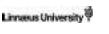


Business Model Innovation for  
**Circular Economy**  
Module 3.1 – Training material

LEAD PARTNER

PARTNERS



## INTRODUCTION

Switching from the current linear model of the economy to a circular one has recently attracted the attention of major global tourism companies, for instance, Hilton Worldwide Holdings. The reasons for this are immense financial, social, and environmental benefits. The rise of interest of SMEs in participating

in this growing trend is also noticeable. Unlike large corporate conglomerates, SME's, are, however, often lacking expertise in the field. Thus, comprehensive knowledge of designing circular business models is needed to stimulate and foster the implementation of the circular economy.

## OBJECTIVES

1. The overall objective of the workshop is to introduce, circular approach by design, followed by a demonstration of good practices, recommendations, and practical exercises regarding closed-circuit, business models implementation.
2. Second of all, we hope to induce a pro-innovative initiatives among SME's, with particular emphasis onto ones representing tourism industry.
3. Thirdly, we raise the awareness and encourage the gradual shift towards circular business models.
4. Last but not least, we expect workshop participants to get familiar with practical skills and knowledge regarding:
  - a. the concept of innovation and how can it be used with relation to the circular economy
  - b. how to identify the benefits from introducing innovations in the tourism industry
  - c. business model design and concept
  - d. tools of development, evaluation, and validation of closed-circuit business models





## KEYWORDS

### Circular economy

The concept of CE defines a set of principles for production and consumption, radically different from the linear 'take-make-dispose' regime prevailing in today's market economies, based on continuous economic growth and increasing resource throughput. The CE goes further than calling for implementation of 'sustainable,' 'green,' resource-effective, and environment-friendly technologies in isolated links of production systems. It requires a broader and more comprehensive design of radically alternative solutions over the entire life cycle of products and adoption of closing-the-loop production and consumption patterns within the whole economic system. (See Cirainno handbook\_CRT rev. 4.0, p. 6 – chapter 1.2 The Circular Economy – a new development paradigm)

### Circular business model

The CE relies on value creation through restoration, regeneration and re-use of re-

sources, enabled by new types of business models and forms of consumption that discard ownership and rely on active 'users' rather than passive 'consumers'. (See Cirainno handbook\_CRT rev. 4.0, pp. 6-7 – chapter 1.2 The Circular Economy). In order to obtain a circular business model, a business does not need to close all its resource loops within the firm. A circular business model can also be one in which the company operates as part of a larger system and adds to other companies' circular business models, which together create a closed loop system (See Cirainno handbook\_CRT rev. 4.0, p. 24 – chapter 2.4 Circular business models).

### Business Model Canvas

-strategic management tools for developing new or documenting existing business models. Visual charts with elements describing product's/service's value proposition, infrastructure, customers, and finances. It assists firms in aligning their activities by illustrating potential trade-offs. The Busi-

ness Model Canvas was initially proposed by Alexander Osterwalder based on his earlier work on Business Model Ontology. Since the release of Osterwalder's work in 2008, new canvases for specific niches have appeared, such as Lean Canvas dedicated to the startups- business ideas of very early stage of development, created by Ash Maurya in 2010.

### Innovation

- the process of translating an idea or invention into a good or service that creates value or for which customers will pay. To be called an innovation, an idea must be replicable at an economical cost and must satisfy a specific need. Innovation involves deliberate application of information, imagination, and initiative in deriving greater or different values from resources, and includes all processes by which new ideas are generated and converted into useful products. The Oslo Manual (see: <http://www.oecd.org/science/inno/2367614.pdf>) defines four types of innovation:

- **Product innovation:** A good or service that is new or significantly improved. This includes significant improvements in technical specifications, components, and materials, software in the product, user-friendliness or other functional characteristics.
- **Process innovation:** A new or significantly improved production or delivery method. This includes significant changes in techniques, equipment, or software.
- **Marketing innovation:** A new marketing method involving significant changes in product design or packaging, product placement, product promotion, or pricing.
- **Organizational innovation:** A new organizational method in business practices, workplace organization, or external relations.



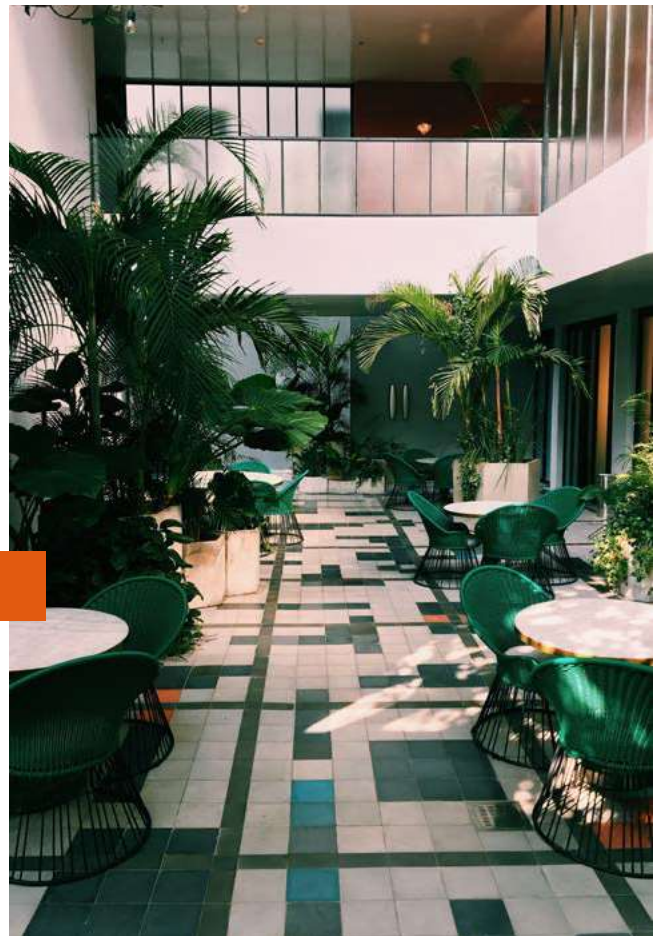
# THEME

## WHAT'S BUSINESS MODEL INNOVATION

Business model innovation is the art of enhancing advantage and value creation by making supportive changes to an organization's value proposition to customers and its underlying operating model. These changes can address the choice of target segment, product and service offering, and revenue model. At the practical level, the focus is on how to drive profitability competitive advantage and value creation through the decisions on how to deliver the value proposition.

