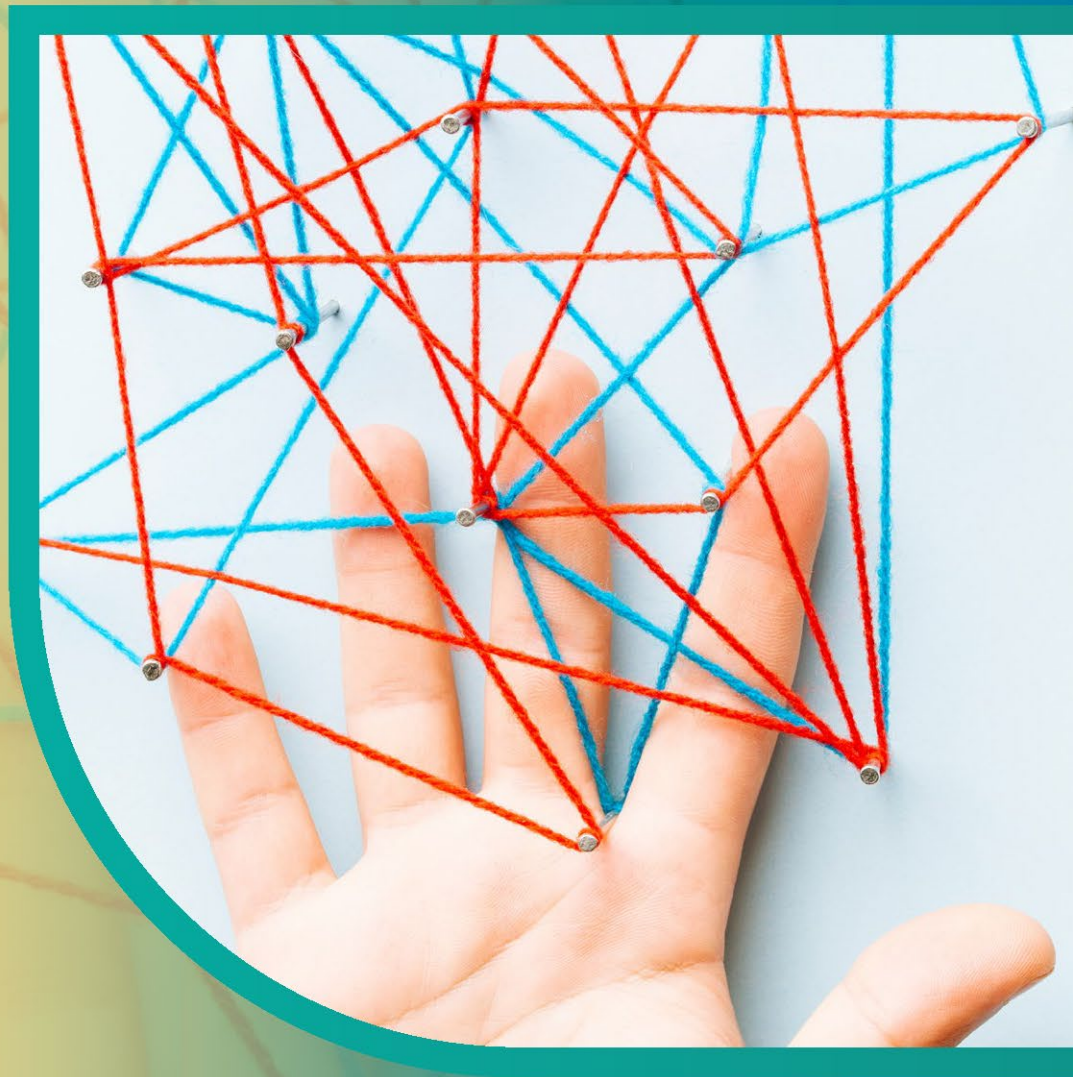
The Circular Business Model Canvas (CBMC). Farm close to Rotterdam.



Methodological indications

The sequence of the practical activities within the present module are:

1. Set the CURRENT ReSOLVE profile of the business CBMC
2. Define at the ReSOLVEmeter, three dimensions:
 - Maximum POTENTIAL evolution of the CBMC, per building block.
 - ACCESSIBLE evolution attending the business reality
 - Evolution GOAL selected by the business for developing the CBMC Roadmap.
3. Define the ReSOLVE Roadmap (NOW, NEXT & FUTURE).
4. Establish the FUTURE CBMC Snapshot and a yearly evolution Snapshot for the NOW and NEXT Timeframes.
5. Plan and create a budget needed to realize the FUTURE ReSOLVE/CBMC goal.



4. CIRCULAR NETWORKING

- Social stakeholders mapping
- Communicating your business' circular message

Module 4 - Circular Networking

Objectives

This module is about connecting the networking theory with the circular economy approach. The learner has to be trained in topics such as: the special relevance of stakeholders networking for a circular business model viability, how to identify potential stakeholders, how to manage a social network, and how to communicate the business’s own circular message.

The learning objectives for the participant in this module:

- How to link the Business Model with supporting local economy
- How to identify potential social stakeholders of your business
- How to manage your social networks
- How to communicate the circular message of your value proposition to facilitate the social circular thinking transition.

Upon completion of this learning module participants		
KNOWLEDGE (will have...)	SKILLS (will be able to ...)	RESPONSIBILITY AND AUTONOMY (will...)
Knowledge of facts, principles, processes and general concepts related to: <ul style="list-style-type: none"> • Relevance of stakeholders networking in a circular business context • Linking business models with local economy • Identifying potential social stakeholders • Managing social networks 	<ul style="list-style-type: none"> • Tap into existing personal and professional networks to leverage the professional community for the business’ benefit • Understand how networking can be extremely valuable in growing a professional community and contributing to company success • Identify who the company’s social stakeholders are, and work out their power, influence • Develop a good understanding of the most 	<ul style="list-style-type: none"> • Demonstrate ability in understanding what makes a valuable circular business, for the local economy beyond individuals, as part of the local economy • Take responsibility for exploring personal and professional networks in order to identify social stakeholders • Take responsibility for analysing stakeholders’ capacity to impact or influence the circular business’ success • Take responsibility for exploring methods for engaging

<ul style="list-style-type: none"> Developing communication strategies 	<p>important stakeholders to know how they are likely to respond, and how to motivate them and to offer their support</p> <ul style="list-style-type: none"> Identify methods for engaging stakeholders Identify drivers that affect local economic development Develop a communication strategy for the company Use specific elements of communication to effectively convey the circular message of the company 	<p>stakeholders</p> <ul style="list-style-type: none"> Take responsibility for exploring and identifying influencing drivers of the local economy Demonstrate ability in designing and effectively implementing the company's communication strategy
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Module No.	4	Duration:	5 hours
Module Title:	Circular Networking		
Aim:	This module is about connecting the networking theory with the circular economy approach. The learner has to be trained in topics such as: the special relevance of networking for a circular business model viability, how to identify potential stakeholders, how to manage social networks, and how to communicate the own business's circular message.		

Learning Outcomes:		Assessment Criteria:	
1	Link the Circular Business Model with supporting local economy	Understand the relevance of stakeholders networking for a circular business model	Understand what makes a valuable circular business, for the local economy beyond individuals, as part of the local economy
2		Identify the potential social stakeholders of a circular business	Identify the potential social stakeholders.

3	Manage social networks	Map out existing personal and professional community.
4	Communicate the circular message of a business	Create a communication strategy for a circular company
		Identify most important elements needed to communicate the circular value proposition of a company

Themes

The module will guide the learner through the process of acquiring and developing the knowledge and skills necessary to identify the most important stakeholders for the business in order to know who to communicate to, and how to do it.

Themes to be addressed in the module are:

1 Networking with stakeholders for the generation of Value Proposition

In this part of the Module, we look at how to find the most important stakeholders and how to engage them in Local Economic Development.

The main topics are:

- Identifying the stakeholders
- Local Economic Development (LED)

2 Identifying social stakeholders

This section of the module will guide the learner through the process of acquiring and developing the knowledge and skills necessary to identify and analyse the potential social stakeholders of a circular business.

The main topics are:

- Finding the Key Players
- Stakeholder analysis

3 Social networking

This part of the module will guide the learner through the process of acquiring and developing the knowledge, skills and competences necessary to tap into an existing personal and professional network and leverage the professional community for the benefit of the circular enterprise.

The main topics are:

- Online Social Networking

4 Communicating the circular message

This section will guide the learner through the process of acquiring knowledge, skills and

attitudes towards understanding how to communicate effectively the circular message of the enterprise.

The main topics are:

- Communications strategy
- Storytelling

Networking with stakeholders for the generation of Value Proposition

In the following, we focus on some key stakeholders that are important in relation to the circular economy ecosystem.

Identifying the stakeholders

Raw materials - The most important group of stakeholders are in the **supplier network**. If we want to make a circular product, we need to make sure that the raw materials meet the requirements of the circular economy. We need to know the possible costs for reuse/recirculation when sourcing the raw materials for the production. A few percent of savings in this process can lead to a much more costly reuse process. If the raw materials are produced at the cost of environmental destruction, then the production process will no longer be in accordance with the circular economy principles. We must avoid this. The other principle we have to uphold in our stakeholder network may be the impact on the **natural and social environment** involved in the production of the raw material. It is not enough to just examine the impact of our own production, we also have to consider the impact of the previous elements of the value chain.

Product design – The partners involved in the design process are very important stakeholders. We have to design a product, so it meets the circular economy criteria. The product planning team can also be a stakeholder, if this is not done internally. Sometimes a consultant team can be hired to validate the aspects of the circular economy, or even help to lay the foundations for financial sustainability.

Production – During production it is important that we do not burden the environment or generate non-recyclable waste. Here, the most important stakeholders are the **machine suppliers** and **packaging suppliers** and if there are subcontractors, they must also understand the principles of the circular economy. Again, all parts of the value chain must lead their processes along the same values.

