

**Program Priority: SO1.1 - Improve the framework conditions for innovation in the Alpine Space**

**Work Package: WPT3 Fostering CE processes in Alpine Space with digitalisation processes**

**Output: O.T3.1 Local actions addressed to SMEs to foster CE with digitalisation processes**

**PP4 – aws**

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**Version:** 1.0

**Month, YEAR:** September, 2022

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## Purpose of the document

The purpose of this document is to describe the achievement of the output O.T3.1, described as follows in the AF:

*“Grouped according to 3 CE approaches and in line with 3 feasibility studies, 15 pilots in 13 areas addressed to SMEs to push CE processes, increase attitude to invest and move toward sustainable growth, waste reduction and optimal use of resources.”*

The following table shows the distribution of the 13 areas (according to the NUTS 2 region code of the respective partners) and the 15 partners in charge of performing one pilot each.

Areas	Pilots
1. SI02 Zahodna Slovenija	1. LP TPLJ 2. PP10 JSI
2. DE21 Oberbayern	3. PP2 TUAS Rosenheim
3. DE11 Stuttgart	4. PP3 bwcon
4. DE27 Schwaben	5. PP14 UCB
5. AT13, Wien	6. PP4 aws
6. AT32, Salzburg	7. PP5 ITG
7. AT31, Oberösterreich	8. PP6 Biz-Up
8. ITH3, Veneto	9. PP7 VI 10. PP13 CCIAA Venezia Rovigo
9. FR42, Alsace	11. PP8 Grand E-nov
10. FR71, Rhône-Alpes	12. PP9 AURAE
11. FR82 Provence-Alpes-Côte d'Azur	13. PP15 RISINGSUD
12. ITC1, Piemonte	14. PP11 TOWL
13. ITC4, Lombardia	15. PP12 Confindustria Bergamo

The present document encompasses the following elements:

- Overall methodology applied by all partners in the consortium to achieve the implementation of their own local pilot action.
- Description of the local pilot action for the partner PP4 aws
- Lessons learned by PP4 aws
- Durability and follow-up

## Methodology to achieve the output

The methodology used to achieve the output mirrors the activities planned in the AF:

Step 1:	<p><b>Planning digitalised CE processes in Alpine Space area addressed to SMEs</b></p> <p>Development of feasibility plans to foster digitalised CE processes in SMEs from the Alpine Space, according to the 3 approaches: CE design, CE optimal use and CE value recovery.</p> <p>Each feasibility plan includes plans for local actions defined by the relevant partners, according to the following distribution across the partnership:</p>		
	<b>CE design</b>	<b>CE optimal use</b>	<b>CE value recovery</b>
	LP TPLJ & PP10 JSI PP4 aws PP5 ITG PP9 AURAE	LP TPLJ & PP10 JSI PP3 bwcon PP7 VI PP8 Grand E-nov PP11 TOWL	PP2 TUAS Rosenheim PP6 Biz-Up PP13 CCIAA Venezia Rovigo PP14 UCB

		PP12 Confindustria Bergamo PP15 RISINGSUD		
	BWCN as a WP T3 leader prepared in a close collaboration with TPLJ a template for the feasibility plans, based on the methodology for the development of feasibility plans provided by TPLJ and confirmed by all PPs in May 2021.			
Step 2:	<b>Experimenting transnational actions to foster CE approaches through digitalisation</b>			
	Implementation of the local actions by the respective partners as defined in the feasibility plans: maturity assessment check, identification of innovation needs, 1:1 assistance provided to SMEs.			
	UCB provided to all partners a template for the drafting of implementation reports.			

## **PLANNING DIGITALISED CE PROCESSES IN ALPINE SPACE AREA ADDRESSED TO SMES - FEASIBILITY PLANS**

The task A.T3.1 Planning digitalised CE processes in Alpine Space area addressed to SMEs was implemented under WP T3 - Fostering CE processes in Alpine Space with digitalisation processes. The main objective of WP T3 was to develop transnational and local actions to monitor the effectiveness of SMEs digitalisation to push them toward CE processes. The role of digitalisation as an 'enabler' for the CE is tested with the support of the CIRCULAR4.0 toolkit developed under T2. The testing method (T3.1) is based on a "cycle" moving from the transnational working groups and their specific approaches, through an Alpine "vision" of the actions to be implemented and developed with the feasibility studies and then their experimenting with local action to come back to the Alpine vision and produce the following CIRCULAR4.0 Action Plan (T4.1). The overall idea is that Circular Economy and digitalisation can benefit SMEs and Alpine well-being economy only if included in a transnational approach that will highlight connections, relationships, knowledge and opportunities for SMEs, Intermediaries, Policymakers, and the society as a whole.

The feasibility plans developed according to the 3 main approaches to CE define concrete paths to be undertaken to achieve the results, the resources and the organization required. Partners selected one priority CE approach looking at their economic and social environment and worked with the target groups "declining" the alpine roadmaps into local needs and expectations. Local Pilot actions consist of actions directly addressed to SMEs to check their maturity for CE processes, the innovation to be introduced in the processes, products and business models, the investment plan required and the way to implement it.

### **1. AS feasibility plan to foster CE design model with digitalisation processes (D.T3.1.1)**

This feasibility plan focuses on how to foster CE design model with digitalisation processes. Each P from the group of CE design model developed its feasibility plan for setting-up local service providers addressed to SMEs to establish services to increase attractiveness by investors and propose new financial schemes by Public Actors, roadmaps to achieve these results. In the case of Slovenia two project partners collaborated – JSI & TPLJ.

The plan defines organization, actions, resources, and equipment needed to set-up Alpine regional centres able to promote digitalised CE activities addressed to SMEs on the design model and eco-innovation in general.

Local detailed plans by PPs for their pilots:

- LP TPLJ & PP10 JSI
- PP4 aws
- PP5 ITG
- PP9 AURAE
- PP12 Confindustria Bergamo
- PP15 RISINGSUD

are available in deliverable D.T3.1.1 in the annexes.

## 2. AS feasibility plan to foster CE optimal use approach with digitalisation processes (D.T3.1.2)

This feasibility plan focuses on how to foster CE optimal use approach with digitalisation processes. Each PP from the group optimal use model developed its feasibility plan for setting-up local service providers addressed to SMEs to establish services to increase attractiveness by investors and propose new financial schemes by Public Actors, roadmaps to achieve these results. In the case of Slovenia two project partners collaborated – JSI & TPLJ.

The plan defines organization, actions, resources, and equipment needed to set-up Alpine regional centres able to promote digitalised CE activities addressed to SMEs on the design model and eco-innovation in general.

Local detailed plans by PPs for their pilots:

- LP TPLJ & PP10 JSI
- PP3 bwcon
- PP7 VI
- PP8 Grand E-nov
- PP11 TOWL

are available in deliverable D.T3.1.2 in the annexes.

## 3. AS feasibility plan to foster CE value recovery approach with digitalisation processes (D.T3.1.3)

This feasibility plan focuses on how to foster CE value recovery approach with digitalisation processes. Each PP from the group value recovery model developed its feasibility plan for setting-up local service providers addressed to SMEs to establish services to increase attractiveness by investors and propose new financial schemes by Public Actors, roadmaps to achieve these results. In the case of Veneto Region two project partners from Veneto collaborated – PP7 VI and PP13 CCIAA Venezia Rovigo.

The plan defines organization, actions, resources, and equipment to set-up Alpine regional centres to promote digitalised CE activities addressed to SMEs to develop value recovery processes, services, and products.

Local detailed plans by PPs for their pilots:

- PP2 TUAS Rosenheim
- PP6 Biz-Up
- PP7 VI & PP13 CCIAA Venezia Rovigo
- PP14 UCB

are available in deliverable D.T3.1.3 in the annexes.