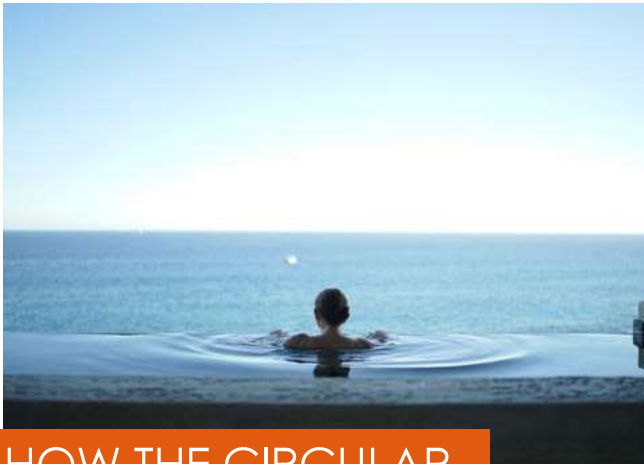
BMI, as a toolset, facilitates the description of the essential factors by which a company creates value. It identifies the following aspects:

- Who are the target customers?
- What is the benefit for customers and for partners who are involved in value creation?
- How is the company created and delivered the benefit?
- How does the company earn money?









## HOW THE CIRCULAR ECONOMY PRINCIPLES APPLY TO THE COMPONENTS OF BUSINESS MODEL?

The fundamental constructs and constituent elements of circular business models can be derived from the main principles of the circular economy. In the CIRTOINNO handbook, such components are understood and defined in various ways. One example is that circular economy mainly emerges through three main 'actions,' i.e. the so-called 3R principles: Reduction, Reuse, and Recycle (See Cirtoinno handbook\_CRT rev. 4.0, pp. 22-23 – chapter 2.3

CE principles as basis for business action). Another „business action framework“ has been developed by the Ellen MacArthur Foundation, based on three fundamental CE principles. It involves six guiding actions abbreviated ReSOLVE (Regenerate, Share, Optimize, Loop, Virtualize, Exchange) framework, ways of circular value creation, normative requirements for business models, and areas for integration.

Table 1.1 How the circular economy principles apply to the components of Business Model Canvas ("X" indicates if CE applies to the particular component of business model)

Traditional BMC components	Regenerate	Share	Optimize	Loop	Virtualise	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		
<b>"CE adopted," additional BMC components</b>						
Take-back system				X		
Adoption factors	X	X	X	X	X	X

Source: Ellen MacArthur Foundation. *Towards the Circular Economy: Economic and Business Rationale for an Accelerated Transition*. Available online: <https://www.ellenmacarthurfoundation.org/assets/downloads/publications/Ellen-MacArthur-Foundation-Towards-the-Circular-Economy-vol.1.pdf>

## ADDITIONAL COMPONENTS OF A BUSINESS MODEL RELATED TO THE CIRCULAR ECONOMY

It is believed that once designing a circular business models, additional issues, exceeding traditional Business Model Canvas components, should be taken into consideration. Especially two areas need introduction to the framework to achieve enhanced, closed-circuit design.

These are:

- **The Take-back system**, which assumes products or their components cascade usage (in case of biological nutrients) or reuse, redistribution, remanufacturing, refurbishing, or recycling (in case of industrial materials). According to the direction of material flow in a supply chain, both forward and reverse are possible; however, reversed logistics may require different partners, channels or customer relations.
- **The Adoption factors** that help to manage barriers related to the circular models implementation. There are internal and external factors affecting adaptation of a designed business model or circular economy principles. Internal factors concern organizational

capabilities such as intangible resources, low team motivation or corporate culture, insufficient knowledge. External factors comprise technological, political, sociocultural, and economic issues.

The circular business model canvas is therefore extended and adjusted. It has eleven components allowing to design models according to the principles of the CE:

1. **Value propositions**—offered by circular products enabling product-life extension, product-service system, virtualized services, and collaborative consumption. Moreover, this component comprises the incentives and benefits provided to the customers for bringing back used products.
2. **Customer segments**—directly linked with value proposition component. Value proposition design depicts the fit between value proposition and customer segments.
3. **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.

4. **Customer relationships**—underlying production on order and what customers decide, and social-marketing strategies and relationships with community partners when recycling is implemented.
5. **Revenue streams**—relying on the value propositions and comprising payments for a circular product or service, or fees for delivered availability, usage, or performance related to the product-based service offered. Revenues may also pertain to the value of resources retrieved from material loops.
6. **Key resources**—choosing suppliers offering better-performing materials, virtualization of elements, resources, elements allowing to regenerate and restore natural capital, and the funds obtained from customers or third parties meant to circulate in material loops (preferably closed).
7. **Key activities**—focused on increasing performance through good house-keeping, 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.
8. **Key partnerships**—based on choosing and cooperating with partners, along the value chain and supply chain, which support the circular economy.
9. **Cost structure**—reflecting financial changes made in other components of CBM, including the value of incentives for customers. Particular evaluation criteria and accounting principles must be applied to this component.
10. **Take-Back system**—the design of the take-back management system, including channels and customer relations related to this system.
11. **Adoption factors**—transition towards circular business model must be supported by various organizational capabilities and external factors.



Table 1.2 Circular Business Model Canvas

**Key Partners**

- Who are our Key Partners?
- Who are our Key Suppliers?
- Could the supplies needed come from the wasted resources of another business nearby?
- Which Key Resources are we acquiring from partners?
- Which Key Activities do partners perform?

**Cost Structure**

- What are the most important costs inherent in our business model?
- Which Key Resources are most expensive?
- Which Key Activities are most expensive?

**Revenue Streams**

- For what value are our customers really willing to pay?
- For what do they currently pay?
- How are they currently paying?
- How would they prefer to pay?
- How much does each Revenue Stream contribute to overall revenues?

**Adoption Factors**

- Organizational capabilities
- PEST factors

**Key Activities**

- What Key Activities do our Value Propositions require?
- Our Distribution Channels?
- Our Customer Relationships?
- Our Revenue streams?