Consumption - our **customers** are the most important stakeholders here. We need to know their preferences and expectations, and based on these, we need to support them in the

process of sustainable consumption. We cannot transfer the responsibility to our customers, so we need to support sustainable consumption by offering high quality circular products, but also by educating our customers.

Waste management - companies specializing in recycling, and regulatory institutions that are involved in waste management processes.

Local Economic Development (LED)

In this section, we will introduce the definition of Local Economic Development (LED) and the understanding of how business models may impact LED.

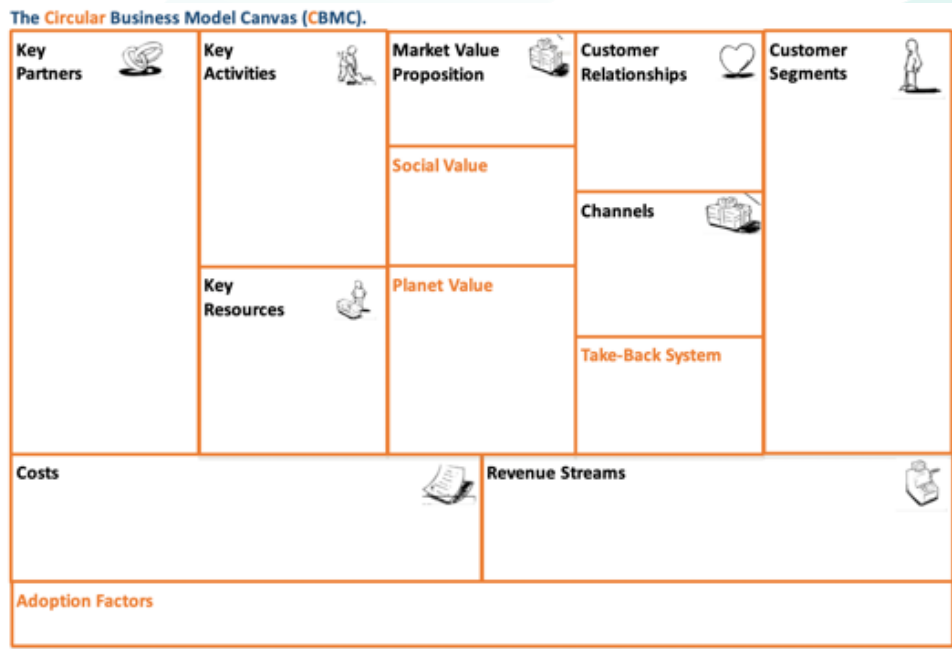
Urban and rural communities, and governments around the world increasingly turn to LED-strategies in response to the challenges of globalization and the drive for decentralization.

LED is a central part of developing local government institutions. It is a process which involves several projects that bring together different partners in the local area. The goal is to work together to harness resources for sustainable economic growth. LED is increasingly being seen as a key function of local government and a means of ensuring that local and regional authorities can address the priority needs of local citizens in a sustainable way. There is no single model for LED. Different approaches reflect local needs and circumstances.

LED means more than just economic growth. It is promoting participation and local dialogue, connecting people and their resources for better employment and a higher quality of life for all.

Applying business models that positively affect the local economy is key to sustainable growth.

In order to better explain the impact business models may have on local economies, the Circular Business Model Canvas may be used (see Module 1).



In the CBMC, the most important part of the model is the Value Proposition, as it explains precisely the value that a company offers to its customers. In the case of a circular business the Value Proposition is usually a combined figure, based on economic value, the “value” for the community as well as “value” for the environment. In a circular business understanding, “Value” refers to operating practices that enhance the competitiveness of a company while simultaneously advancing the economic and social conditions in the communities in which it operates, (Porter and Kramer 2011).

The value creation process also leads to opportunities for creating awareness. The Use of local resources reduces harmful impact on the environment and collaborating with local companies (as key partners) further boost the local economy. Employing local labour also positively contributes to the local economy. While applying the circular economy principles in the entire process, we also need to pay attention to the source of possible investment in the business, and make sure that it is not opposed to the interests of the local community or nature.

An example of shared value: El Garrofer de Benialí, a Spanish eco-kindergarten functioning part time and on weekends. They offer educational services for children visiting the region of Benialí and as a solution for their parents to spend some of their free time in the area. The local Municipality is promoting the Benialí area for hiking. There are many people interested in the activity, many of them are parents, so during hiking activities parents need some supervised place for their kids. El Garrofer is the perfect solution – the eco-kindergarten is placed in the middle of beautiful nature and both children and parents benefit from this. The Municipality highly supports El Garrofer to extend their offers and thus attracting more

visitors to the area. In this case the Value Proposition (eco-kindergarten being located in close proximity to nature) is connected with Local Economic Development.

For more examples for shared value please check the Live Circular Canvas case studies accessible at: <https://livecircularcanvas.eu/en/circular-practices/>.

Identifying social stakeholders

This section of the module will guide the learner through the process of acquiring and developing the knowledge and skills necessary to identify and analyse the potential social stakeholders of a circular business.

A stakeholder is a party, defined as *anyone with an interest in the company, irrespective of whether that interest is positive or negative, and can either affect or be affected by the business*. Social stakeholders may include employees, customers, beneficiaries, local leaders, funders and supporters, local communities, governments, trade associations, etc.

Stakeholder Analysis PowerPoint Template



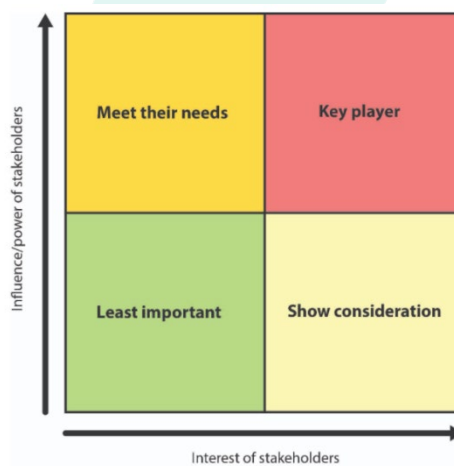
It is important to identify the stakeholders of a company, and to analyse their levels of interest, expectations, importance and influence. The stakeholder database usually includes classification and assessment information based on perception and explicitly describes each stakeholder from the perspective of the business.

Analysing your stakeholders is crucial to the success of your business, and in the context of the circular economy, we need to do this even more broadly.

Stakeholder analysis is the process of identifying a company's stakeholders and their interests, assessing their influence/power, or how they are impacted by the company, to formulate strategies for managing relationships with them.

Finding the Key Players

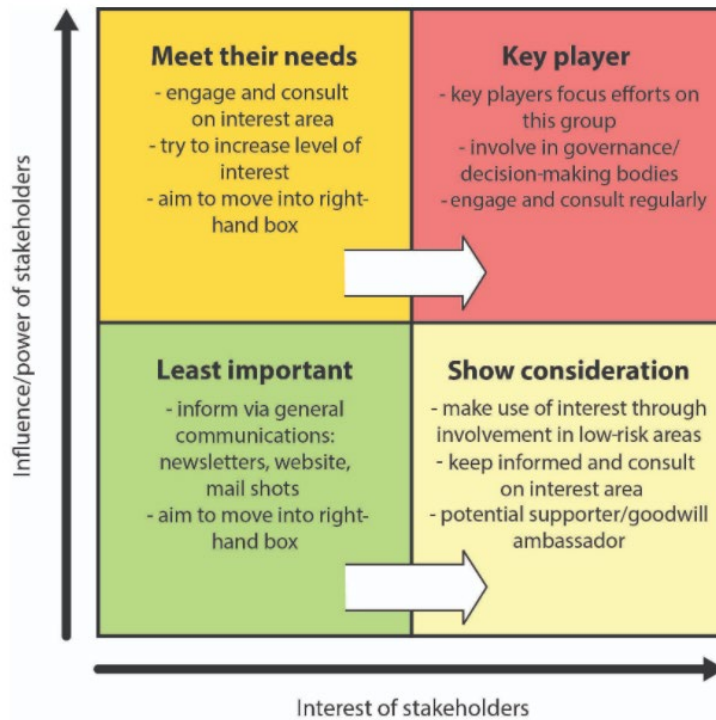
High power or high interest stakeholders are Key Players. Low power or low interest stakeholders are less important.



(source: BRT Planning Guide, Stakeholder map that looks at both the influence/power and the interest of stakeholders. Source: <http://www.stakeholdermap.com/stakeholder-analysis.html>.)

Once the stakeholders are categorized in this way, the map can be used to determine strategies for dealing with each category.

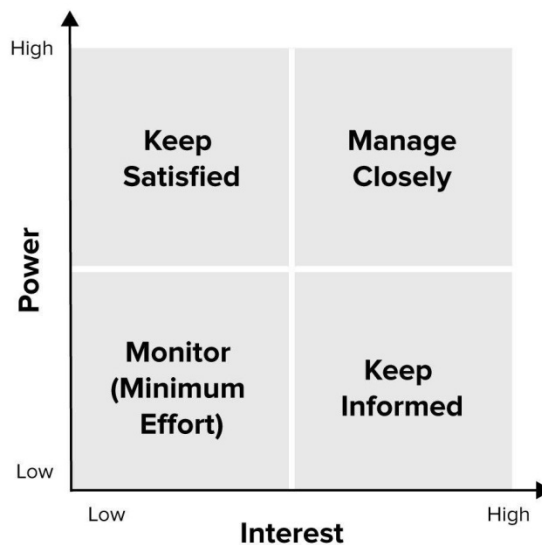
The interests of stakeholders need to be aligned to the company's business model and goals so we can make our business model more socially consolidated and our companies' goals easier to be reached and maintained.