## EXPERIMENTING TRANSNATIONAL ACTIONS TO FOSTER CE APPROACHES THROUGH DIGITALISATION - IMPLEMENTATION REPORTS FOR THE LOCAL ACTIONS

IN coherence with the feasibility plans, 15 local actions were implemented by the project partners, according to a shared methodology. The following picture shows the common parts of all local actions as well as the flexibility available to the partners for the operational aspects of the implementations:

Common parts of all local actions	Flexibility
Information events Calls for SMEs (transparent selection)	Kick-off for selected companies or pre-call events Selection procedure / main criteria = transparency

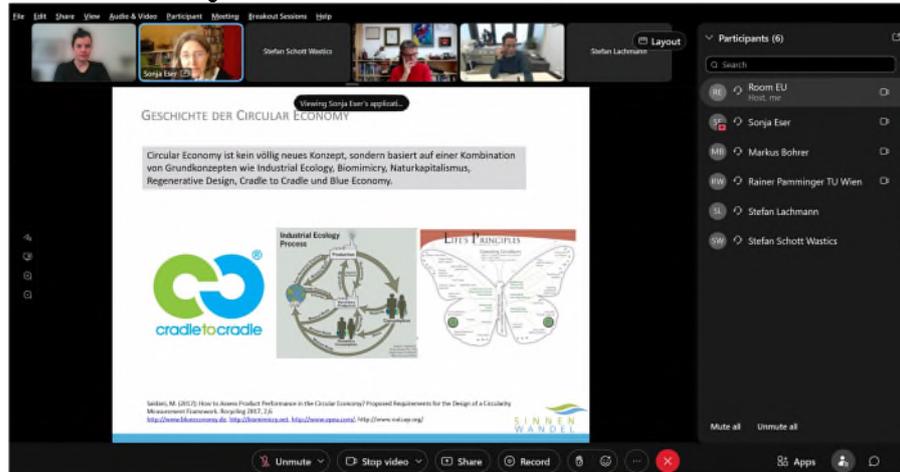
<b>Circular assessment</b> <b>Digital maturity assessment</b> <b>Access to self-learning materials</b>	Different tools can be used, as long as they are part of the toolkit. Assessments can be performed online as self-assessment or in interviews.
<b>Identification of innovation needs</b> <b>1:1 assistance</b>	Assistance provided either directly by the partners or in combination with external experts (most common case)
<b>Development of recommendations</b> <b>focus 3 to 6 months</b> <b>(on the basis of the above)</b>	Format of recommendations: business model canvas, transformation roadmap...

## Description of the local pilot action implemented by PP4 – aws

(please, explain the activities carried out following the steps undertaken: engagement of SMEs; training actions addressed to them; 1:1 assistance; outcomes of the assistance)

<b>Title</b>	Modul 1 – Raising Awareness	<b>Start date</b>	31.03.2022
		<b>End date</b>	31.03.2022
<b>Description</b>			
Objective: to raise awareness of the opportunities of the circular economy through information events for specific sectors / several companies (building & construction, wood industry, recycling/water treatment, waste electronic equipment).			
We invited all the companies that had already signed up for the pilots at this point to join our raising awareness workshop, with contributions from Dr. Sonja Eser and Dr. Rainer Pamminger.			
<b>Results</b>			
Please list below the results achieved, including the items available for documentation of the results (those items shall be put in the annexes to the deliverable).			
1	<p><i>Online: Raising Awareness Workshop</i></p> <p><b>AGENDA:</b></p> <p><b>11:00 – 11:10 Begrüßung und Circular 4.0 Projektvorstellung</b> Bianca Kahr</p> <p><b>11:10 – 11:50 Circular Economy – Zeit zu handeln</b> Dr. Sonja Eser Einführung in die Circular Economy, relevante Hebel und neue Geschäftsmodelle</p> <p><b>11:50 – 12:20 Circular Design</b> Dr. Rainer Pamminger Kreislaufgerechte Produktgestaltung – Strategien, Tools und Umsetzungsbeispiele</p>	<b>Date</b>	31.03.2022

12:20 - 12:30 Q&A



2

Direct contact with companies who have signed up for the pilot

3

We had three companies that joined for our Raising Awareness workshop which was not as many as we had hoped but nevertheless it was a very lively workshop.

Dr. Sonja Eser gave a very interesting introduction into CE and the business models. Dr. Rainer Pamminer afterwards went into more detail when it came to Circular Design, strategies, tools and some good practice examples.

Main outcomes/learnings:

It became clear that either the companies were already very knowledgeable concerning CE and were very willing to make some changes and/or receive input or that the companies had little to no knowledge concerning circular economy. There were many questions on regulations (national and regional) as well as specific questions on how they could design their respective product to make it more CE and cost friendly.

## 1.1. Activity 2

<p>Modul 2 – 1:1 assistance</p> <p>All together: 15 companies were assisted</p>	<p><b>Start date</b></p>	<p>01.03.2022</p>
<p><b>Description</b></p> <p>Understanding the Business Case of CE Objective: Create awareness / raise awareness of the business case of CE and digital transformation</p>	<p><b>End date</b></p>	<p>31.06.2022</p>
<p><b>Results</b></p>		
<p><b>Description</b></p> <p>The following tools were used for the digital maturity and the CE assessment:</p> <ul style="list-style-type: none"> <li>○ Regional best practice cases</li> <li>○ Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts) – developed by Dr. Sonja Eser</li> <li>○ Check for most relevant CE business models (“Value Hill”)</li> </ul> <p>The following tools were not used during 1:1 assistance, as the tool “check for linear risks and circular opportunities” was considered as the most appropriate one for the 1:1 consultancy:</p> <ul style="list-style-type: none"> <li>○ Katch-e CE strategist tool to help the user identify Circular Business Opportunities and provide ideas and inspiration along the process of defining a Circular Business Model.</li> <li>○ Katch-e CE idea creation game to stimulate the users to generate value ideas from a business challenge, applying circular design and circular business strategies. The tools should act as a guide to get an idea about an innovative product-service or to solve a real business problem and generate opportunities</li> <li>○ Moveco qualification tools – principles of circular economy &amp; business models for the circular economy</li> </ul> <p>Results: 15 reports</p>		

**Bitte kreuzen Sie für Ihr Unternehmen relevante Risiken und Ineffizienzen in der Grafik an:**

## 1.2. Activity 3

<b>Title</b>	Modul 3 – Circular business strategies in specific sectors (sector specific training)	<b>Start date</b>	31.03.2022
		<b>End date</b>	31.03.2022
<b>Description</b>			
<p>Know-how transfer &amp; sector-specific workshops (building &amp; construction, wood industry, recycling/water treatment, waste electronic equipment) - creative process</p> <ul style="list-style-type: none"> <li>• Workshop for one sector, several companies</li> <li>• The entire value chain was invited (if possible, cover the entire value chain of specific sector)</li> <li>• Creative session</li> </ul> <p>Focus: understanding of possible new circular business models and how digital technologies can</p> <p><b>Tools:</b>  Creative tools (CE idea creation game: <a href="https://www.katche.eu/knowledge-platform/tools-and-training-materials/katch_e-tools/katch_up-board-game/m">https://www.katche.eu/knowledge-platform/tools-and-training-materials/katch_e-tools/katch_up-board-game/m</a>) to stimulate the users to generate value ideas from a business challenge, applying circular design and circular business strategies. The tools should act as a guide to get an idea about an innovative product-service or to solve a real business problem and generate opportunities  Outsourcing to external experts</p>			