**Key Resources**

- What Key Resources do our Value Propositions require?
- Could they come from resources wasted by our clients?
- Could products be made out of ingredients that offer the same functionality as the traditional ones used but that biodegrade over time?
- Our Distribution Channels?
- Customer Relationships?
- Revenue Streams?

**Value Proposition**

- What value do we deliver to the customer?
- Which one of our customer's problems are we helping to solve?
- What bundles of products and services are we offering to each Customer Segment?
- Which customer needs are we satisfying?

**Channels**

- Through which Channels do our Customer Segments want to be reached? How are we reaching them now?
- How are our Channels integrated?
- Which Channels work best?
- Which Channels are most cost-efficient?
- How are we integrating them with customer routines?

**Customer Relationships**

- What type of relationship does each of our Customer Segments expect us to establish and maintain with them?
- Which ones have we established?
- How are they integrated with the rest of our business model?
- How costly are they?

**Customer Segments**

- For whom are we creating value?
- Who are our most important customers?

**Take-Back System actions:**

- management
- channels
- customer relations

Source: M. Lewandowski, *Designing the Business Models for Circular Economy—Towards the Conceptual Framework*, Institute of Public Affairs, Faculty of Management and Social Communication, Jagiellonian University, Kraków 2015

# HOW TO DESIGN INNOVATIVE CE BUSINESS MODELS TO THE EVERYDAY BUSINESS PRACTICE?

In order to answer the questions how the principles of the circular economy can be applied to a business model and which universally applicable components are needed for a circular business model, this training material has been employed.

The process is divided into four steps:

1. Observing
2. Planning
3. Implementing
4. Checking and revising





## OBSERVING

**Observing is a step that identifies the body of knowledge needed to evaluate current module-specific processes, measure current processes outcomes and identify the module-specific processes that need to be changed obtain the answers for the research questions.**

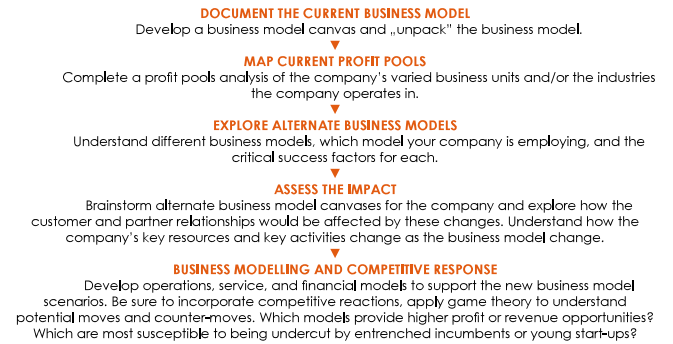
### Current Business Model Analysis

Businesses – whether large or small – run around in circles daily to cater for customers' need and desires. The process of moving to a more circular business model typically begins with an analysis of where existing inefficiencies and leakages lie within a business's current linear model. Companies must identify customer segments that have needs related to the circular economy by using market research to identify areas of environmental or social concern related to new or existing products. It is also essential to consider the lifecycle stage of a product as this may determine its potential for re-use or refurbishment. It is, therefore vital to understand customer behaviour and requirements before assessing the poten-

tial viability of a circular business model concept. Furthermore, you always need to be two steps ahead of everything: the other businesses in your field, your suppliers, your clients, your employees, the economy – and also of yourself. See Table 1.2 for an example of step by step business model analysis.

The ultimate goal of understanding the business model variations in the digital world is to be able to address real-world problems that the business faces. It is one thing to understand what the business models are and what distinguishes them from each other, but it is quite another to be able to understand what is going wrong, why, and what results another business model might provide.

Table 1.3 Business Model Analysis, step by step.



### How to identify if customer needs are met

Next, we get into an analysis of the business model as it relates to the customer. This would include evaluating the company's relationship with its customers as well as the customer interfaces. A key aspect of most business models is how the company interacts with customers, levels of customer intimacy and self-service, as well as the overall benefits and value proposition for the customer. Naturally, all of these factors come back to the channels that the company sells through, such as a direct sales force, retail locations, and a website. How would the company's customer interactions change with a different business model?

### The main questions:

- Which customer needs are/ are not satisfied?
- Do customers need to own the products or can services better meet their need?
- What are the emerging trends that may influence the value proposition in the short or long term?

- How can value be delivered to the customer in a less resource-intensive way?

### Questions related to the Circular economy:

- Could we offer a service alongside our product?
- Could we make our products more robust and repairable so that they last longer?
- Could we explore some additional revenue streams from selling the spare parts needed and recovering the old ones?

When the company sums up all information: evaluates current module-specific processes, measures current processes outcomes and identifies the module-specific processes that need to be changed obtains the answers for the research questions, the company can begin to the planning part.



## PLANNING

**Study object** – define and identify circular based business model objectives.

**Study purpose** – evaluate and identify circulating processes to achieve the new goals, related challenges and solutions.

**The main tasks:**

- Identify actors in the process
- Identify required resources
- Identify required actions and circulating processes to achieve the new goals, problems and solutions

**How to identify the actors in the process?**

Circular economy requires widespread commitment and cooperation over a range of different actors (see Table 1.4). Actors are the ones that will carry out the tasks involved in a process. In some cases, their working routine may include some unsuccessful habits that slow down the process, complicate its flow, or even create mistakes in its results. Completely changing the actors' habits will surely produce great resistance to its implementa-

tion. Actors perceived as important for the transition to a circular economy are: public sector, business, researchers and the civil society, who are believed to be motivated by the notion that a circular economy will lead to a more sustainable society. Furthermore, it is assumed within a circular economy that at a broader social level, different partners will work together towards the common goal of a circular economy.

Table 1.4 Key actors of the business environment.

ACTORS	
Public sector	Who can help us?
Business	
Researchers	
Civil Society	
Employees	<ul style="list-style-type: none"> <li>• Who will be the key players in the business? (Name the management team, board and advisors to the business. Highlight their expertise and experiences.)</li> <li>• What communication should take place with the employees?</li> </ul>

**Review your goals and outcomes to see if they are met:**

- Did we meet the goal we envisioned before the business process began?
- Were our strategy plans made with our goals in mind?
- How far did we stray or how precise did we follow our goals?
- Were our goals too challenging? Were they unrealistic?
- Were our goals too simple? Did we underestimate ourselves?
- Were our goals aligned with the industry's standards?
- What could have been improved?