(source: BRT Planning Guide, Stakeholder map that describes each type of stakeholder by both the influence/power and the interest of stakeholders. Source: <http://www.stakeholdermap.com/stakeholder-analysis.html>)

Stakeholder analysis

To develop a framework for managing different types of stakeholder relationships, map the power and influence of relevant stakeholders against their interest and aspirations.



One way to conduct stakeholder mapping is to use the grid pictured above. Stakeholders with high interest would include those who are particularly active in their support. Those with high power are those who have great influence over the company's success.

The combination of interest and power determines the best approach towards these different groups:

- Low power, low interest: Monitor them with minimum effort
- Low power, high interest: Keep them informed of your work
- High power, low interest: Keep them satisfied to ensure continued support
- High power, high interest: Manage them closely to maintain a strong relationship

Another prioritization tool may be **RASCI stakeholder categories**, which is a useful tool to help identify different categories of stakeholders.

R = responsible: the person who is ultimately responsible for delivering the project successfully.

A = accountable: the person who has ultimate authority - this is the person 'R' is accountable to.

S = supportive: the person or team who will do 'the real work'.

C = consulted: someone whose input adds value, is essential for successful implementation, or who needs to give buy-in.

I = informed: the person or group who need/s to be notified of results or action taken, but don't need to be involved in the decision-making or delivery.

Stakeholder analysis is a technique that can assist the company's staff members in mapping the variety of stakeholders that have an interest in the company and the individual nuances that can affect the company's success. The methods presented so far can be used in the case of all kinds of enterprises and organizations, including those of circular businesses.

Social networking

This part of the module will guide the learner through the process of acquiring and developing the knowledge, skills and competences necessary to tap into existing personal and professional networks and leverage the internal professional community for the benefit of the circular enterprise.

Social networking is an important part of the success of a business. It serves to connect individuals with other people and businesses to share information, ideas, and to form mutually beneficial relationships that provide assistance and support to each other over time.

Companies use social networks, to create and increase brand recognition, promote products and services, and to answer customer queries and concerns.

Social networks are important because they allow people to develop relationships with others with whom they might not otherwise be able to connect. It also helps boost business productivity when used for public relations, marketing, and advertising purposes.

Some of the results and advantages that may be reached in the process of business networking:

- network of partners built to keep an open eye and ear for new mutual opportunities
- targeted individuals reached for the own business in two ways: directly or indirectly (through network)
- own network expanded through colleagues/staff
- visibility built within the industry where the company operates
- visibility built within the local community to assist the company to develop a reputation as an employer of choice, leading to high chances of recruiting and retaining great employees
- strong network built with co-workers within the company to accomplish work more successfully by utilizing the network of mutually beneficial relationships
- networks created with diverse groups of people (other circular business people and professionals) with whom new ideas can be shared.

Online social networking

There are various ways in which to network. The recurring question is whether online and in-person networking is equally effective and interchangeable. The combination of the two will probably work most effectively for the majority of businesses.

Online social networking involves the development and maintenance of personal and business relationships using technology. Social networking can have a social purpose, a business purpose, or both, through sites like Facebook, Twitter, LinkedIn, and Instagram. Social networking has become a significant base for marketers seeking to engage customers, as well as for increasing brand recognition and encouraging brand loyalty. Since this makes a company more accessible to new customers and more recognizable for existing customers, social media marketing helps promote a brand's voice and content.⁴

Despite some stiff competition, Facebook remains the largest and most popular social network, with 2.8 billion people using the platform on a monthly basis, as of Dec 31, 2020. It was followed, in order of popularity, by Instagram, Facebook Messenger, Twitter, and Pinterest. There are disadvantages related to social media, including the spread of misinformation and the high cost of using and maintaining social network profiles.

The constantly evolving nature of social networking makes it challenging to keep up with changes, and influences a company's marketing success rate.

Communicating the circular message

This section will guide the learner through the process of acquiring knowledge, skills and attitudes to understand how to communicate effectively the circular message of the enterprise.

Communication strategy

As the circular economy emerges from the margins to the mainstream, companies across industries are beginning to implement circular business models, products, and services. But this transformational approach, from linear to circular, is still in the nascent stage and most customers, even the most sustainability-savvy, are not yet familiar with the concept. They often mistakenly see circularity akin to "recycling 2.0."

Accordingly, companies must be more creative, clear and careful in messaging circularity to engage customers.










How does a company communicate its circular economy message?

First, it develops a communications strategy.

The circular economy message needs to be strategically communicated both internally and externally. Messages can be communicated through the same channels used for corporate social responsibility and sustainability or can utilize any number of external communication channels that are focused exclusively on the circular economy.

One of the many tools to use in order to build up a business's communication strategy could be the one based on the widely used Business Model Canvas.

Create the Communications Plan for Your Circular Business

Key Stakeholders  List the key stakeholders who need to be involved. How do their needs differ? Who can provide input?	Key Activities  What activities and campaigns can be used to deliver the message?	Communication Goals  What are the main goals of your external communication activities? What do we want customers to do/say/feel differently?	Key Messages & Stories  What are the main messages for customers? What are specific messages for individual teams and personas?	Target Personas  With whom are you communicating? How do their needs differ? Which moments matter for them?
	Communications Team  What are the communications team's key resources? How could they be bolstered by external help and local part-time content owners?		Communication Channels  What channels will be used to communicate with which target customers? Examples: Social media, Public speaking, Networking, SEO, Viral marketing, Blogs, Online platforms, PR, Social advertising, Fairs, Content marketing, Community building, etc.	
Communications Budget  What is your communications cost structure? What changes to the budget are needed and why?			Track Results and Measure  How do you define success of communication? What are the output and outcome metrics?	

The above model focuses mainly on external communication but can also be used well to think through the internal communication strategy.

Storytelling

Secondly, the communication should be transparent, consistent, and convincing. It should include the following elements:

- Creative storytelling** - Stories of collaboration, co-creation, co-development, and societal transition that inspire and motivate the company's stakeholders/customers. Stories are very compelling, and visual elements are particularly persuasive behaviour change techniques for novel concepts such as the circular economy. Both success stories and those showing failure should be shared with the audience, they can help further advance the transition toward a circular economy.
- Educational** messages that inform consumers of their new role in the circular economy —rental, repair, return, re-buy, retain, resell, remunerate, and shared reuse—while communicating that recycling is the last option. Help consumers understand their new role in the circular economy and provide incentives to take on that new role. A circular economy requires a significant shift in a consumer's mind to increase their level of participation and to adopt new behaviours such as returning products, paying for access rather than ownership, and reusing materials. To support this behaviour change, companies need to explicitly communicate their expectations of consumers after the products or service's use phase. It should also be convenient or beneficial for consumers to take those actions after the use phase. An Ellen MacArthur Foundation [study](#) found that the number-one factor driving consumers' willingness to resell, donate, or recycle goods was convenience. Consumers cared less about getting the most money for their electronics or clothing than the ease of the

take-back program. The circular economy can increase the touch points associated with the customer experience.

- **Statistics** that reflect the outcome of the company's circular project. Companies tend to approach circularity on a case-by-case basis, rather than looking at their entire business model. Communicating data more transparently, particularly around pilot work, would be a useful first step.
- **Calls to action** that challenge consumers, government, and industry to embrace the circular economy.

Communications that engage stakeholders, respond to their concerns, and communicate in an open, honest, and transparent manner will contribute to a strong public image as a credible company.

The main purpose of communication is to communicate the added value (e.g., amount of natural resources preserved, the quality of clean/purified air, etc) that a circular business creates for its consumers and the community. Communicating multiple/shared values for customers and community is very important, significant effort needs to be spent on making these visible and clear.

Defining the target audience is a key factor in communication strategy. The basic demographic data of the target group, as well as its consumption and communication habits/channels need to be analysed. (e.g. Radio/TV advertisements are useless if the target group typically obtains their information only from online sources). Similarly, special attention should be given when working with influencers/ partners who are credible (or not) in connection with the protection and development of the community and environment.

While implementing our communication strategy (key stakeholder, key activities, key resources), those partners should be preferred, who also follow the circular economy model, or those who at least do not engage in community or nature destructive activities. In connection with the key activities, if possible, events should be planned, which are both communication activity but also create value (e.g. a press conference with seed planting, or an informal conversation with the press and target group members during garbage collection).

Operating according to circular economy principles does not exempt us from developing an effective and cost-effective communication strategy. A cost framework for communication needs to be defined and planned activities prioritized - implement those estimated as having the greatest impact on stakeholders - while fitting into the framework of both the circular economy and the defined financial framework.

Methodological indications

This module is practice oriented, in order to address the targeted learning outcomes, the teaching methodology has been developed in line with mainstream pedagogic trends. Moreover, blended learning methodology will be applied, which includes both online and offline methods relating to gamification, co-operative and project management techniques.

The following list details the adopted offline and online pedagogic methods which should be used:

- OFFLINE TECHNIQUES: Six Thinking Hats method (de Bono), Design Thinking, Marshmallow Challenge, Elevator Pitch, Peer Instruction, Case Study writing (assignment), Presentation, group works
- ONLINE TECHNIQUES: www.coggle.it – Mind Map, www.menti.com – Word Cloud, Online Entrepreneurial Test, www.scrumblr.ca – Brainstorming, www.kahoot.it – online test, video lectures, short presentations given by teachers or learners upon theoretical and research-oriented knowledge, video based exercises

Group activities to be applied during the training session are longer and require larger teams and sometimes the whole group to work on a specific task. For instance: World Cafe Method, Dilemmas Cafe, Resources for the IDEA, training exercise named 'Challenges'. The objectives of these types of activities are awareness raising, encouragement of collaborative teamwork, learning through developing an understanding of issues and perspectives.

Significant length of time is allocated for learners to participate in facilitated group discussions. Through discussions, learners can develop the experience of sharing knowledge, develop critical listening and questioning skills and can learn how to engage critically in relevant issues.