Results			
1	<p>On site workshop in Gemini Startup Base in Salzburg  <i>GEMINI - STARTUP BASE</i>  <i>Gewerbestraße 8</i>  <i>5300 Hallwang</i>  <i>AUSTRIA</i></p> <p><b>Agenda:</b></p> <hr/> <p>10:00 Uhr Start  - Check-In  - 10:30 Uhr Impuls: Circular Economy Grundlagen und Innovationspotentiale  - 11:15 Gemeinsame Analyse der vor Ort vorhandenen Materialien, Ideensammlung zur Schließung von Kreisläufen</p> <p>- ca. 12:30-13:30 Uhr gemeinsames Mittagessen &amp; Networking</p> <p>- 13:35 Impuls: Circular Design Strategien und Umsetzungsbeispiele  - 14:00 Planspiel Simplycycle und Anknüpfungspunkte für Circular Design im eigenen Unternehmen  - 15:30 Gemeinsame Auswertung  - Check-Out</p> <p>16:00 Uhr offizielles Ende – Networking</p>	<b>Date</b>	11.04.2022
2	<p>Gemini Start Up Base is an incubator in Salzburg, Austria and offers creative working space to currently over 70 companies. The project partner “Innovation Salzburg” had previously worked with the incubator and we have agreed to continue the work they had started in their pilot and organized the creative workshop with the interested companies that rent a space in the Gemini Premises.  <a href="https://gemini.co.at/">https://gemini.co.at/</a></p>		

# Lessons learned and recommendations for the follow-up

Nearly all 1:1 assistances were undertaken by Dr. Sonja Eser. Therefore, she summarized all experiences and lessons learned and also include those from her work with Salzburg and Umweltcluster Bayern:

## SUMMARY OF PILOT FINDINGS:

### actual problems:

- increased resource and energy prices – between 300 – 700%
- problems to get material at all – delivery shortages
- even recycled material has become scarce
- more employees needed to source material from new suppliers
- bottlenecks due to corona diseases
- renegotiations of customer contracts due to price increases, old prices could no longer be maintained

### digital technologies:

- The expert could not confirm digital technologies as relevant lever for CE, though for several applications it will be necessary or improving customer experience

## STATUS QUO

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### CE

- CE quite unknown
- very few have already circular products or business models but do not know that they are CE strategies
- environmental impacts of specific sectors are often unknown, ecological consequences also often ignored
- systemic approach is unknown and not practiced, i.e., organizations take into account all interactions and dependencies of their decision sand actions that impact their organization and the environmental, social, and economic systems, and identify unintended consequences of decisions or actions before they are implemented and manage these interactions effectively.

### Sustainability

- longlife products are the norm, constructed with material efficiency – now we have problems to bring these products into **cycles (long times until products come back, construction is not detachable, lightweight constructions with material mixes)**
- own products as longlife are supposed to be already sustainable enough, more interest in process improvements and cost reductions
- when sustainable strategies are already implemented, circularity is none
- use of recycling material is very low due to lacking quality
- compostable products are seen as good alternatives, though the problematic environmental impacts and problems with closing the loop are not known
- no RFL at most companies, toxic ingredients are not known
- sustainable requirements from customers (private or public) are very new and cannot be ansered accordingly now (lacking data)

## **production and supply chain**

- a lot of companies do only final assembly – getting back their product or material will not reduce costs or help them, that would help the suppliers
- material changes would mean an intensive discussion/research together with suppliers as they buy in components
- not much companies have good connections or cooperations with their suppliers
- most companies do not know their input materials exactly or to 100ppm
- site-based sustainability is mostly well developed, some water or energy cycles can be closed

## **business models**

- products are sold, to make a product-service-system is not very popular
- involvement of customers only in exceptional cases (medical products)
- issues with regulations or norms currently prevent closing loops for some products
- very few have already circular products or business models but do not know that

## **Innovation and cooperation**

- most companies are already innovative and have developed niche products

## **INTERESTING ACTIVITIES DISCUSSED**

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- use production waste as new input/ improve selection to sell high quality material
- use 100% renewable energy from all accruing material on the site
- product passports
- remanufacturing of bigger products as new business models
- sustainability activities not clearly targeted, some actions that are thought are sustainable – no clear strategy, CE can help to work on a clear sustainability strategy for the companies
- discussion about developing new markets
- few new biological products
- establish clean and high-quality material streams
- develop circular products but also circular systems for closing the loops
- improving packaging, e.g. reuse
- close water or chemical cycles in production
- improve/rethink material selection and purchasing with criteria for circular materials
- glues are needed in several applications, no detachable connection techniques currently available
- cooperation with other companies to do research on material/glues/construction issues
- industrial symbiosis with neighboring companies
- procurement include circular sourcing
- discussions on business model and improvements with circular activities

## **INCLUDED ADDITIONAL INFORMATION FOR**

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- instructions for specific industries/products e.g. construction
- networks
- material fitting for circularity
- design strategies
- how to talk to customers about CE, sustainable products

- product passports
- national CE strategies
- how do we measure circularity
- learning material
- environmental impacts of specific sectors are often unknown!

## FIRST EVALUATION

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- Companies need very specific guidance for their products/equipment/processes/material selection/product design.
- We received from all companies great feedback that the check was valuable, helped to rethink, think about more sustainability, think about issues they have not developed yet etc.
- The check that was developed is quite detailed and helps to interesting discussions about a wide variety of important topics. The step-by-step process helped to guide the discussion and rethink the own processes.
- A too simple check would serve more the intermediaries but not the companies, so it was good that we improved the check in this way.
- Forgotten was to include topics for biomass and biological cycle

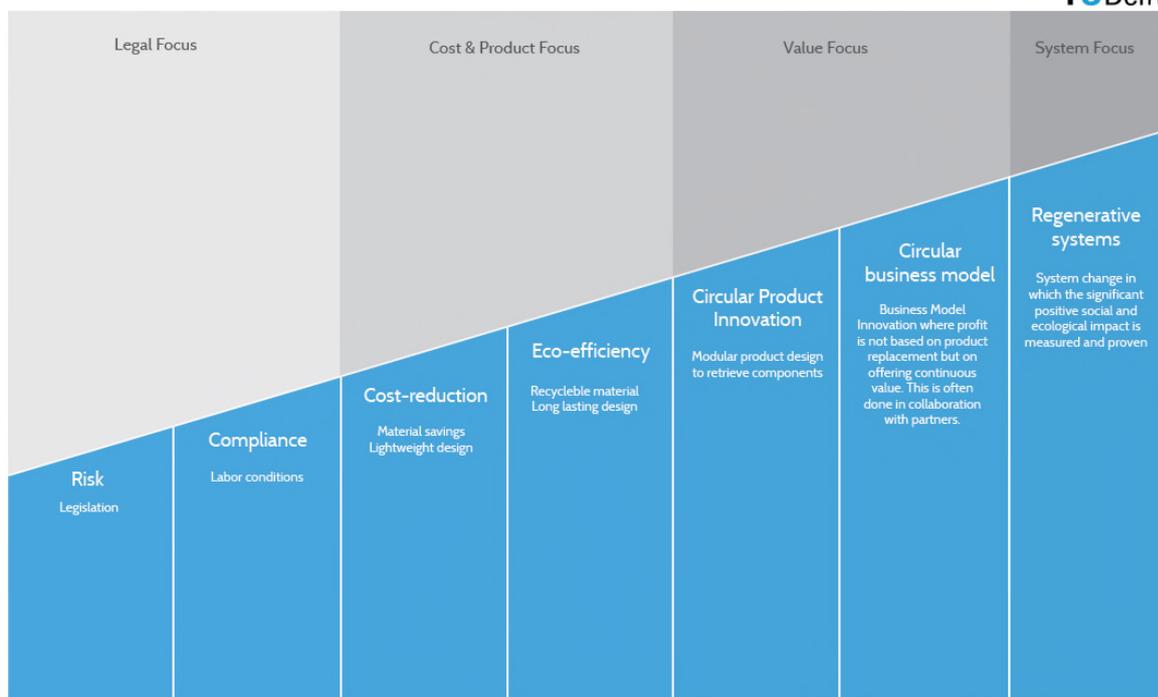
## CE maturity assessment over all SMEs consulted through Dr. Sonja Eser via UCB, AWS and Innovation Salzburg:

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### Risk to Opportunity Map

Develop an internal vision

innoboost  
TU Delft



## Durability and follow-up

aws organized a capitalization workshop together with the two other Austrian PP ITG as well as Biz-Up in order to capitalize the project's results and findings. Moreover, aws presented the pilot action results to the Austrian Federal Ministry of Climate Action and Energy and invited a representative of this respective ministry to speak about the Austrian Circular Economy Strategy during our capitalization workshop.