Note what did not work well and ensure you do not repeat it. Focus on your success and take notes on the way to repeat and expand them. The table 1.5 is a practical example of questions regarding goals and their match with a given BMC component:

ACTION DESCRIPTION (Which actions are required to reach the desired goal?)	PARTY/DEPT RESPONSIBLE (Which group of staff are involved in working with this objective? Who will perform the activities? Who will monitor the process?)	START DATE	END DATE	REQUIRED RESOURCES (Financial, human etc.)
---	--	------------	----------	---

**GOALS RELATED TO PARTNERS (Who will help you?)**  
Write your goal statement here

--	--	--	--	--

**GOALS RELATED TO ACTIVITIES (How do you do it?)**  
Write your goal statement here

--	--	--	--	--

**GOALS RELATED TO RESOURCES (What do you need?)**  
Write your goal statement here

--	--	--	--	--

**GOALS RELATED TO CUSTOMER RELATIONSHIPS (How do you interact?)**  
Write your goal statement here

--	--	--	--	--

ACTION DESCRIPTION (Which actions are required to reach the desired goal?)	PARTY/DEPT RESPONSIBLE (Which group of staff are involved in working with this objective? Who will perform the activities? Who will monitor the process?)	START DATE	END DATE	REQUIRED RESOURCES (Financial, human etc.)
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**GOALS RELATED TO CUSTOMER SEGMENTS (Who do you help?)**  
Write your goal statement here

--	--	--	--	--

**GOALS RELATED TO DISTRIBUTION CHANNELS (How do you reach them?)**  
Write your goal statement here

--	--	--	--	--

**GOALS RELATED TO COSTS (What will it cost?)**  
Write your goal statement here

--	--	--	--	--

**GOALS RELATED TO REVENUE STREAMS (How much will you make?)**  
Write your goal statement here

--	--	--	--	--



# IMPLEMENTING

Implementing the circular economy framework and philosophy into your organization can take time. However, the result will be a future of security and opportunity that you can use to position yourself as a leader in your field. To ensure that in the future, there are enough raw materials for food, shelter, heating and other necessities, our economy must become circular. That means business model innovation preventing waste by making products and materials more efficiently and reusing them. If new raw materials are needed, they must be obtained sustainably so that the natural and human environment is not damaged. Table 1.6 provides general characteristics of linear and circular business models and you can compare at what stage of the business model you are.

Table 1.6 General characteristics of linear versus circular business models.

LINEAR MODEL	CIRCULAR MODEL
<b>What? The value of proposition</b>	
Low cost products that are disposable at their end of life	Durable products designed for re-use
Emphasis on ownership	Services instead of products
Take, make, dispose	Take, make, re-use, recycle
<b>HOW? Processes and supply chain</b>	
Take, make, waste	Take, make, remake
Limited role and influence of customer	Customers become partners
Supply chain management several tiers up	Supply chain management of the whole system
<b>WHY? Financial model</b>	
Pay per product	Pay per use or performance (hours, km, sheets etc.)
Make more and sell more	Make better and gain more
Negative value creation at some stages	Positive value creation at all stages
<b>WHO? Customer interface</b>	
Transfer ownership	Access over ownership
Products are not taken back after warranty	Product take back or service / performance provision
Traditional customer segments	Appeal to new niche segments

In this stage actions regarding each plan will be implemented. Actions can be as many as needed depending to how comprehensive the plan is. In the best case the timeline may be the same timeline as in the Planning phase. But in the

Implementation phase the timeline can deviate from timeline of Planning. People can be the same people as in the Planning phase or they can be different. Hence, in the Implementation phase some deviations may occur compared to the Planning phase in terms of time and people. In addition, planners should divide each plan in to several actions in order to execute them.

Table 1.7 Actions related to implementation of Business Model Canvas.

Actions related to changing partners			
Timeline	People to implement	People to supervise	People to collect data
ACTION 1			
ACTION 2			
ACTION 3			
Actions related to changing activities			
ACTION 1			
ACTION 2			
ACTION 3			
Actions related to changing resources			
ACTION 1			
ACTION 2			
ACTION 3			
Actions related to changing relationships			
ACTION 1			
ACTION 2			
ACTION 3			
Actions related to changing segments			
ACTION 1			
ACTION 2			
ACTION 3			
Actions related to changing distribution channels			
ACTION 1			
ACTION 2			
ACTION 3			
Actions related to changing costs			
ACTION 1			
ACTION 2			
ACTION 3			
Actions related to revenue streams			
ACTION 1			
ACTION 2			
ACTION 3			



In this step, called Checking and Revising, the company identifies the processes that need to be changed or improved, performs them and periodically reviews a checklist for the actions taken towards module-specific activities and the actors involved.

The assigned people in the Planning phase perform the Checking. Planned outcomes will be checked against achieved outcomes. The difference between these two show the deviations from plan. Accordingly, actions will be decided. Actions will be decided based on the gap between planned and achieved outcomes.

Table 1.8 Actions related to the checking process.

	Achieved vs Actual Outcomes	Planned vs Desired Outcomes	Deviations/ Gap
Action 1:	actions can be as much as necessary. Add more if needed.		
Action 2			
Action 3			
<b>Actions related to changing activities</b>			
Action 1			
Action 2			
Action 3			
<b>Actions related to changing resources</b>			
Action 1			
Action 2			
Action 3			
<b>Actions related to changing customer relationships</b>			
Action 1			
Action 2			
Action 3			
<b>Actions related to changing customer segments</b>			
Action 1			
Action 2			
Action 3			
<b>Actions related to changing distribution channels</b>			
Action 1			
Action 2			
Action 3			
<b>Actions related to changing costs</b>			
Action 1			
Action 2			
Action 3			
<b>Actions related to revenue streams</b>			
Action 1			
Action 2			
Action 3			



## REVISING

The gaps found in the Checking stage are the input for the Revising stage. Analysis on each action shows if the activity should be stopped or not. If the decision is to stop the activity then it will be dropped otherwise it will be continued. Documentation is the next action in this stage which not only helps organization to decide on actions based upon out-

comes but also keeps knowledge within the organization. The last action in the stage of Revising is education. This action is necessary to settle down the PDCA (Plan, Do, Check, Act) policy in an organization. Education is also necessary to ensure continuous development which is the nature of the PDCA model.