Case study analysis is also used as a typical exercise to develop learners' both critical thinking and analytical skills.

The Live Circular Canvas case studies and digital short stories (see at <https://livecircularcanvas.eu/en/home/home/scroll-outcomes>), Youtube videos and other relevant support material will be used to lead the learners through the various topics as well as have insight into successful circular practices from all over Europe. Topics and examples should be adjusted to be relevant. Self-assessment tools will be provided at the end of the unit to check the trainee's level of knowledge acquired.



5. CIRCULAR FINANCIALS

- Managing costs in a Circular Model
- Managing Customer Value in Circular Models
- Planning and Forecasting Finances in Circular Business Models

Module 5 - Circular Financials

Objectives

This Module deals with the changes that the circular approach introduces in the linear way of understanding businesses' financial perspective. New concepts contributed by the Circular Economic theory will be analysed and the new way of using previous financial concepts and models under the new paradigm of the circular economy.

The learning objectives for the participant in this module are:

- Be able to understand and leverage costs in the circular model
- Be able to manage and support the financial consequences of the specific Customer Circular Lifetime Value, from acquisition to fidelization (brand loyalty), through customer development.
- Be able to manage the financial consequences introduced in the Product Life Cycle by the circular approach.
- Understand, plan, and manage the new financial balance, needed to support the circular organization

Upon completion of this learning module participants		
KNOWLEDGE (will have...)	SKILLS (will be able to ...)	RESPONSIBILITY AND AUTONOMY (will...)
<p>CIRCULAR COSTS: Knowledge of facts, principles, processes and general concepts of:</p> <ul style="list-style-type: none"> • extended product live costs • reusing costs • recycling costs • virtualisation costs • take-back system costs • sharing assets costs • adoption factors costs • Triple Bottom Line 	<ul style="list-style-type: none"> • Understand the relations between circularity costs and circular perceived value for the customer • Understand the module margins implications derived from virtualization processes • Understand the financial implications of preparing your processes to change from autonomous operations to collaborative processes 	<ul style="list-style-type: none"> • Demonstrate ability in identifying specific circular model costs • Demonstrate ability in identifying and quantifying risks and opportunities of cost management in circular models

costs	derived from sharing assets.	
<p>CIRCULAR CUSTOMER MANAGEMENT</p> <p>Knowledge of facts, principles, processes and general concepts of:</p> <ul style="list-style-type: none"> • Customer Life Time Value (LTV) • Customer Circular Acquisition (circular prospection for a potential customer development), Costs of search and qualifying customers • Circular customer development (customer education for a proper perception of the circular value proposal) • Circular Engagement and Fidelization; Costs to create barriers to non-circular value proposals and win “willingness to purchase” from customers to our circular offer; Defensive and optative costs 	<ul style="list-style-type: none"> • Understand the Customer Lifetime Value (LTV) model • Understand the Circular filtering process, to reach good conversion rates and costs, from circular prospects to circular customers • Understand the need of an educational process in order to make evident the circular value to reinforce the customers purchase decision • Understand the need to extend alongside all the customer relationship the educational work: <ol style="list-style-type: none"> 1. to develop the customer circular purchase level and retention rate. 2. to activate our customer as an active promoter of our offer enhancing our Net Promoter Score index (NPS). 	<ul style="list-style-type: none"> • Demonstrate ability in assessing Acquisition Costs • Demonstrate ability in assessing Satisfaction, Retention and Development Costs • Demonstrate ability in assessing Engagement and Fidelization Costs
<p>CIRCULAR PRODUCT LIFECYCLE MANAGEMENT</p> <p>Knowledge of facts, principles, processes, and general concepts of:</p>	<ul style="list-style-type: none"> • Understand the Product Life Cycle (PLC) model: <ol style="list-style-type: none"> 1. Launching Phase. Adopt the new rules needed to create long term 	<ul style="list-style-type: none"> • Demonstrate ability in identifying consequences of the Development/ Launching Phase

<ul style="list-style-type: none"> • Product Life Cycle (PLC) • Product Circular Design Financial Implications • PLC phases: <ol style="list-style-type: none"> a. Development phase b. Launching phase c. Growing phase in circular products, sustainable pace and network effect. d. Maturity phase, replacing components and maintaining costs and services. e. End of Life (EOL) phase. Recovering, TBS and Recycling) 	<p>cooperation agreements with circular providers (raw materials, services, etc.)</p> <ol style="list-style-type: none"> 2. Growing Phase. Circular commitment between parties, to assure the Continues Improvement needed. Growing pace its now a network capability issue, not your only issue. 3. Maturity Phase. Understand Product Life Extension through maintenance and repairing. To make real the circular promise extending product life should be easy, affordable and have economic sense for you and for your costumer. 4. EOL Phase. Define the Take-Back System for recovering and reintroducing EOL products as new raw materials. Study of compensation systems for the customers. Recycling capabilities for materials not able to be reintroduced in the production process. <ul style="list-style-type: none"> • Understand the Costing approach within Circular Product Management Phases: <ol style="list-style-type: none"> a. Design, Concept & 	<ul style="list-style-type: none"> • Demonstrate ability in identifying consequences of the Growing Phase • Demonstrate ability in identifying consequences of the Maturity Phase • Demonstrate ability in identifying the consequences of End of Life Phase
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	<p>Development</p> <ul style="list-style-type: none"> b. Manufacturing c. Transportation & Installation d. Operation & Maintenance e. Phase 5: End Of Life (EOL) 	
<p>CIRCULAR FINANCIAL PLANNING</p> <p>Knowledge of facts, principles, processes, and general concepts of:</p> <ul style="list-style-type: none"> • TAM (Total Addressable Market) • SAM (Serviceable Available Market) • SOM (Serviceable Obtainable Market), in a circular context. • Creating the Triple Bottom Line Indicators for the business. 	<ul style="list-style-type: none"> • Understand TAM, SAM, SOM • Create, maintain and communicate your Triple Bottom Line statement 	<ul style="list-style-type: none"> • Demonstrate ability in producing a Total Market Analysis (TAM SAM SOM) • Demonstrate ability in elaborating a simple Triple Bottom Line framework (Market, Social and Planet) consequences of the launching/design phase

Module No.	5	Duration:	8 hours
Module Title:	Circular Financials.		
Aim:	<p>This module deals with the changes that the circular approach introduces in the linear way of understanding businesses' financial perspective. New concepts contributed by the Circular Economic theory will be analysed and the new way of using previous financial concepts and models under the new paradigm of the circular economy.</p> <p>Learners will be trained in identifying the impact on costs over time in financials (at the short, medium and long time) of circular principles. They will be able to evaluate the extra income potential derived from CE principles application, performing the financial statements of the business as a whole with both perspectives, circular costs and circular incomes.</p>		

Learning Outcomes:		Assessment Criteria:
1	Be able to understand and leverage costs in the circular model	Identification of specific circular model costs
		Identification and quantification of risks and opportunities of cost management in circular models
2	Be able to manage and support the financial consequences of the specific Customer Circular LifetimeValue.	Evaluation of Acquisition costs
		Evaluation of Satisfaction, Retention and Development Costs
		Evaluation of Engagement and Fidelization costs
3	Be able to manage the financial consequences introduced in the Product Life Cycle by the circular approach.	Launching/design consequences recognition
		Growing phase consequences recognition
		Maturity phase consequences recognition
		End Of Life consequences recognition

4	Understand, plan, and manage the new financial balance, needed to support the circular organization	Produce and Justify Total Market Analysis (TAM SAM SOM)
		Elaborate a simple triple Bottom Line (Market, Social and Planet) for the circular business.

Themes

This module mainly works on the specific financial issues implied in a circular business model or the transition from linear to circular. The primary financial matters within the business model can be reviewed in the Erasmus+ project, LiveCanvas (www.live-canvas.eu), specifically in the section on finances (www.live-canvas.eu/en/learning-area/5/1/financing--profit-analysis).

Themes to be addressed in this module are:

1. Costs in the circular model

This part of the module will guide the student through understanding how the business standard costs are affected by adopting the circular approach. It will also consider the opportunities and threats that arises in terms of costs, derived from adopting this approach.

It will similarly give an overview **of cost analysis and cost structure in a circular business model**. It is important to realize the costs related to work in a circular enterprise, and how they differ from that of a linear business.

2. The Customer Life Time Value (LTV)

In this part of the module, we will explain in detail how the Customer Life Time Value (LTV) is used to model the value that a customer gets from a circular product.

The main topics are:

- Circular Customer LTV
- Net Promoter Score (NPS)

3. The Product Life Cycle

This part of the module will guide the learner through the process of acquiring and developing the knowledge, skills and competences necessary to manage the Customer Relationship financial perspective derived from the circular approach.

The main topics are:

- PLC from a Circular management angle
- PLC Cost structure
- Life Cycle Costs

4. Managing the new Circular financial balance

This part of the module will help to consolidate the financial analysis done on the specific costs of circularity, circular management of customer and product/service life cycles. We will highlight the "circular constellation" effect, which implies that some parts of the system have to consider the others' growth level to establish and achieve their growth plans. Finally, we will work on some fundamental indicators to present the circular business's Triple Bottom Line.

The main topics are:

- TAM SAM SOM
- Triple Bottom Line basic indicators.

Costs in the circular model

We must begin with an approximation of the new types of costs that we will encounter, derived from the circular nature of the business model.

Cost analysis in a circular business model

In the Circular business model costs can be split up in four different "Blocks".

Block 1: Increasing the Product Lifetime.

In the first block, we can include the costs associated with achieving the objective of extending the useful life of products. Product can achieve this extension through a more studied design or by using materials or components that allow it to last longer. A further aspect of product life extension is reuse, either by the original or by a different user. To achieve this reuse, we will probably have to factor in the costs of reconditioning the product or the logistical or commercial costs of making it available to the new user, or both at the same time.

Block 2: Multiple user access.