Moreover, aws recommended a specific funding program with a special focus on Circular Economy to the Austrian Federal Ministry of Climate Action and Energy and was additionally invited to speak at an Austrian conference ("Chancen der Kreislaufwirtschaft durch Digitalisierung") about the pilot action results.

## Annex

- D.T3.1.1 - AS feasibility plan to foster CE design model with digitalisation processes
- D.T3.2.1 - Local actions to implement CE Design Model approaches with digitalisation processes (6 documents)

**Program Priority: SO1.1 - Improve the framework conditions for innovation in the Alpine Space**

**Work Package: WP T3 - Fostering CE processes in Alpine Space with digitalisation processes**

**Activity: Planning digitalised CE processes in Alpine Space area addressed to SMEs**

**Deliverable: D.T3.1.1 AS feasibility plan to foster CE design model with digitalisation processes**

**Author: TPLJ, inputs by PPs (JSI&TPLJ, CONFBG, AWS, ITG, AURAE, RISING SUD)**

**Version: final**

**Month, YEAR: December 2021**

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## I. Introduction

The task *A.T3.1 Planning digitalised CE processes in Alpine Space area addressed to SMEs* is implemented under *WP T3 - Fostering CE processes in Alpine Space with digitalisation processes*. This deliverable relates particularly to the development of the deliverable *D.T3.1.1 AS feasibility plan to foster CE design model with digitalisation processes*.

The main objective of WP T3 is to develop transnational and local actions to monitor the effectiveness of SMEs digitalisation to push them toward CE processes. The role of digitalisation as an 'enabler' for the CE is tested with the support of the CIRCULAR4.0 toolkit developed under T2. The testing method (T3.1) is based on a "cycle" moving from the transnational working groups and their specific approaches, through an Alpine "vision" of the actions to be implemented and developed with the feasibility studies and then their experimenting with local action to come back to the Alpine vision and produce the following CIRCULAR4.0 Action Plan (T4.1). The overall idea is that Circular Economy and digitalisation can benefit SMEs and Alpine well-being economy only if included in a transnational approach that will highlight connections, relationships, knowledge and opportunities for SMEs, Intermediaries, Policymakers, and the society as a whole. The feasibility studies developed according to the 3 main approaches to CE will define concrete paths to be undertaken to achieve the results, the resources and the organization required (T3.2). Partners selected one priority CE approach looking at their economic and social environment and will work with the target groups "declining" the alpine roadmaps into local needs and expectations. Local Pilot actions (T3.3) will consist of actions directly addressed to SMEs to check their maturity for CE processes, the innovation to be introduced in the processes, products and business models, the investment plan required and the way to implement it. Finally, 280 SMEs will be assisted to implement CE processes and some of them, identified as success cases will be included in one exhibition tour, being CE with a social impact too. Pilots will be evaluated by a Scientific committee that will support the analysis of the performance according to KPIs (T2.5). The outputs will be the ground for the development of the CIRCULAR4.0 Action Plan (T4.1).

The task *A.T3.1 Planning digitalised CE processes in Alpine Space area addressed to SMEs* provides the AS users with proposals and plans to increase attitude by SMEs to eco-innovation, to innovate business models and products for re-use & recycling starting from traditional business and production processes. BWCON as a WP T3 leader prepared in a close collaboration with TPLJ a template for A.T3.1 based on the methodology for the development of feasibility plans provided by TPLJ and confirmed by all PPs in May 2021.

This deliverable (D.T3.1.1) is focusing on the development of AS feasibility plan to foster CE design model with digitalisation processes. BWCON collected inputs of each project partner from the CE design model (in the case of Slovenia two project partners collaborated – JSI & TPLJ). Each PP from the group of CE design model (JSI & TPLJ, CONFEBG, AWS, ITG, AURAE, RISING SUD) developed its feasibility plan for setting-up local service providers addressed to SMEs to establish services to increase attractiveness by investors and propose new financial schemes by Public Actors, roadmaps to achieve these results. The plan defines organization, actions, resources, and equipment needed to set-up Alpine regional centres able to promote digitalised CE activities addressed to SMEs on the design model and eco-innovation in general.

Local detailed plans by PPs for pilots (Slovenia: JSI & TPLJ, CONFEBG, AWS, ITG, AURAE, RISING SUD) are available in the appendix. All PPs in this group provided their input.

Appendix (Inputs by PPs: Local detailed feasibility plans by PPs for the implementation of pilots – Slovenia (JSI & TPLJ, CONFBG, AWS, ITG, AURAE, RISING SUD)

Project Acronym: Circular 4.0

Project title: **Digital technologies as enabler to foster the transition to the circular economy by the SME in the Alpine Space area**

## **A.T3.1**

### Planning digitalised CE processes in Alpine Space area addressed to SMEs

Template for description (plan) of Local pilot actions (for use in D.T3.1.1/2/3)

WP n°: T.3.	Fostering CE processes in Alpine Space with digitalisation processes
Task n°: T.3.1	Planning digitalised CE processes in Alpine Space area addressed to SMEs
Author(s):	Lara Trikha, Luc Schmerber, bwcon Dr. Eva Schichl, UCB
Contributors:	Roberto Sandrini, TPLJ
Type:	<b>T -Template/R – Report, JSI &amp; TPLJ</b>
Dissemination level:	<b>CO = confidential</b>
Revision:	<b>DRAFT 02</b>
Due Date:	<b>26.11.2021, v1, JSI TPLJ</b>
Date of submission:	<b>2.12.2021 (v3), JSI &amp; TPLJ</b>

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## Overview of the local pilot action - Slovenia (Jožef Stefan Institute, Technology Park Ljubljana)

This is the place where to describe in 2-3 pages the pilot action in its entirety, without entering into deep operational details related to its implementation. It is a summary-like or elevator pitch like approach.

The description should encompass at least the following elements:

- **Local context and CE approach**  
Sectors, geographical area, type of businesses targeted, etc.

In Slovenia pilot actions will address the sectors in accordance with the selected sectors of interest as mapped out in D.T1.4.2. Report on the industrial sectors selected by each area and justification of those selected:

:  
**Wood processing industry,**  
**Plastics,**  
**Construction,**  
**Manufacturing,**  
**Food**

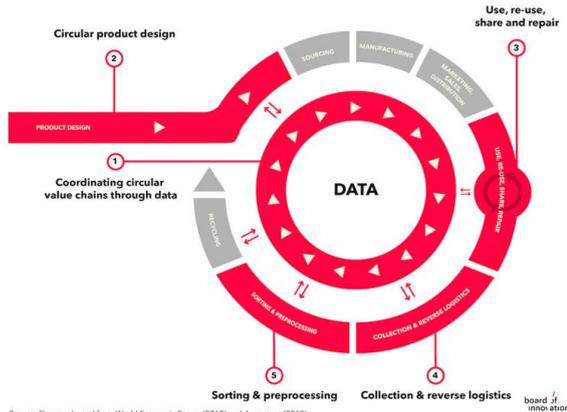
These selected sectors of interest are in accordance with the National Circular Economy Roadmap and other national strategic development plans:

	TPLJ+IJS	RISINGSUD	GRAND E-NOV	AURE	TWL	VINN+CCIAAVE	UCP	TUAS	BIZ-UP	AWS
	SI	R-Sud	Grand Est	Rhone-Al	Piemonte	Veneto	Swabia	Up-Bayern	Ober-Oster	Vienna
Wood processing industry					Forest based value chains			Furniture		
Plastics					Packaging plastics					
Construction							Construction and Building			Construc
Manufacturing industry										
Food										
Bioeconomy										
Textile										
Electronics and Electrical engineering										
<b>TOTAL</b>	<b>5</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>6</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>

These are also sectors included in Slovenia's regional specialization strategy supported by cluster organizations.