Table 1.9 Actions related to the revising process.

	Analysis of gap	Continue	Drop	Redo	Documentation	Educate
Action 1	Why is there a gap between planned and achieved outcomes?	Continue with the action if the planned outcomes are close to achieved outcomes	Drop the action if there is no value with the action or it will not generate desired results.	Redo the action if the gap between planned and achieved outcomes are large.	Document outcomes and prepare a report of Action 1	In case the outcomes are acceptable, standardize Action 1 and educate subordinates how to do the action.
Action 2						
Action 3						
<b>Actions related to changing partners</b>						
Action 1						
Action 2						
Action 3						
<b>Actions related to activities</b>						
Action 1						
Action 2						
Action 3						
<b>Actions related to changing resources</b>						
Action 1						
Action 2						
Action 3						
<b>Actions related to changing customer relationships</b>						
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Action 3						
<b>Actions related to changing customer segments</b>						
Action 1						
Action 2						
Action 3						
<b>Actions related to changing distribution channels</b>						
Action 1						
Action 2						
Action 3						
<b>Actions related to changing costs</b>						
Action 1						
Action 2						
Action 3						
<b>Actions related to revenue streams</b>						
Action 1						
Action 2						

## CASE STUDIES

### Good practices concerning implementation of innovative, closed-circuit business models

One of the facts related to the sustainable approach- the very backbone of the Circular economy, is that although it was primarily an area of interest of large

entities, in practice, it requires minimum resources to be implemented. 3R principle is an excellent example, of an easy to access strategy for introduction of circular mechanisms to everyday economic activities.

## REUSE EXAMPLES

**Looming Hostel (Estonia):** Not all products can be reconditioned in their entirety; most products have specific components that carry a high value. Often the materials have an embedded energy component that makes them even more valuable than their original source. With the right design and remanufacturing capabilities, they can be put together to form new products. This is called product transformation or reuse. Looming hostel is the first eco-hostel in Estonia, 99% of the hotel furniture is reused. They also train employees in environmental responsibilities and also encourages guests to act responsibly towards the environment. All cleaners they use are eco or nature-friendly, or they use soda and vinegar. Source: <http://loominghostel.ee/eng/>

**Paradores (Spain) and Albert Dock (United Kingdom):** Linking economics and authenticity to the community is instrumental in developing tourism. One of the most compelling benefits of tourism is the range of positive economic effects made possible by utilizing local history and heritage. The process of retrofitting old buildings for new uses, which allows structures to retain their historic integrity while meeting the needs of modern occupants, is called adaptive reuse.

An example of reusing old and historic buildings for tourist facilities is the Spanish Paradores. Founded by King Alfonso XIII to promote tourism throughout Spain, Paradores are great as a concept for displaying cultural heritage and creating jobs of areas off the beaten track. This public owned hotel and restaurant chain, consist of castles, monasteries, convents,



palaces, historical venues, and regional constructions. Paradores have maintained authenticity, sense of place and architectural integrity, while being sensitive to the environment. Source: <https://www.paradoresofspain.com>  
Albert Dock complex, a XIX century docking complex in Liverpool was used to be one of the greatest maritime cities on earth, where 40% of global trade was passed through by the beginning of the 19th century. By 1981, the entire Albert Dock complex was however, abandoned. Efficient and bold reuse strategy for the area transformed it into unique retail and leisure offering with six million visitors a year. Source: <https://albertdock.com/history>

**Historic Hotels of America (USA):** Comprised of mostly independently owned and operated properties. Some of the historic hotels are adaptive reuse projects, including buildings initially built as a historic theatre, a military barracks, U.S. post office, or office buildings. Program is managed by the National Trust for Historic Preservation for recognizing the finest Historic Hotels. Source: <https://www.historichotels.org/>

## REDUCE PRACTICES



**Usage reduction examples:** The overall goal is to minimize the input of energy, raw materials, and waste production through the improvement of internal processes f.e.:

- Stadthalle hotel is an example of a zero energy consumption hotel. Source: <https://www.hotelstadthalle.at/>
- The Voksenaasen hotel achieved the highest score for eco-friendliness among hotels in Norway. The building's design helps regulate temperature with south-facing overhangs, a geothermal system used to monitor the hotel's heating and cooling, and over 25% of hotel roof is planted with veg-

etation for wildlife habitats. Source: <http://www.voksenaasen.no/>

- The Adler-Feldberg hotel installed new system, which is collecting the heat produced by the refrigerators in the hotel's restaurant to heat the warm water in the hotel. They are currently saving 100% of the energy needed to heat the hot water in the hotel. Source: <https://adler-feldberg.de/en/>

**FoodValue (the Netherlands):** Shortening of supply chains- project aimed at reducing logistics and environmental costs of delivery or processing of goods. FoodValue is a food supply chain of a local or

regional dimension that offers an opportunity to receive higher quality food, for a competitive price (elimination of intermediaries) and restore feedback-related contact between food producers and city customers. Source: <https://foodvalue.nl/>

**Zero Gaspil (France):** Smart principles regulating meals provision, supported by an sustainable food usage training, resulted in decreased food waste in school cafeterias in France. The uniqueness of the project is manifested, in this case, in its simplicity. Zero Gaspil, from the very beginning, focused around soft techniques

and changing the way food is served. By observing the way that meals are approached and consumed by students, project creators identified bad practices, which led to food wasting. Consequently they modified dishes size, and the modus operandi of its serving (f.e. tray's elimination), as well as, established set of principles protecting against excessive intake of meals (exceeding the student's appetite). As a result food waste decreased by 94% in some cases, transforming pilot program into nation-wide acknowledged strategy. Source: <https://www.100trepas.com/zero-gaspil/>



## RECYCLE

**The Leisurefarm (Malaysia):** introduced a "Waste = Money" system, then visitors can pay part of their entrance fee with reusable waste (plastic, aluminium bottle, paper). This hotel has been awarded in European Business Awards for the Environment Winner 2016-2017. Source: <http://www.leisurefarm.com.my/>