A second block would be related to costs related to how customers reach the product's benefits. The standard way would be the physical and complete possession of the product for its use, such as owning a 3D printer. If we choose to offer the 3D printing that customers need more circularly, we can evolve in two different directions. We can offer 3D printing services from a platform where the customer uploads the design, and we send them their printed prototype (virtualisation). We can create a physical space where the customer comes

and rents the printer time he needs (sharing services). There are beneficial circular effects in both cases, but they will require specific costs for their development.

Block 3: End of Life Management.

A third block has to do with managing the product's end of life (EOL). If the provider cannot reuse the product, there will be costs associated with recycling operations. These operations will include logistical fees, separation and preparation expenses, recycling process costs and costs related to taxes that may arise from the process. If, on the other hand, the provider can reintroduce the product into the production chain, the provider will incur the costs associated with the support of the Take Back System (TBS). These costs will include the logistical fees of recovery, preparation, and reconditioning, as a raw material or as a component, of the goods provided by the TBS.

Block 4: Adoption Factors.

The fourth and last block has to do with the cultural component that any transition from a linear to a circular model implies. Within this block are the costs derived from implementing the Adoption Factors, both internal and external. The Inner Adoption Factors derive from training our teams and preparing your processes to make circularity operational in a fluid and consistent way. We must train, measure and control new aspects of management and operation, which will undoubtedly bring benefits, but which initially will also entail additional efforts and costs. Concerning External Adoption Factors, we must mention the costs derived from the action on all types of stakeholders to generate a favourable positioning of our circular model. Also included here are the costs derived from educating our immediate society about the benefits of circularity and developing corporate social responsibility (CSR) policies and actions in this direction.

The Triple bottom line.

All these new costs will impact our unique way of achieving the bottom line of circular companies. That new bottom line will serve a triple bottom line: economic, environmental and social. The Triple Bottom Line: **Market, Planet** and **Social**.

The circularity of our offer is a positive differentiating attribute for that part of the market that is aware of the need to work with this triple orientation. This differentiator makes it possible to attract this demand to our company and create strong retention links. The social connection with what is close, local, helps create barriers to aggressive competition from offshored companies that compete based on the cost economies derived from this offshoring.

In other words, a circular business stands out from the rest of the producers in the market. Used wisely, this status can give the business access to new customer segments and maybe even convince conventional customer segments to "join the cause".

Initially, the costs of implementing circularity will impact revenue, because they are added to those of the linear model of producing or operating service, but they are costs of change that later displace and replace them. Sourcing reused raw materials can initially be more expensive, but in the long run they may prove to be a cheaper alternative, and setting up a TBS can be costly, but will in turn save on sourcing new materials.

The circular model is designed to achieve more with less and reintroduce those economies into benefits on the planet and society. Circular models can, ideally, be cost-competitive, as they incorporate an evolution of LEAN (zero waste) methodologies with the addition of DESIGN TO LAST and LOCAL PROMOTION.

The Customer Life Time Value (LTV)

The trade-offs to the increased costs associated with boosting the circularity of the model are:

- on the one hand, the possibility of charging a higher price for the added value that circularity implies for some segments that are aware of it.
- On the other hand, it is possible to extend the useful life of the customer, derived from the extension of the life of the products and the new and extended revenue streams that may appear in the model.

LTV is a metric that shows how you can expect the evolution of both parallel indicators: your income sources from the customers and the investments/expenses incurred in developing your relationship with the customer.

Circular Customer LTV

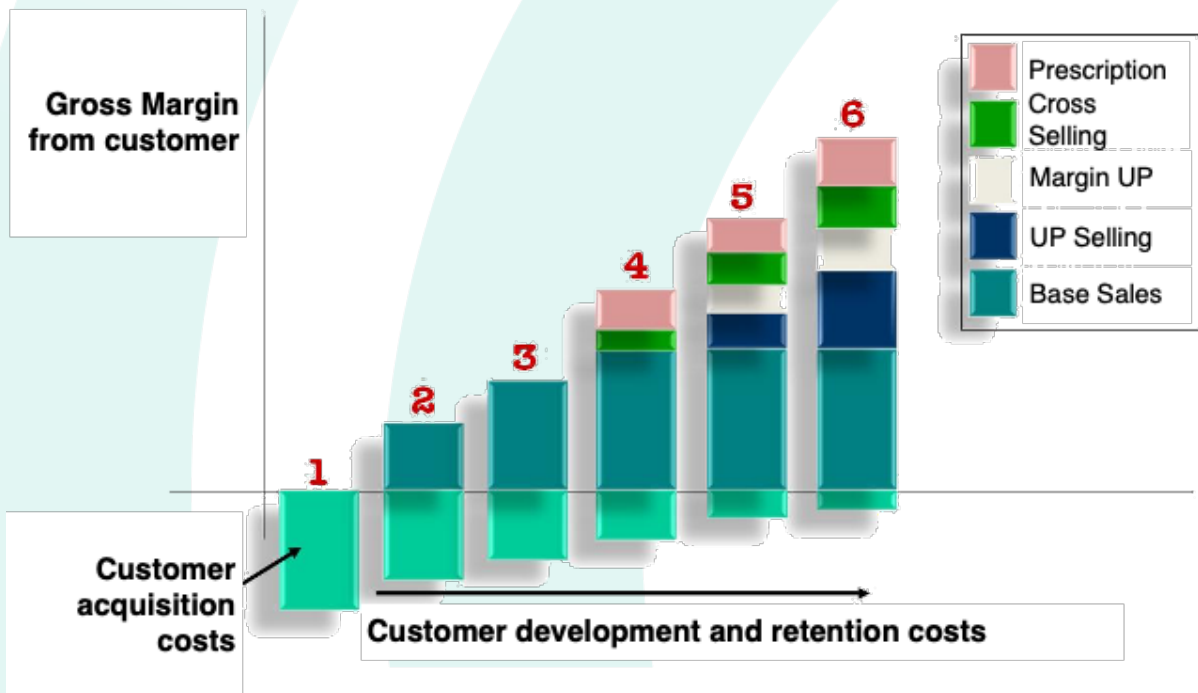
Circular customer LTV implies some considerations:

- **Acquisition costs.** Due to the need to educate some segments or specific customers, these kinds of costs will probably be more significant than in a standard linear product or service.
- **Lifetime extension.** As most of the circular designed products aim to extend their time in use, you can expect an extended LTV, meaning more value in total from each product to the customer or market segment.
- **Customer development costs.** Longer product life means a prolonged and more intense customer relationship. All the maintenance and repair services aimed to extend the product life has to be used to gain valuable customer knowledge and

market insight. The seller bears a part of these costs. On the other hand, it will generate a new source of income by billing these services, and it should be considered an investment in loyalty activities.

While it may seem counterintuitive that a longer product life can increase revenue, it actually does make sense if you look at the customer relation over time.

The customer's lifetime value follows a specific logic and has an evolution over time, both of which we present in the graph below.



On the vertical axis, the different sources of margin generation with the customer over time are represented:

1. The **Base Sales** margin is the margin generated by the sales that this type of customer may have according to their profile as a customer or consumer. If we work well with the customer, the margin of these sales from the first sales to the customer will progressively increase as the volume of sales increases until it reaches a level close to the maximum for this type of customer.

In other words, customers who buy a circular product that they are happy with, will likely come back and buy some more.

2. As the relationship with the customer progresses, and trust becomes more consolidated, there will be an opportunity for generating something called **UpSelling**, which includes two variants: upselling itself, which implies consumption beyond

expectations according to their profile; and upgrading, which means that from this base of satisfaction and trust, we can convince the customer that the volume they buy from us and the margin we generate, as a result, will be of a higher range product or service, so that for the same volumes, the margins generated are likely to be higher.

In the longer run the happy customers may even exceed our expectations in buying even more, or in fact return with earlier products to get them refurbished or upgraded.

3. As in the previous point, **Margin-Up** is not about improving the margin because a superior product is purchased that generates more margin, but about the effect of enhancing the margin by learning and integration between customer and supplier. As the relationship between the two becomes more robust, the supplier gets to know the customer better and can offer the products or services less friction and less effort. This lower friction and effort translate into a lower cost for generating the same sales volume, which ultimately becomes a Margin-Up.

When the customer relationship grows, the circular business can start making new products on demand, or even bespoke solutions to specific customers that they cannot get anywhere else. This expands the range of products, that in turn generates new demands from other customers.

4. Cross-Selling means expanding the customer's sales base by adding new products or services to our offer, which our customer did not initially purchase. Over the customer's initial sales base from a first product or service, new sales bases will appear coming from the following products or services that, based on the trust of our relationship with the customer, are incorporated into our commercial relationship with the customer.

Now we are really talking about Brand loyalty. The customers will start buying other products from the circular business just because they are producing them.

5. Finally, an additional source of margin generation is referrals or **Prescription**. When a customer refers to us, it does not create additional revenue in itself. Instead, when a referral occurs, the margin of the customer on whom the referral has been made is improved. The acquisition cost of the prescribed customer is reduced due to the effect of the reduction of commercial barriers exerted by the action of the prescriber. If we lose a customer of this type, or if he ceases to be an active prescriber, we will lose not only his margin but also the reductions in the cost of acquiring customers who will not now be the object of prescription.

With customers like these - who needs advertising? Using the leverage from loyal customers will outweigh most ad campaigns.

On the horizontal axis, what is depicted in the graph is the evolution of customer acquisition and development costs. Again, two key issues can be seen:

Customer Acquisition Costs. As the graphic shows, the vast majority of customers start with a negative economic balance. Therefore, we begin by investing in customer acquisition. However, we have not yet obtained any sales, or the deals got offers a margin that is not sufficient to achieve a positive result for the customer in that period.

Customer Development Costs. As we work with the customer, the costs are reduced, but they never disappear because we will always have to adjust our offer and services, communicate with the customer, develop and direct promotional actions, etc.