Circular economy approach we plan to undertake for pilots is the circular design model (approach) and optimal use model (approach) as defined in the scope of the Circular 4.0 project. If applicable for Slovenian SMEs also value recovery model (approach) will be used.

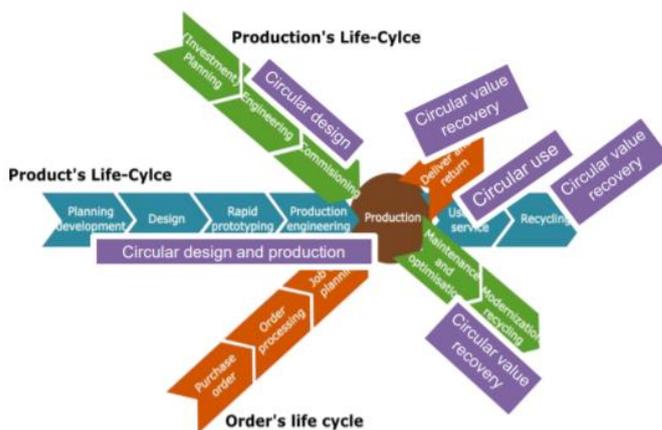
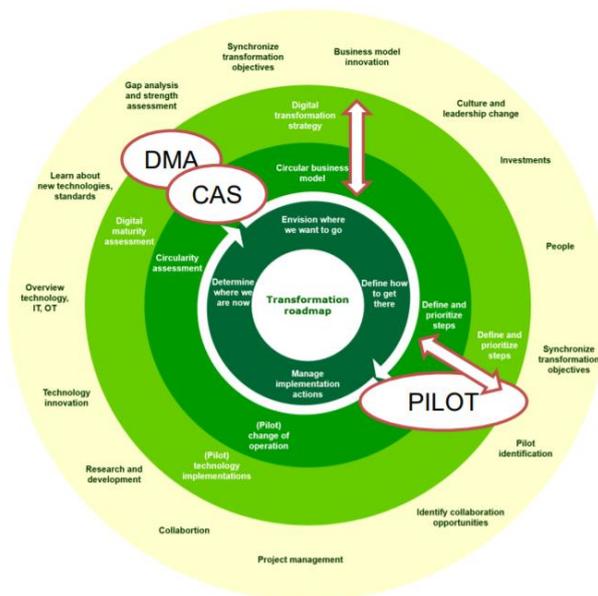
In addition, digital data-based models and systems changes will be adopted where applicable (example in advanced manufacturing) for coordinating business chains transformation and digitalization as enabler of circular transformation will be strongly emphasized along the value chain transformation. CAT4.0 transformation course of the Circular 4.0 project will be used as a base for pilot actions.



Source: Figure adapted from World Economic Forum (2019) and Accenture (2018).

Source: <https://www.boardofinnovation.com/blog/circular-business-model-examples/>

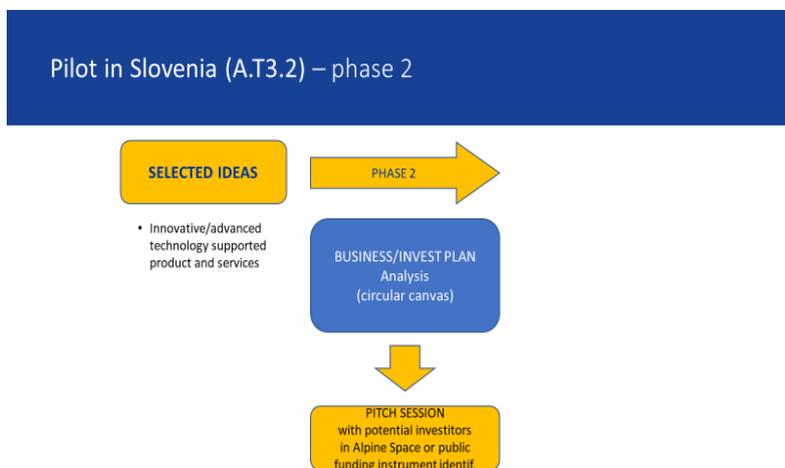
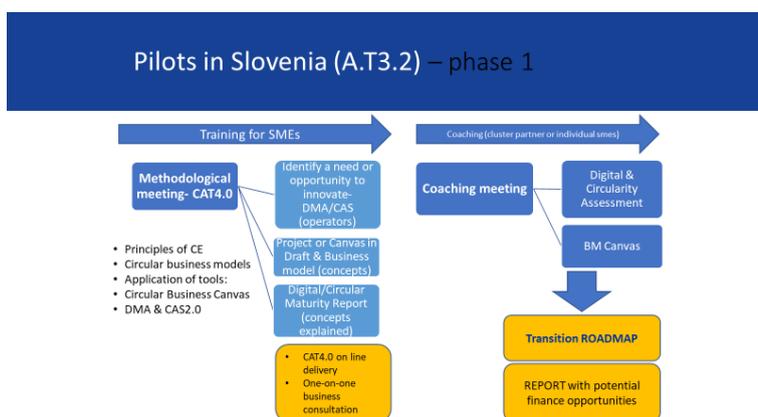
Underlying principles of pilots used in Slovenia are explained in the Module 1 (Part 2) of the CAT4.0 training course Enabling the potential for circular transformation – tech readiness–digitalization and I4.0 (available over <https://circular40.eu/>). The process encompasses systemic changes as well as transformation across the value chain of the product, production and business functions.



Improving production and process by means of digitalization will be examined such as the concepts of Zero-defect manufacturing through analytics, signal processing, AI, sensing. Industrial symbiosis & industrial urban symbiosis for improving collaboration utilizing technology and IoT & Industrial cloud platforms for connecting, storing, monitoring, analyzing and improving production processes.

(Ref.: [www.symbiosis.dk/en](http://www.symbiosis.dk/en); • <https://qu4lity-project.eu/wpcontent/uploads/2020/05/PRJ.pdf>; <https://www.ellenmacarthurfoundation.org/casestudies/effective>)

- **Methodology**



AWARNESS RISING FOR SMEs& CHECK FOR LINEAR RISKS & CIRCULAR OPPORTUNITIES will be also included in the CAT4.0 approach.

Tools to be used:

**Digital maturity assessment tools:**

<http://dma.innocape.eu/en/test/registration>

Designed for all kinds of companies to assess the digital maturity and to give a foundation for internal discussions on strategic priorities in digitalization opportunities and challenges. It is useful for the assessment of results to initiate dialogue with the regional Digital innovation hub to gain further support in digitalization process within the company:

- Improving processes through digitization and automation
- Experimenting at low costs to reveal efficiency gains, new customer touch points or new products
- Collecting and analysing data to generate insights for strategic decision making
- Establishing relationships with external partners to pool complementary resources

Other tools for SMEs & business or CE model specific tool (to be selected by experts from the tools approved in the scope of the Circular4.0 project and introduced through the training actions in T.2.) including tools assessed in the scope of **D.T2.3.1 Setting up the toolkit to support digitalisation processes to foster the CE in the Alpine space**. Such as:

<https://digital-transformation-tool.eu/project/>

and some selected tools from a repository of identified tools “fit-for-purpose” (depending on level of maturity of SME, size and SME pilot project needs)

<http://e2-owncloud.ijs.si/owncloud/index.php/s/rc17RxI7bd7Kw8d>

Companies will be cross-examined also about the application of advanced technologies such as robotics, control technologies (industrial control systems), artificial intelligence, big data use, block-chain, XP, virtual reality or augmented reality use.

#### **Circularity assessment scoring tool:**

CAS2.0 tool (developed in the scope of Circular4.0 project):

<https://circular40.eu/cas2-0/>

- **Expected results**

This section shall explain the benefit / added value expected for the SMEs.