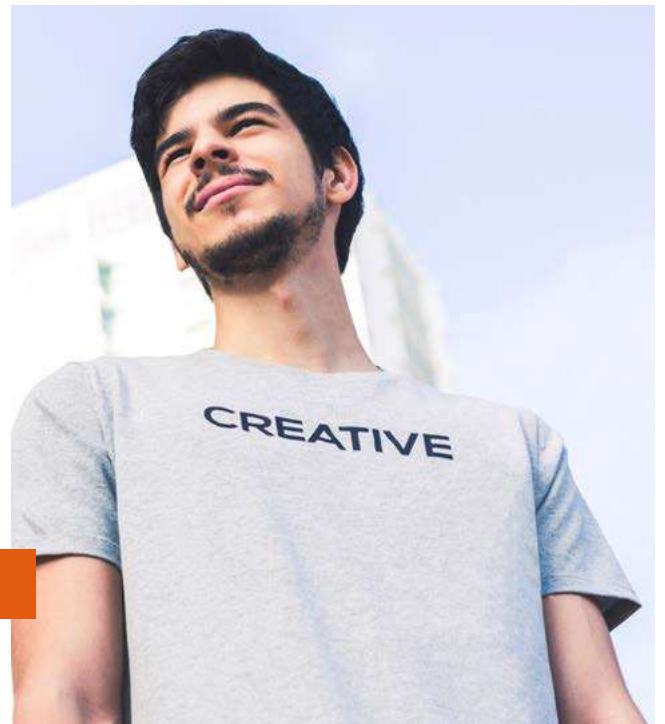
**Sandymount Hotel (Ireland):** At the hotel 97% of hotel waste is now recycled or recovered. Source: <https://www.sandymounthotel.ie/environment.html>

**Winnow (United Kingdom):** Food waste monitoring tools – such as smart weighing meter technology supported by cloud software analyses and records of the day's waste provide real-time data helping kitchen managers and their staff reduce waste volume and cut costs related to products usage. Producent declares that it's customers typically save 3-8 % on food cost. Source: <https://www.winnow-solutions.com>

## OTHER CASE STUDIES REGARDING IMPLEMENTATION OF CIRCULAR BUSINESS MODELS

**The Hotel Allegro Bern (United Kingdom):** cooperates with a local charity called 'Bikeworks' who provided the hotel with 10 recycled bicycles for guests to use free of charge as an eco-friendly mode of transport and a fun way to explore Lon-

don. Bikeworks service is an example of the sharing model, which is centered on the sharing of products and assets (e.g. cars, rooms, appliances) instead of its ownership.



**Green Solution House (Denmark):** is an example of an integration of all circular business models together. This hotel continuously adapts by embracing new green technologies that demonstrate state of the art developments in the building industry. Achieving this structure requires a regenerative business model; therefore, monetary revenue from the hotel and the

conference centre's operations is spent to fund the ongoing integration of new solutions and the assessment of existing systems and products. The green Solution House works to inspire enhanced sustainability practices in both international and local design briefs. Source: <http://www.greensolutionhouse.dk/circular-business-model/>

## PROJECT VALIDATION

### A CIRCULAR APPROACH TO RESOURCE-EFFECTIVE AND COST-EFFECTIVE IDEAS TESTING

Steve Blank, a world-famous business consultant, is believed to say, that "No Business Plan Survives First contact with customers." In his opinion, entrepreneurs often mistake their business plan as a cookbook for execution, failing to recognize that it is only a collection of unproven assumptions. Therefore a strong emphasis is put on improvement of the techniques allowing designed business models early validation. Thanks to testing, organizations can avoid the mistake of involving financial and non-financial resources in economically ineffective projects. One of the recommended technics is PRETOTYPING® introduced by Alberto Savoia.

According to Mr Savoia, deciding on which idea to invest, market testing has often been speculative and opinion-based, resulting in:

- False Positives: in which innovators get infectiously excited by ideas, which results in substantial investment in concepts not yet proven to be attractive to their markets.
- False Negatives: in which decision-makers and investors over-cautiously underinvest in innovative ideas before they've had a chance to be market-tested.

In response to this problem, the term Pretotyping was originated, defined as: "Validating the market appeal and actual usage of a potential new product objectively and with the smallest possible investment of time and money."

If prototyping is a process of testing that an idea can be built and work as expected, prototyping's fundamental principle is that this is not the right test. What should be tested is whether the product or service should be developed in the first place and if customers will use it if it is. The pretotyping mission is described as: "Make sure you are building the right it before you build it right."





## HOW IT WORKS?

## EPILOGUE

To overcome the traditional barriers to concept testing, such as the unreliability of surveys and the inability of consumers to test concepts (resulting in a lack of correlation between test results and market success), prototyping focuses on real data. Products or services, rather than ideas, are tested with actual respondents and showing tangible results.

This is done by different methods such as:

- **The Fake Door:** a fake "entry" for a product that doesn't yet exist in any form.
- **The Pinnochio:** a non-functional, "life-less," version of the product; useful for form and fit validation.
- **The Mechanical Turk:** replacing complicated and expensive computers or machines with human beings.
- **The One Night Stand:** a complete service experience without the infrastructure required by a permanent solution.
- **The Impersonator:** a repackaged or re-"skinned," existing product masquerading the developed one.
- **The Minimum Viable Product (MVP):** a functional version of the product, but stripped down to its most basic functionality

Alberto Savoia book titled „The right IT“ is at sale since 2019. Before publishing the final version of the book, an MVP version was released, describing all of the above-mentioned validation techniques, and available for download, free of charge, at <https://www.pretotyping.org/>.

Affordable and clean energy, responsible consumption and production, or sustainable cities and communities- the pillars of a circular approach belong to Sustainable Development Goals identified by United Nations (see: <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>). They play a blueprint role to achieve a better and more sustainable future for all. Out of the SME owner perspective the 17 SDG agenda may, however, seem distant from the his or her everyday market struggle. Therefore, one of the fundamental goals of the authors of this study is to show that the circular approach finds very practical application in any business, regardless of its size or sector.

The presented examples show that a closed-circuit approach is achievable even in the conditions of a negligible investment budget or in the most traditional, seemingly less susceptible to innovation, services. The most important thing is, however, that the benefit of implementing circular innovations is noticeable immediately after implementation and has a measurable, monetary dimension. For SME companies, which often operate under tight budget conditions, the circular approach is not only an issue referring to the owners value system. It's a must, an easy access mean of creating the lasting, market, competitive advantage.