Suppose we combine the dynamics of reducing customer relationship costs with increasing margins from the various sources we have seen. In that case, we can intuit the positive evolution of customer profitability. What will be decisive for both dynamics (cost reduction and increase in margins) to occur, is that we have a segment in front of us that we are able to satisfy. This satisfaction will allow us to create linkage and continuous improvement, which will enable us to extend the customer's LifeTime Value and reach the temporary scenarios where profitability is maximised.

So the most important thing to remember is: Know your customer base, and keep them happy.

Net Promoter Score (NPS)

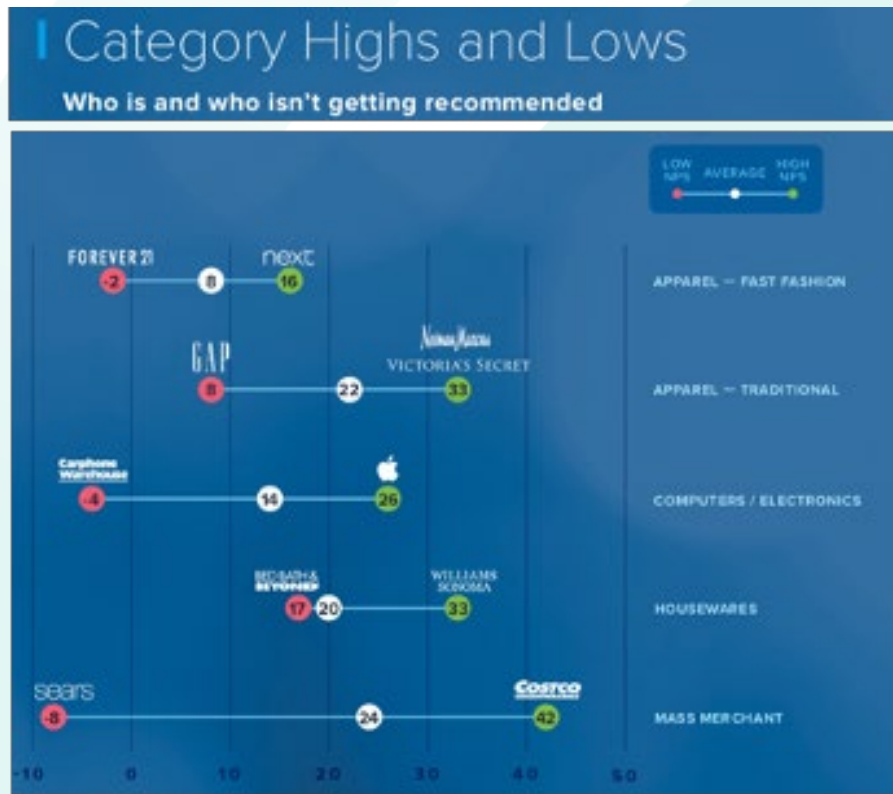
If you want to extend your customer's LifeTime Value, you need their loyalty.

It might be unrealistic to expect that 100% of their purchases in a product or service category that you provide are made from you. They are not being unfaithful to you if they buy from other suppliers. But a way to visualize customer loyalty is the Net Promoter Score.

The Net Promoter Score (NPS) goes beyond customer loyalty. A customer can be loyal and make all his purchases in a product or service category from a supplier. But he can be neutral from the point of view of prescription or referral to other potential customers. For example, imagine that a customer of yours makes 100% of his purchases from your company, but when asked if he would recommend your company, he remains neutral. Why might this happen? For example, there are several possibilities if someone stays in your three-star hotel every time he comes to your city but does not recommend it because he would like to stay in a four-star hotel, which does not exist in your city.

A positive NPS implies that the people you serve are loyal and satisfied and recommend your offer for that category of product or service. A circular business needs its customers to be

satisfied with the circular value proposition AND recommend it to other potential circular customers.



The Net Promoter Score consists of the number of people who would recommend your products to colleagues, friends and family, minus the people who would actively deter other from buying them.

The State of NPS

In the 15 years since Net Promoter Score™ (NPS®) was introduced, tracking and improving it has become a top initiative and a closely watched KPI for executives. It's easy to understand why: NPS offers a simple, one-question formula for better understanding customers.

Because so much is riding on NPS, access to real customer data and expert analysis is vital. This report is based on our annual survey of more than 40,000 retail consumer experiences with brands in the U.S., U.K., and Canada. With that input, we show you who's winning and who's coming up short — in store, web, and mobile channels (pages 4-5). And we dive deeper, adding insight into what customers want from retailers and data on how NPS differs across geographies, gender, and other segmentations (page 9).

We've been collecting and publishing retail benchmarks for 16 years. The data and insights that follow will help you understand consumer sentiment about your brand and NPS in the retail industry. It will also help you develop strategies to improve NPS and, by extension, the broader customer experience.

ForeSee's Predictive NPS complements and extends NPS measurement with a proven methodology that delivers actionable intelligence to drive business results. See page 10 for details.

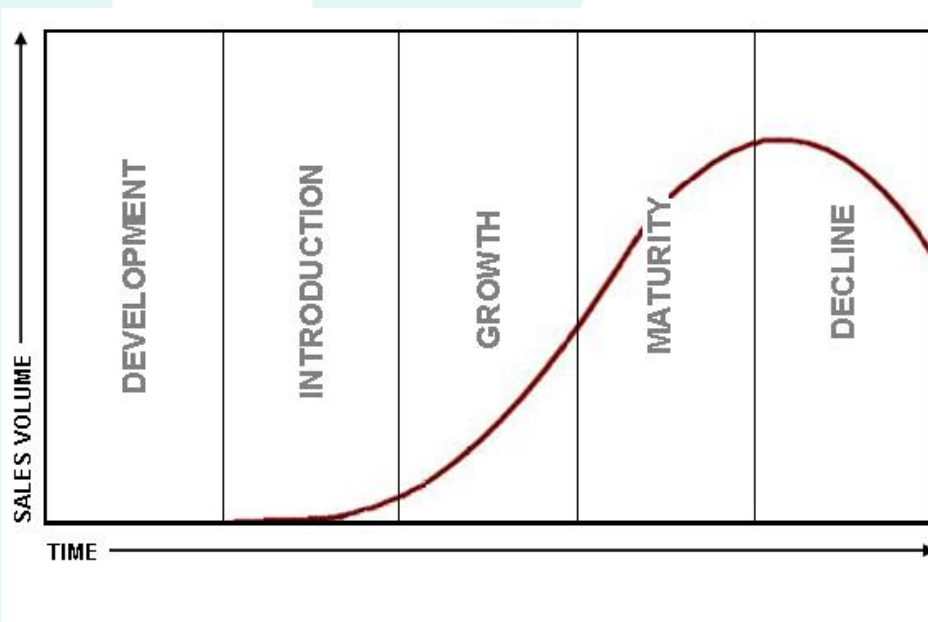
% PROMOTERS - % DETRACTORS = NET PROMOTER SCORE

The NPS is a metric that allows us to anticipate whether the market's position on our offer is positive or negative. A positive trend in this metric will facilitate the expansion of our offer in the market. Given the particular characteristic of the Value Proposition of a Circular Business

Model, which extends from Market Value to Planet Value and Social Value, we are interested in obtaining positive NPS focused mainly on customers who perceive the three components of our value proposition. We will have to educate the market about the triple benefits of the circular value proposal (External Adoption Factors at the CBMC). So that, the content of their positive reference includes all dimensions of the value of our product, not only those related to its functionality and attractive design.

The Product Life Cycle

In this part of the module the focus will be moved from the customer to the other side of the Value Proposal: Product/Service offer. The circular approach of the business model will imply several differences in terms of the financials of the product in the different phases/stages of its life cycle.



The Product Life Cycle is a model that presents the stages, with different characteristics, through which a product passes from its introduction to its exit from the market. Five phases are usually distinguished:

- **Development:** We go from idea to product, with research and development costs, concept testing, analysis and selection of potential suppliers, prototyping, product testing and industrial validation of the design.
- **Introduction:** in this stage, the main costs come from marketing actions to communicate the existence of the product, commercial activities to promote its

introduction to "early adopters", as well as trade marketing actions aimed at introducing the product in the distribution channels (physical or online) that will make the product available to end customers. If we have chosen the right market to launch in, competition at this stage is most likely to be scarce and weak.