SME's will identify the pilot project (business transformation project and/or investment project) they will start the CE transformation journey, get acquainted with the CE principles. They will also elaborate a business plan (business canvas) and/or investment plan (investment project) and present it in front of funders i.e., proactively seek financial instrument for implementing the transformation project.

## Planned activities

### Planned activities in Slovenia (JSI & TPLJ) are:

#### 1. Recruit expert assessors for 1:1 consultations & delivery of DMA/CAS

TPLJ: Preparation of the open call for experts, selection & contracting phase

Selected experts prepare CAT4.0 for specific sectors to support 1:1 assessment within the process of DMA/Circular Maturity Assessment, business canvas preparation, investment plan preparation, potentially for pitching)

**Deadline:** 10.12.2021 (draft), 15.12.2021 (final)

#### 2. Selection/identification of SMEs

Selecting SMEs to participate in the training program & directly addressing sector specific industrial clusters (clusters for wood, manufacturing, plastics, food) (open call and/or direct call for participation in the CAT4.0 program through sectoral clusters organized through regional specialization or located under the umbrella of Chamber of Economy).

**TPLJ/JSI** - expression of interest to be publicly published on TPLJ and JSI web page & involvement of Operators (Association of plastic industry of Slovenia, Regional development agencies/centres etc.)

**Deadline:** 10.12.2021 (draft), 15.12.2021 (final)

##### Clear message for SMEs!

**Deliverables:** CAS2.0, DMA, Canvas, Fin. Investment plan, possible investors pitching events (Slo & It – venture capital investors)

**Preparation of direct invitations for companies:** (approx. to be selected 10), list of companies from business data bases (BIZi/AJPEs, among 500 companies, selection by sectors, by turnover, profit & value added), principle of selection: First come, first selected, Deminimis rule (to be received by FLC)

#### 3. Thematic workshops/seminars

Implementing the CAT4.0 modules addressed to SMEs supported by awareness rising campaign (using project partners communications channels – JSI & TPLJ).

**Thematic workshops per sectors:** 15.2.2022 – 15.3.2022

#### 4. Circular CE capability/potentiality and Digital Maturity Assessment of SMEs

**Tools mainly used will be:**

##### - INNOCAPE tool

<http://dma.innocape.eu/en/test/registration>

Designed for all kinds of companies to assess the digital maturity and to give a foundation for internal discussions on strategic priorities in digitalization opportunities and challenges. It is useful for the assessment of results to initiate dialogue with the regional Digital innovation hub to gain further support in digitalization process within the company:

- Improving processes through digitization and automation
- Experimenting at low costs to reveal efficiency gains, new customer touch points or new products
- Collecting and analysing data to generate insights for strategic decision making
- Establishing relationships with external partners to pool complementary resources

Some other SME/sector specific tool from a repository of identified tools might be deployed as well that is “fit-for-purpose” (depending on level of maturity of SME, size and SME pilot project needs) <http://e2-owncloud.ijs.si/owncloud/index.php/s/rc17Rx17bd7Kw8d>

Other tools for less digitally advanced SMEs & business or CE model specific tool (to be selected by experts from the tools approved in the scope of the Circular4.0 project and introduced through the training actions in T.2.) including tools assessed in the scope of **D.T2.3.1 Setting up the toolkit to support digitalization processes to foster the CE in the Alpine space**. Such as: <https://digital-transformation-tool.eu/project/>

## 5. Identification of innovation needs and investment plan

As discussed during the partner meeting on 02.11.2021, each company supported should receive a document established based on the assessment and in collaboration with the SME (at least one bilateral meeting between the SME and an expert/consultant during the process) and encompassing at least one recommendation covering any of the following aspects of the transformation of the company towards higher circularity (= increase of maturity level)

- Technology adoption
- New or improved process
- New or improved or transformed business model
- New or improved products
- New or improved services
- Digitally supported (as far as possible)
- With a time, horizon from 6 months up to 1 year

Business canvas and a roadmap for the implementation of the SME pilot action covering at least one of the transformation areas listed above will be produced by the experts and a pitching presentation prepared to advance SMEs with their transitioning intentions. Experts will assist SME's 1:1 on that.

## 6. Pitching the pilot in front of finance organizations and/or identification of the funding instrument for SME to apply for funding the pilot action.

Identifying financial organizations and their instruments in support of CE.  
Organizing a “pitching” event with financial institutions and/or

**Pitching event (SLO-IT):** April 2022 (to be decided)

For the description of each activity (or sub-activity if relevant), we suggest using the following table:

Title		Start date	MM.YYYY
		End date	MM.YYYY
<b>Description</b>			
Describe here the activity			

<b>Add sub-activities if necessary</b>			
<b>Results</b>			
Note: the results (or deliverables) will need to be documented and reported upon in Activity T3.2 in the report for each local pilot action. They should therefore be formulated in a way that enables monitoring and documentation of the implementation.			
1	Example: 3 online workshops ...	<b>Date</b>	
2	Example: 1 call for applications	<b>Date</b>	
3	Example: 25 CE + digital maturity assessments of SMEs	<b>Date</b>	
n		<b>Date</b>	

## Indicators (KPIs) and monitoring

This section shall describe what are the measurable objectives (qualitative and quantitative indicators) of the pilot action and how the progress will be monitored. The selection/definition of indicators shall refer to deliverable *D.T2.5.1 Evaluation methodology* and *D.T2.4.2 KPIs definition to assess the contribution of digitalisation on CE approaches* (templates available on Teams – see also next page).

A basic indicator for all pilot actions is the number of SMEs targeted (35 in Slovenia - 17 (JSI) within Circular Design Model and 18 (TPLJ) within Optimal Use Model).

Measurable objectives:

Minimally 17 + 18 PPs (JSI & TPLJ) SMEs going through CAT4.0. All together 35.

- Technology adoption
  - 1 new or improved process in SME
  - 1 New or improved or transformed business model identified
  - 1 New or improved products foreseen within 6 months to a year from finalizing CAT4.0
  - 1 New or improved services/business process
  - 1 Digitally supported action identified with at least one advanced digital technology

Project Acronym: Circular 4.0

Project title: **Digital technologies as enabler to foster the transition to the circular economy by the SME in the Alpine Space area**

## **A.T3.1**

### Planning digitalised CE processes in Alpine Space area addressed to SMEs

#### Template for description (plan) of Local pilot actions (for use in D.T3.1.1/2/3)

WP n°: T.3.                      Fostering CE processes in Alpine Space with digitalisation processes

Task n°: T.3.1                 Planning digitalised CE processes in Alpine Space area addressed to SMEs

Author(s):                      Lara Trikha, Luc Schmerber, bwcon  
Dr. Eva Schichl, UCB

Contributors:                 Roberto Sandrini, TPLJ

Type:                                **T -Template/ R- Report, CONFBG**

Dissemination level:        **CO = confidential**

Revision:                         **DRAFT 02**

Due Date:

Date of submission:         **Nov 2021**

1. Overview of the local pilot action – Confindustria Bergamo.....	7
2. Planned activities.....	11
3. Indicators (KPIs) and monitoring.....	13

## Overview of the local pilot action – Confindustria Bergamo

This is the place where to describe in 2-3 pages the pilot action in its entirety, without entering into deep operational details related to its implementation. It is a summary-like or elevator pitch like approach.

The description should encompass at least the following elements:

- **Local context and CE approach**

The local context of the local actions encompasses enterprises from the Bergamo province. The targeted companies are SMEs from the manufacturing sector

The assessment allows to evaluate the status and the workshops would allow to understand how to improve in three areas:

- design of new actions and strategies connected to the circular economy
- optimal use through benchmarking companies and optimizing what enterprises already use
- value recovery to implement trivial actions such as the reduction and recovery of waste finalized at recovering the value that was previously lost

- **Methodology**

The project described here has the general objective of developing, testing and applying a tool for assessing the maturity of companies in terms of Circular Economy.