TRAINING  
MATERIAL



# Business Model Innovation for Circular Economy

Module 3.1 - Guide for Trainers

LEAD PARTNER

Agencia Rectorsa Pinaros S.A.

UNIVERSIDAD POLITÉCNICA DE VALENCIA

INSTITUTO TECNOLÓGICO DE AERONÁUTICA

energiator

MAP

CRT

Linnaeus University

PARTNERS



CIRCINNO





## INTRODUCTION

Switching from the current linear model of the economy to a circular one has recently attracted the attention of major global tourism companies, for instance, Hilton Worldwide Holdings. The reasons for this are immense financial, social, and environmental benefits. The rise of interest of SMEs in participating

in this growing trend is also noticeable. Unlike large corporate conglomerates SME's, are, however, often lacking expertise in the field. Thus, comprehensive knowledge of designing circular business models is needed to stimulate and foster the implementation of the circular economy.

## OBJECTIVES

The overall objective of the workshop is to introduce, circular approach by design, followed by a demonstration of good practices, recommendations,

and practical exercises regarding closed-circuit, business models implementation.

## EXPECTED RESULTS

The expected result is to improve innovation capacity among South Baltic SMEs operating in the tourism sector, as

well as to teach them how to develop and implement circular solutions into their daily business operations.





## WORKSHOP SCHEDULE

Below is a recommended schedule for the workshop.

### Day 1, 09:00 - 15:30

Time	Topic
09:00 - 09:15	Opening remarks
09:15 - 10:30	A smart approach to innovations and their implementation to business
10:30 - 10:45	Coffee break
10:45 - 12:45	Introduction to a circular economy, practical examples of the 3R approach
12:45 - 13:00	Coffee break
13:00 - 15:30	Exercises
15.30	Closing remarks

### List of slides

- Slide 1: Introduction
- Slide 2: Lecturer
- Slide 3: Agenda.
- Slide 4: 3 Worst things that could happen.
- Slide 5: Why to innovate?
- Slide 6: Experienced people's thoughts.
- Slide 7: Why innovating is that difficult?
- Slide 8: Study case #1 – when innovation gets hit by the market
- Slide 9: Study case #2 – innovation is not only about new product or service
- Slide 10: Introduction to a circular economy
- Slide 11: Linear vs. circular
- Slide 12: Starting a circular design with the 3R principle
- Slide 13: Reuse principle in a nutshell
- Slide 14: Study case #3 - adaptive reuse on the example of Paradores and Albert Dock
- Slide 15: Study case #4 - historic Hotels of America- adaptive reuse supporting marketing activities
- Slide 16: Introduction to Recycle principle
- Slide 17: Study case #5 - waste measuring tools fostering recycle policies - the example of Winnow
- Slide 18: Study case #6 - how to approach eco-management in hotel industry – the case of Martin's Hotels
- Slide 19: Reduce principle description
- Slide 20: Study case #7 – shortening food supply chains
- Slide 21: Study case #8 – Zero Gaspil – reducing food waste by a smart approach in meals serving
- Slide 22: How to design a circular model – step by step introductory
- Slide 23-25: Exercise #1- identification of the client and his needs (the pain list); available tools facilitating the process and their review
- Slide 26: Exercise #2- prioritizing the pain list
- Slide 27: Exercise #3 – Lean Canvas use in the process of circular model establishment
- Slide 28-29: Exercise #4 – model tests/validation by using Prototyping techniques.
- Slide 30: Closing remarks



# GUIDE OF SLIDES

### Slide 1

Introduction. Brief survey onto audience familiarity with the circular approach in the economy.



### Slide 2

Lecturer. Information about the lecturer and his professional background.



### Slide 3

Content. Expected agenda for the day.



### Slide 4

3 Worst thing that could happen.



### Slide 5

Why innovating is vital for the business? What strategic gains are a result of the pro-innovative approach? Brief introductory of Blue Ocean Strategy.



### Slide 6



Inspiring quotes of Albert Einstein and Charles Darwin. Both brilliant minds are supporting the thesis of the pro-innovating mindset as the key to success in business life.

### Slide 7



Challenges related to introducing innovative solutions to the market. The Hype cycle of innovation. The distinction of time to market and time to profit periods and their impact on business cash flow.

### Slide 8



Building cool stuff, an exciting technology that has no business application. Must have vs. nice to have products on the example of Barobot (PL).

### Slide 9



The four types of innovation as defined in the Oslo Manual. Ziferblat case of process innovation.

## Slide 10

General characteristics of circular economy and business models established on its principles.

Short description of „butterfly“ graphic introduced at the slide:

- Points of focus: Renewables and finite materials; biological and technological flows; consumer/user; some elements of business models such as virtualizing, sharing, redistributing; minimizing systematic leakage and negative externalities like toxic wastes.
- The two circles (butterfly wings); the green one is an example of renewable flow management - bio cycle, the blue one - an example of stock management - techno-cycle. Both are designed in a closed-circuit spirit. Organic materials follow a different reuse process than synthetic or industrial products. Therefore it is crucial to ensure the separation of bio and non-bio materials after use.
- Industrial materials, such as fossil fuels, plastic, and metal, have limited re-use options or cannot be re-used. One of the techno-cycle responsibilities is to design finite products after-use management. 'Using' instead of 'consuming' mindset is recommended. Enhanced value retention strategies focus on materials recovery after use.
- Organic materials, such as cotton, food, or water, can be processed by the ecosystem's natural, biological processes. In the bio-cycle, the ecosystem's independent operational capacity is an essential factor. Human activity may take place in the cycle (food, water, fertilizer usage) as long as the circulation of matter is ensured, as well as it does not cause the natural environment's contamination. When the ecosystem is balanced, organic materials are renewable.
- There are different sizes of "loops" of re-use within the techno-cycle. The general principle implies that that the smallest, innermost circles are preferred. The shorter circuit usually requires less processing activities, causing work, energy, or new materials usage. As a result, more value is retained.
- Bio-cycle recycling is implemented in cascades. Cascading means the use of a product (or a part of it) for a different application. When a product is no longer in a position to fulfill the primary function, it is given a new role in which it can be used again. While being process by following cascade levels, the quality of the material decreases, and energy is consumed. Cascading is different from reuse or recycling because of the role modification f.e.:
- Recycle: shredding old T-shirts into cotton fibers which are spun into new yarn.
- Re-use: selling used clothes at a thrift store
- Cascading: use of old T-shirts as cushion filler.
- A lifespan of a product should be designed for maximum durability. It can be achieved through:
- Ensuring that the moment when a product is discarded is deferred as far in time as possible, for example, by adding to other products, refilling options, or adaptability for a new purpose of use.
- Arranging several, successive cycles of direct reuse before the product is repaired, by facilitating product maintenance, sharing model of provision, or the interchangeability of product.