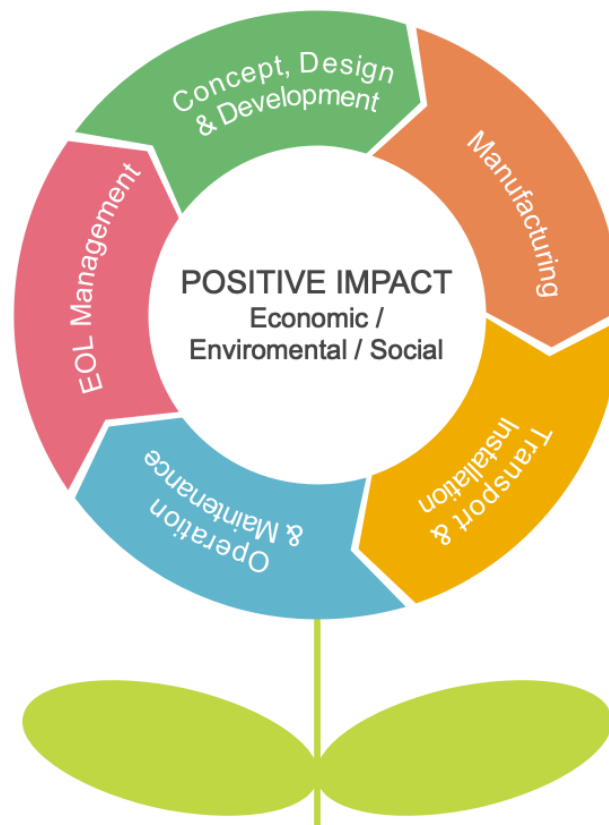
- **Growth:** at this stage, sales traction must occur to reach volumes that make the marketing of the product profitable. So again, the essential costs will be associated with marketing and sales. At this stage, competitors may start to appear because they have become aware of our product and launch their versions on the market.
- **Maturity:** we reach this stage when we have met the base sales volume of most of the customers we selected as our target group. If we have been successful, we will most likely have attracted even more competitors. This increased competition can dilute the initial differentiation provided by our product. The existence of very similar products on the market can lead to the "commoditization" of the product, with a substantial decrease in brand loyalty. As a measure to combat this evolution, specialisation in certain parts of the target market is usually recommended, achieving a differentiation on a smaller scale than the initial one, but which allows us to maintain our prices at sufficient levels to generate profitability. Suppose we are not capable of practising this specialisation. In that case, commoditization will lead us to price-based competition, significantly increasing the promotional cost to maintain a sufficient volume of sales so that producing it makes economic sense.
- **Decline:** the erosion of differentiation caused by the concentration of competitors leads to the loss of module margins. Suppose we add to this the possible introduction of new substitute products (by our competitors or by us), which respond better to market demand and provide differentiation. In that case, we will find ourselves in the decline stage that will culminate at the End Of Life of the product, with its orderly exit from the market. At this stage, the objective will be to reduce and concentrate the range offered so that production lines can still manufacture reduced product volumes in efficient batches. This compression of the product range makes it possible to reduce the stocks of components and finished product, which in time will facilitate the exit of our product from the market.

These phases represent the products themselves, and they are relevant for ALL products, Linear and Circular. But for a Circular product where one of the goals is to extend the Product life time, we need to look at how the business itself can secure this when working with the PLC phases.

PLC from a Circular management perspective

From a Circular management perspective, the Product Life Cycle still has the five different phases shown in the graphic (with slightly different names but the same meaning). Here we will consider the different financial aspects related to each of them and we will highlight the action that a circular business needs to consider in each phase:

Product Life Cycle Phases (Circular perspective)



1. **Development Phase.** Apply the Circular Product Design that implies “design to last” and “green components” easy to reuse and recycle. There are some additional considerations when it comes to circular products, and also some extra costs. The raw materials need to be sourced, maybe even from local suppliers. And already in this phase you need to adapt the product for its end-of-life phase to be able to reuse as much as possible.

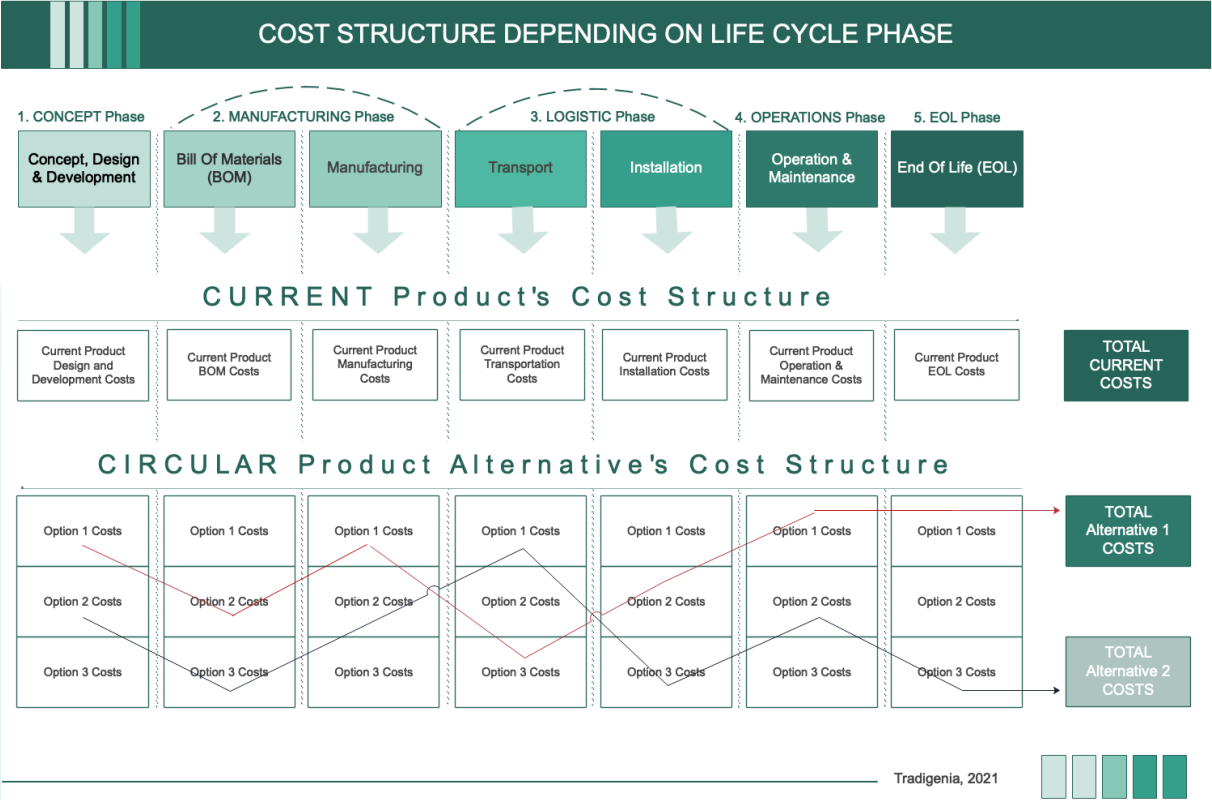
2. **Launching Phase.** Adopt the new rules needed to create long term cooperation agreements with circular providers (raw materials, services, etc.). The local aspect may be important, and the marketing activities should reflect the product, and be targeted at the customer segments likely to adopt the products. The story about the product may be just as important as the product itself.
3. **Growing Phase.** Circular commitment between parties, to ensure the continuous sales growth needed. Growing pace is now a network capability issue, not yours alone. So you need your partners' help to grow sales. Try to engage and activate your customers to help promote the brand and the product. Sell the story along with the product. Listen to the feedback and make sure that the changes made to the products reflect that, and it is communicated.
4. **Maturity Phase.** Understand Product Life Extension through maintenance and repairing. Making good on the circular promise to extend product life should be easy, affordable and have economic sense for you and for your customer. As with other products in this phase competition might be rising, forcing a price-based competition. But a circular product should be more robust against other similar products, in that the customers are buying into the story of the product, as much as the product itself. And in addition, existing loyal customers are able to keep the story flowing by promoting it to others. Be sure to reward this behaviour.
5. **EOL Phase.** Define the Take-Back System for recovering and reintroducing EOL products as new raw materials. Study of compensation systems for the customers. Recycling capabilities for materials not able to be reintroduced in the production process. Make sure that the take-back process is, above all, easy for the customer to use. Customers of circular products have shown to value convenience much higher than fiscal compensation when returning a used product to the next in line. Handing over your old products to refurbishment and reuse is in itself a part of the circular idea that the customers have bought into.

PLC Costs Structure

Products can be made better all the time, but for a circular business it is not only about making the product better each time you redesign it, it is also about making it even more circular. But circularity is not cheap, and some of the things that can make a product really circular may also prove to be really expensive.

It can be helpful to look at this model to illustrate the cost structure of the different designs a circular product goes through in its total lifetime.

By looking at the current costs structure in the different PLC phases it is possible to spot the opportunities to use different alternative approaches to make the product even more circular in the alternative cost structure.



This way we can try out different methods in each redesign, and for some circular products even in each production batch, to see what alternatives give the most circularity at the lowest cost.

Using this model, we can generate different product alternatives; each one includes various sets of circular improvement options in each process. Once the alternatives have been generated, we will evaluate our probability of successfully developing them, the capacity to assume the development effort they require and, finally, the expected market impact of each alternative. With all this information at hand, we will choose the most appropriate circular alternative for the evolution of our product.

Life Cycle Costs

For each of these phases there are different costs. Designers are expensive, and it can take a long time to find out how to produce the right product. Manufacturing has to be set up. Packaging and transportation have to flow, and maintenance and repairs costs money, not to

mention collecting and disposing/recycling used products. Initially these costs have to be paid by the manufacturer, but eventually they have to be borne by the customers. We have to make sure that we understand the difference between manufacturer costs and user costs.

From the manufacturer perspective there are several cost groups:

Manufacturing costs related to materials, transportation, research, product design, purchases, planning, construction/production costs, wages, certification, training and marketing.

Operation costs such as maintenance, auxiliary costs, wages, taxes, training and transportation.