In particular, it will be divided into 4 main phases:

- Project activation
- Circular Maturity Assessment Tool Test
- Application of the tool to the mapping of 5-15 virtuous companies associated with Confindustria Bergamo and identification of areas for improvement through workshops to be organized in the company
- Development of a final benchmarking report among the companies analyzed, possibly with a final dissemination event



Main steps:

1. DMA (Confindustria Bergamo)
2. CAS (Bergamo University)
3. Roadmap with corrective actions and suggestions
4. Dedicated consultancy to build the Business Model Canvas of each company profile

Digital maturity tool: Derived from Dreamy 4.0 Politecnico of Milano

Circular assessment tool: Circularity Assessment Score 2.0

- **Expected results**

Through the parallel assessment of digital and circular maturity, SMEs will be able to auto-assess their readiness with respect to the green and digital transitions, which will be relevant to drive investments in the short term. Thanks to the dedicated workshop, each company will be able to engage in brainstorming and reflections with the involved experts, as well as with other functions inside the company, so to overcome the so-called silos thinking. In addition, the benchmarking report will allow SMEs to achieve a deeper understanding on their current digital and circular state related to other companies in the same area. Finally, the main opportunity for companies is to understand which actions to implement to become more digitalized and exploit circular processes to get a competitive advantage.

## Planned activities

In this session, the activities planned for the roll-out of the approach described above shall be detailed. In order to have a significant degree of comparison among the different local pilot actions, we suggest using a set of common activities (= same title or heading, not the same methods). Those activities are the ones listed in the AF

### 7. Selection/identification of SMEs

The selection of SMEs is done through the Confindustria Bergamo database of companies. Firstly the companies are filtered in order to visualize only the ones that are qualified as SMEs regarding the number of employees and their annual turnover. Secondly, the selected SMEs are contacted through the Confindustria newsletter to inform them about the Circular 4.0 project and its opportunities. After having an adequate number of responses, the works proceeds in organizing the thematic workshops, the circular and digital maturity assessments in our headquarters or in company according to company preferences.

### 8. Thematic workshops/seminars

The Local training Actions were organized in two different Front-desk modules:

1. Front-desk module 1 were addressed to the internal resources of Confindustria Bergamo that are involved in the Circular Acceleration Training 4.0 (CAT4.0) and in the Pilot actions, in particular in the implementation of the Digital Maturity Assessment (DMA). The module were scheduled for the 25th June 2021 and consisted in a meeting of three hour in a classroom of Confindustria Bergamo dedicated to the training activities.
2. Front-desk module 2 were addressed to the University of Bergamo that were involved in the Pilot action, and in particular in the implementation of the Circular Assessment Score (CAS) and in the construction of the Circular Business Model Canvas. The module were scheduled for the 29th June 2021 and was implemented through an online Teams meeting of four hours.

The front-desk modules were supported also by an online course (OCT training course) that was available on the platform TalentLMS. The online course was composed by eight different module of one hour each; the materials and information provided by the Talent platform are fundamental for the correct implementation of services dedicated to the SMEs: the training activities (CAT4.0) and the pilot action (implementation of the assessment tools and the circular business model canvas).

### 9. Circular CE capability/potentiality and Digital Maturity Assessment of SMEs

Regarding the digital maturity assessment, Politecnico di Milano and Assoconsult have developed an online self-assessment tool Test Industria 4.0, available free of charge on the website: <http://preparatialfuturo.confindustria.it/digital-innovation-hub/check-aziendale-online/>

The Industry 4.0 Test provides a first indication of the digital maturity of your company, with the intention of photographing its positioning with respect to the possibilities offered by the Industry 4.0 logic. The level of maturity is measured against four dimensions of analysis (Execution, Monitoring and Control, Technologies and Organization) in the processes that form the value chain of a company.

On the other hand, the tool used for the circularity assessment is the CAS 2.0, it will be applied by the experts of the University of Bergamo in order to make sure the companies understand the questions and fill them in the most accurate way.

### 10. Identification of innovation needs and investment plan

The University of Bergamo will then merge the results of the digital maturity test with the circular assessment score in a single report. This report will present to each company

the current state on both maturities and a roadmap on which actions to take in order to develop both their digital and circular maturity.

As discussed during the partner meeting on 02.11.2021, each company supported should receive a document established on the basis of the assessment and in collaboration with the SME (at least one bilateral meeting between the SME and an expert/consultant during the process) and encompassing at least one recommendation covering any of the following aspects of the transformation of the company towards higher circularity (= increase of maturity level)

- Technology adoption
- New or improved process
- New or improved or transformed business model
- New or improved products
- New or improved services
- Digitally supported (as far as possible)
- With a time horizon from 6 months up to 1 year

Consequently this activity should describe the process for the draft of those recommendations, like for instance involvement of experts and setup of a roadmap (example for AURA-E).

Each of the above activity can be split into several steps (sub-activities) as relevant for each pilot action. But we recommend keeping it simple.

For the description of each activity (or sub-activity if relevant), we suggest using the following table:

Title	Selection and identification of SMEs	Start date	11/2021
		End date	12/2021
<b>Description</b>			
<p>The selection of SMEs is done through the Confindustria Bergamo database of companies. Firstly the companies are filtered in order to visualize only the ones that are qualified as SMEs regarding the number of employees and their annual turnover. Secondly, the selected SMEs are contacted through the Confindustria newsletter to inform them about the Circular 4.0 project and its opportunities. After having an adequate number of responses, the works proceeds in organizing the thematic workshops, the circular and digital maturity assessments in our headquarters or in company according to company preferences.</p>			
<b>Results</b>			
1	Identification of 15 SMEs		

<b>Title</b>	Thematic workshops	<b>Start date</b>	.YYYY
		<b>End date</b>	MM.YYYY
<b>Description</b>			
<p>The Local training Actions were organized in two different Front-desk modules:</p> <ol style="list-style-type: none"> <li>1. Front-desk module 1 were addressed to the internal resources of Confindustria Bergamo that are involved in the Circular Acceleration Training 4.0 (CAT4.0) and in the Pilot actions, in particular in the implementation of the Digital Maturity Assessment (DMA). The module were scheduled for the 25th June 2021 and consisted in a meeting of three hour in a classroom of Confindustria Bergamo dedicated to the training activities.</li> <li>2. Front-desk module 2 were addressed to the University of Bergamo that were involved in the Pilot action, and in particular in the implementation of the Circular Assessment Score (CAS) and in the construction of the Circular Business Model Canvas. The module were scheduled for the 29th June 2021 and was implemented through an online Teams meeting of four hours.</li> </ol> <p>The front-desk modules were supported also by an online course (OCT training course) that was available on the platform TalentLMS. The online course was composed by eight different module of one hour each; the materials and information provided by the Talent platform are fundamental for the correct implementation of services dedicated to the SMEs: the training activities (CAT4.0) and the pilot action (implementation of the assessment tools and the circular business model canvas).</p>			
<b>Results</b>			
1	Front-desk module 1	<b>Date</b>	25/6/2021
2	Front-desk module 2	<b>Date</b>	29/6/2021
3		<b>Date</b>	
n		<b>Date</b>	

<b>Title</b>	Digital and circular maturity assessment	<b>Start date</b>	12/2021
		<b>End date</b>	3/2022
<b>Description</b>			
<p>Regarding the digital maturity assessment, Politecnico di Milano and Assoconsult have developed an online self-assessment tool Test Industria 4.0, available free of charge on the website:  <a href="http://preparatialfuturo.confindustria.it/digital-innovation-hub/check-aziendale-online/">http://preparatialfuturo.confindustria.it/digital-innovation-hub/check-aziendale-online/</a></p> <p>The Industry 4.0 Test provides a first indication of the digital maturity of your company, with the intention of photographing its positioning with respect to the possibilities offered by the Industry 4.0 logic. The level of maturity is measured against four dimensions of analysis (Execution, Monitoring and Control, Technologies and Organization) in the processes that form the value chain of a company.</p>			

On the other hand, the tool used for the circularity assessment is the CAS 2.0, it will be applied by the experts of the University of Bergamo in order to make sure the companies understand the questions and fill them in the most accurate way.