## Slide 11



Linear economy vs. the circular economy. The overall goal of the slide explanation is to point out that circular economy is considered to be a more sustainable alternative compared to a linear one. In the one-way approach, natural resources are extracted to manufacture products that are incinerated or landfilled after use. It is often described as 'take, make, and dispose.' Such a model expects the infinite supply of cheap, easily accessible materials and energy, with no boundary on the amount of generated waste. The essence of a closed-circuit approach, on the other hand, is to preserve natural resources by retaining the quality or value of products.

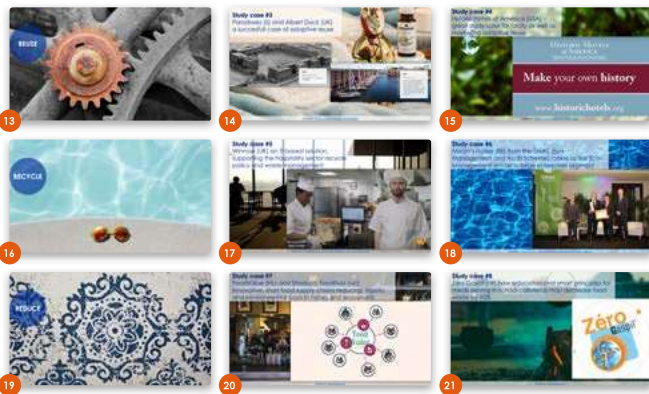
## Slide 12



The 3R rule as an example of an easy-to-start approach once designing circular projects.



### Slide 13-21



Practical examples of 3R principles used by various actors of the tourism sector:

- Paradores (S), Albert Dock (UK) and Historic Hotels of America (US) - the examples of adaptive reuse in the hotel industry. The historical background of the facility used for accommodation services significantly strengthens the marketing potential of the object, as well as can be a source of its competitive advantage.
- Winnow (UK) an IT-based solution, supporting the hospitality sector recycle policy and waste management.
- The case of Martin's Hotel (BE) – successful, step-by-step implementation of the Eco-management policies in the hotel industry, where managing staff had no previous experience in the field.
- Food Value (NL) and Stroudci Foodhub (UK) – innovative, short food supply chains matching local farmers with buyers from the tourism sector. A smart way for logistic and environmental costs-cut in hotels and restaurants.
- Zero Gaspil (FR) how education and smart principles for meals serving in school cafeterias may decrease food waste by 93%

### Slide 22



The design process of a circular project is composed of 8 consecutive steps:

- Beneficiary identification. Usually, two types of beneficiary appear-external one (f.e. client) or an internal one (improvement of the company's internal processes).
- Pain list establishment. The success factor is to understand beneficiary problems and a level of discomfort caused by each issue separately.
- Pain list prioritization.
- Preparation of a draft of a solution. There are several tools available for the facilitation of the process f.e. the Lean Canvas, explained at slide no. 26
- Metrics establishment. Identified key metrics support project monitoring, and provide a more objective evaluation of its progress.
- Testing. Highly innovative projects usually represent the above-average level of uncertainty. In most cases, no benchmark solutions are available to support the project's market validation or assessment of its economic potential. Early-stage internal and external tests are recommended to confirm that the project represents the desired value for the money ratio.
- Review.
- Business decision onto project future and it's implementation.

### Slide 23-25



Identifying beneficiary needs is often challenging, especially in the case of an external beneficiary, who is not directly accessible. However, some tools can support the process f.e.:

- The empathy map.
- The value proposition canvas.
- Personas characterization.

Workshop participants should also be informed that some circular innovations regard the company's internal processes or operations and require no direct involvement from external stakeholders such as clients. The expected result improves organizations' internal processes; therefore, company related-staff may become project beneficiaries.

### Slide 26

Exercise regarding pain list prioritization by using a set of specified assessment criteria.



### Slide 27

Designing a draft of a circular project. The tool used to facilitate the process: Lean Canvas. Instruction onto Canvas proper usage:

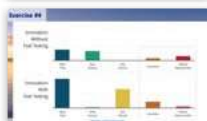
- Starting from the top right field ("Clients"). Workshop participants identify the target group of the action (beneficiaries).
- Next, the fundamental environmental problems of the targeted group should be established (top left field "Problems")
- Consequently, the participant should focus their attention on possible solutions ("Solution") answering identified needs. If more than one solution is applicable, choose the one that represents the most significant and unique value out of the beneficiary perspective ("Unique value").
- Once establishing possible solutions, try identifying key metrics ("Metrics" field) that somehow justify the declared value or will allow to compare and contrast designed solution with competitive offerings/available alternatives.
- "Channels" refer to the designated means of communication with targeted audience, whereas "Unfair advantage" describes already possessed, hard to copy, access to the beneficiaries (f.e. strong personal network), which significantly facilitates or speeds up the approach process. If project is primarily focusing on company's internal processes "Channels," and "Unfair advantage" fields may be skipped since the access to the beneficiary pool is structurally provided.

Subsequently, participants, supported by trainer, conduct an Lean Canvas exercise. Analysed case: East Ayrshire (Scotland)- an example of sustainable approach to procurement of catering as a mean for broader social policies implementation.



### Slide 28-29

Alberto Savoia established a set of tools, techniques, and tactics designed to validate an idea for a new product or service market fit-in. "Prototyping" is a smart way of making sure that designed solution effectively answers designated problems. The main focus is to test the idea fast, cheap, and by using a minimum volume of resources



### Slide 30



- Summary and a short discussion onto following issues:
  - Differences distinguishing linear and circular modules, which is more efficient in terms of sustainability/costs/resources usage?
  - What changes might be implemented in Your business?
  - What was new/known?
- Questions – Answers session.
- Closing remarks.