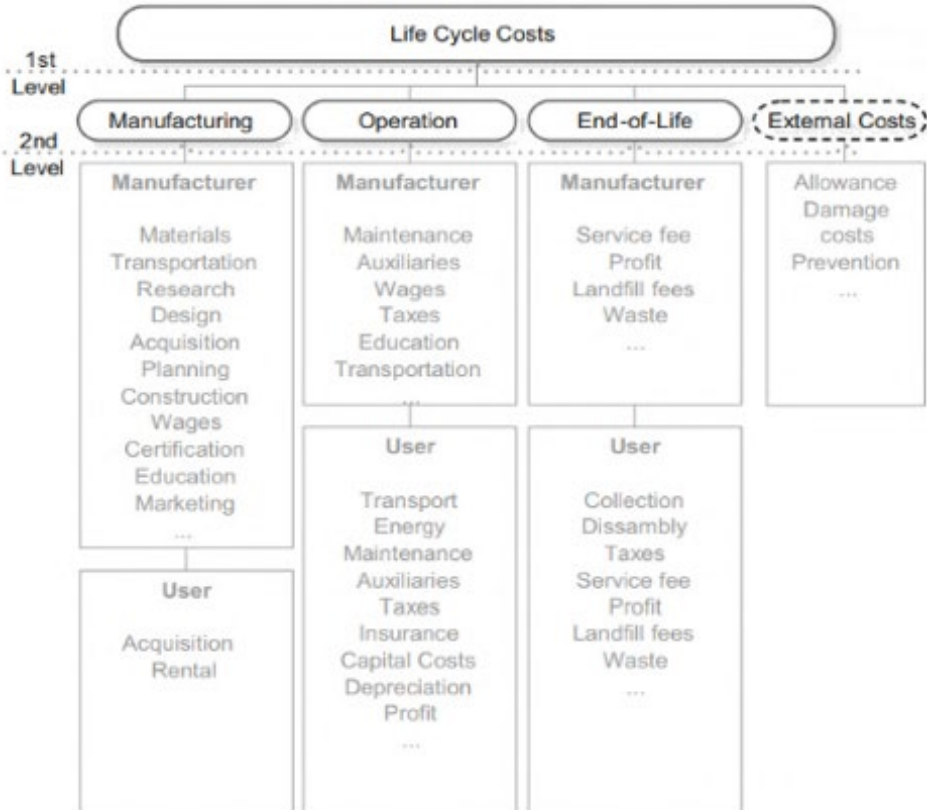
End of life costing, including service fees, landfill fees and waste costs.

From the user perspective we can observe the same groups, but with different content:

Manufacturing costs related to product/service acquisition or rental.

Operation costs such as transport, energy, maintenance, auxiliary costs, taxes, insurance and others.

End of life costing, including collection costs, disassembly, taxes and waste costs among others.

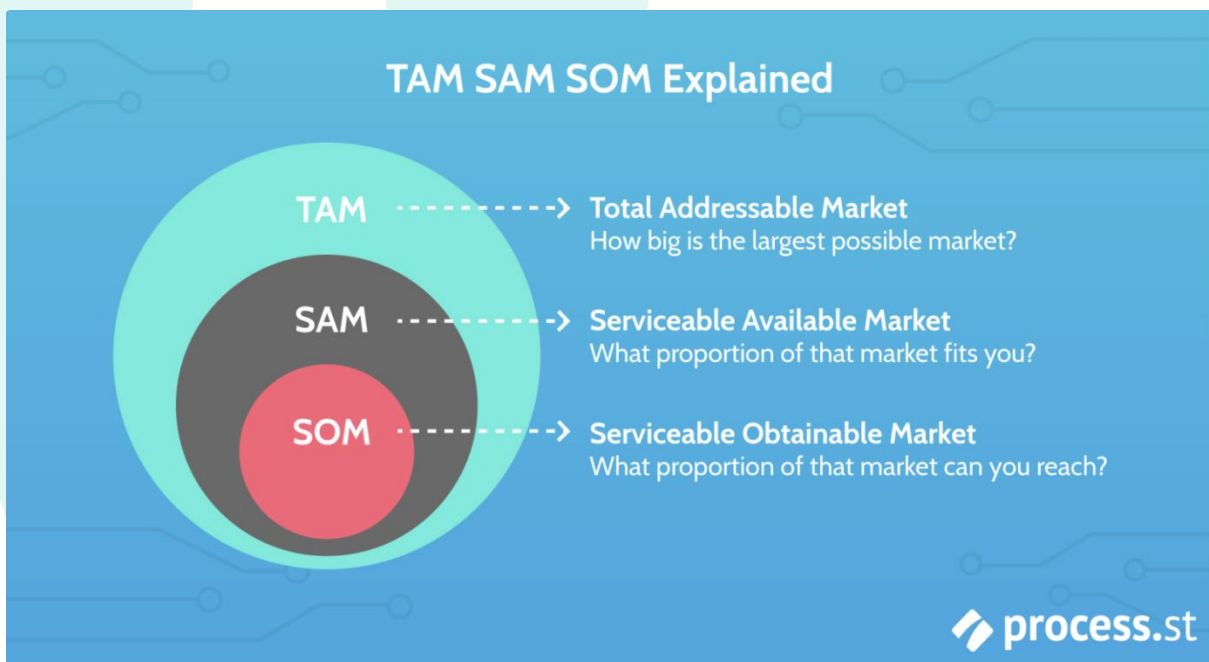


Managing the new circular financial balance

This part of the module will help to consolidate the financial analysis done on the specific costs of circularity, circular management of customer and product/service life cycles. We will highlight the "circular constellation" effect, which implies that some parts of the system have to consider the others' growth level to establish and achieve their growth plans. Finally, we will work on some fundamental indicators to present the circular business's Triple Bottom Line.

TAM SAM SOM

- TAM: Total Addressable Market. Everybody. But not all of them will be susceptible to your circular offer.
- SAM: Serviceable Available Market. People who want your product, but some of them can be difficult to reach.
- SOM: Serviceable Obtainable Market. Those parts of the market that you're able to reach with adequate marketing offers AND who want to buy your products.



Source: <https://www.process.st/tam-sam-som/>

TAM SAM SOM of your circular business

Considering your target market, that is the people who would be able to appreciate your circular value proposition. You must define which part of that market will be offered the

result of your business model and plan. They will be the potential source of your income and the leading cause of your expenses as a business.

The figure introduces the market sizing definitions that lead to our goal, the Serviceable Obtainable Market (SOM). Until the circular economy becomes mainstream, you can expect that our SOM size will be smaller than the size of the SOM of a similar but non-circular business. Against this current **quantitative disadvantage**, there is a future **qualitative advantage**; the SOM of circular business propositions is much more loyal than the one from linear business propositions, which is much more sensitive to fads and promotional action.

SOM of your “circular constellation”.

“Circular constellation” refers to the need to analyse the conjoint capabilities of your model network (raw materials suppliers, service and activities providers, etc.) to establish an appropriate growth pace.

Reaching the SOM is, most times, a network issue because if you want to grow, you will need all your network growing at the same pace to reach the conjoint success while maintaining the integrity of your circular business proposal.

Sometimes, a specific strategy is necessary to support and develop the network, at your own cost, to assure those critical capabilities to maintain an improving pace in your growth and consistent circular value proposal.

Triple Bottom Line basic indicators

The Triple Bottom Line is the expression, in the form of an income statement, of the content of the Value Proposition of the Circular Business Model Canvas: value for the **Market**, value for the **Planet** and **Social** value.

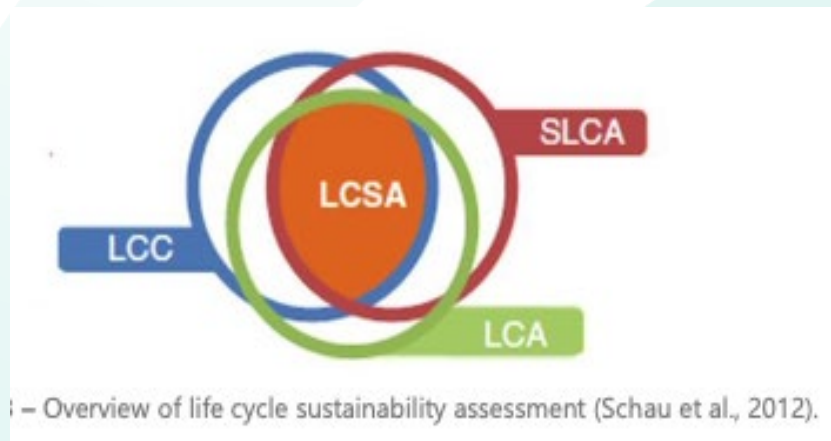
The research on this topic is trying to find ways to practically measure the impact on social and planet indicators. But there is not one simple method that real life businesses can apply to present their Triple Bottom Line in a common framework - yet.

For those interested in learning more about this we recommend visiting the LCSA methodology.

LCSA

LCSA **Life Cycle Sustainability Assessment** Methodology. The LCSA methodology assesses all environmental, social, and economic impacts and benefits of products

throughout their entire life cycle. LCSA combines LCA measuring Planet aspects, LCC measuring Economic factors, and SLCA measuring social elements.



LCSA = LCA + LCC + SLCA, where:

- LCA, (Life Cycle Assessment), a technique used to assess the environmental aspects associated with a product during its life cycle.
- LCC (Life Cycle Cost), a method of assessing the cumulative product cost over its life cycle (time interval between conception and decommissioning/EOL).
- SLCA (Social Life Cycle Analysis), considers the social impacts of products/services on life cycle actors: workers, local communities, consumers and society itself.

(Adapted from LCSA, Sustainn)

But for practical purposes in a real-life Circular business there are many different ways of narrating the Triple Bottom Line. In the end it is all about credibility. If your customers accept your claims of circularity, and they are willing to pay extra for it, or indeed select the circular option in their shopping habits, then the narrative of the Triple Bottom Line is working.

There is always the danger of being accused of “Greenwashing” where a company tries to sell a product, or brand the company, using circular concepts, but it is not viewed as credible by the market. But all in all, a circular business should always use its planet and social value indicators as a selling point.

Methodological indications

This module is practice oriented, applying blended learning methodology, which includes both online and offline methods relating to gamification, co-operative and project management techniques.

Alongside the traditional ways of giving lessons which draws upon theoretical and research oriented knowledge, a series of pair or small group activities - based on the application of training tools, case study analysis, etc - can be offered during trainign sessions.

Dedicated time is allocated for learners to participate in facilitated group discussions.

Work assignments can be applied both for in class presentation or for online submission.

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Online resources

1. <https://www.ellenmacarthurfoundation.org/circular-economy/concept>
2. <https://www.mckinsey.com/business-functions/sustainability/our-insights/europes-circular-economy-opportunity#>

3. <https://staffbase.com/blog/after-coronavirus-planning-for-the-new-normal-with-proactive-internal-communication-includes-free-strategy-template/>
4. <http://www.free-management-ebooks.com/faqpm/team-09.htm>
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