**Results**

1	Digital and Circular maturity assesments		

<b>Title</b>	Identification of innovation needs and investment plan	<b>Start date</b>	3/2022
		<b>End date</b>	4/2022

**Description**

The University of Bergamo will then merge the results of the digital maturity test with the circular assessment score in a single report. This report will present to each company the current state on both maturities and a roadmap on which actions to take in order to develop both their digital and circular maturity. Along with the report, it will also be created a business model canvas that encompasses the findings of both the circular and digital assessments.

**Results**

1	Final report of assessment activities and roadmap	<b>Dd/mm/yy</b>	

## Indicators (KPIs) and monitoring

The KPIs defined for the four above-mentioned phases are as follows:

1. Selection/identification of SMEs:
  - Number of identified SMEs
2. Thematic workshops/seminars:
  - Number of workshops
  - Average number of participants
3. Circular CE capability/potentiality and Digital Maturity Assessment of SMEs
  - Number of SMEs that were assessed with the Digital Maturity Assessment
  - Number of SMEs that were assessed with the Circular Assessment Score
4. Identification of innovation needs and investment plan:
  - Number of SMEs that participated in the post-assessment workshop
  - Average number of improvement actions/innovation identified per company

Project Acronym: Circular 4.0

Project title: **Digital technologies as enabler to foster the transition to the circular economy by the SME in the Alpine Space area**

## **A.T3.1**

### Planning digitalised CE processes in Alpine Space area addressed to SMEs

Template for description (plan) of Local pilot actions (for use in D.T3.1.1/2/3)

WP n°: T.3.                      Fostering CE processes in Alpine Space with digitalisation processes

Task n°: T.3.1                Planning digitalised CE processes in Alpine Space area addressed to SMEs

Author(s):                      Lara Trikha, Luc Schmerber, bwcon  
Dr. Eva Schichl, UCB

Contributors:                 Roberto Sandrini, TPLJ

Type:                              **T -Template/ R- Report, AWS**

Dissemination level:        **CO = confidential**

Revision:                        **DRAFT 02**

Due Date:                        **November 2021**

Date of submission:         **December 2021**

1. Overview of the local pilot action - Austria (Austria Wirtschaftsservice).....	7
2. Planned activities.....	11
3. Indicators (KPIs) and monitoring.....	13

## Overview of the local pilot action - Austria (Austria Wirtschaftsservice)

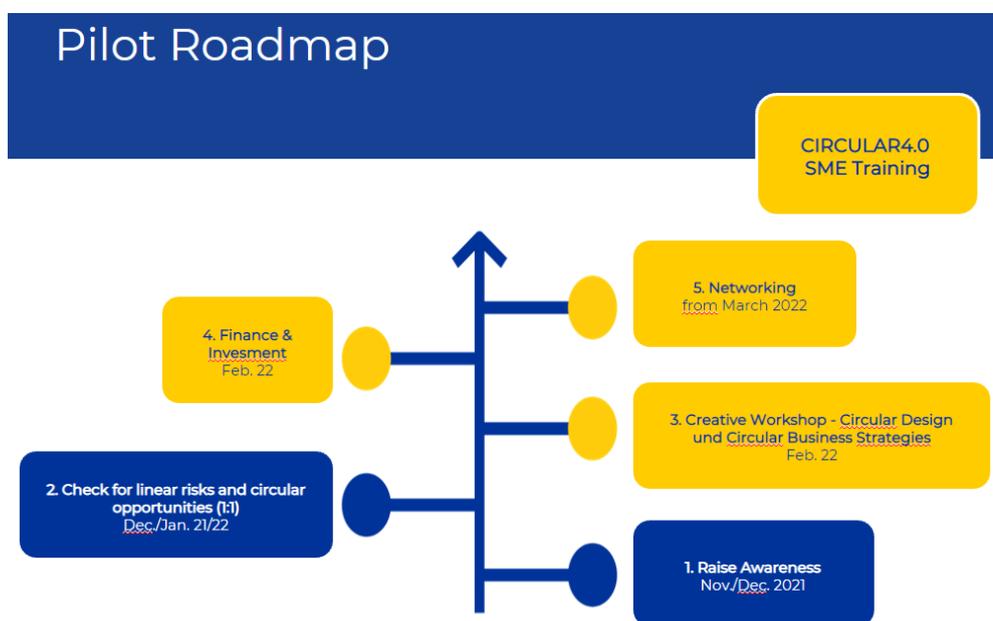
AWS has started to work with experts to plan out the pilot actions, based on what has been developed with the other German speaking partners.

The pilot action is planned out in the following models:

1. Raise awareness for CE supported by digitalization
2. Understanding the business case of CE with digital support
3. Circular business strategies in den specific sectors (sector specific training)
4. Finance & Investment
5. Networking

Not all steps are mandatory – depending on the demands/requirements of the SMEs the different modules will be applied. Just the first module is more or less mandatory because we need it to come into contact with the SMEs and to build the community.

1:1 assistance starts immediately after the first module. Module 2 is implemented in the form of a workshop but just for one company (CEO + additional employees). Module 3, 4 and 5 can be carried out either as individual 1:1 assistance or as group workshops (depending on the demands/requirements of the SMEs)



### Expected results

We expect to assist 15 companies with their journey to introduce circular economy in their businesses. With the kick-off workshop we hope to educate companies on what circular economy is and what it could mean for their respective businesses. The 1:1 assistance is an opportunity for the companies to dive deeper into their business cases and to find specific ways to introduce circular economy e.g., when

producing a product with the help of digitalisation. The creative workshops intend to help companies with the circular design of their products and services and plan their journey beyond the project life.

## Planned activities

### MODUL 1

Raise Awareness for CE supported by digitalization (community building)

Objective: to raise awareness of the opportunities of the circular economy through information events for specific sectors / several companies (building & construction, wood industry, recycling/water treatment, waste electronic equipment)

Format:

- Networking event/(online) workshop
- 1-2 hours
- An event is planned and carried out for each of the three sectors
- The entire value chain is invited

Topics:

- Presentation of the Circular 4.0 project
- Presentation of EU Circular Economy Action Plan
- Basics of the circular economy and how digitalization can support transformation (with focus on the respective sectors)
- Presentation of two (regional) case studies
- Q&A + discussion
- Forecast: what does Circular4.0 offer the participating companies?

Tools:

- Regional best practice cases

### MODUL 2

Understanding the Business Case of CE

Objective: Create awareness / raise awareness of the business case of CE and digital transformation

Format:

- (Online) coaching for one company - 1:1 assistance
- 2-4 hours

Topics:

- Entry point: linear risks and circular opportunities of sectors - as a check
- Knowledge transfer of added value of the circular economy for company
- Opportunities at point of intersection of CE and digital technologies for various circular economy business models

Tools:

- Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)
- Katch-e CE Strategist (<https://www.katche.eu>)
- MOVECO Qualification tools (<http://www.interreg-danube.eu/news-and-events/programme-news-and-events/2577>)
- SMEs will receive:
- an evaluation of the check for linear risks and circular opportunities (based on the example of the CAS) and digital maturity check (+ evaluation of contexts)
- Circular business model canvas

<b>MODUL 3</b>
----------------

Circular business strategies in specific sectors (sector specific training)

Objective: Know-how transfer & sector-specific workshops (building & construction, wood industry, recycling/water treatment, waste electronic equipment) - creative process

Format:

- Workshop for one sector, several companies
- The entire value chain is invited (if possible, cover the entire value chain of specific sector)
- Creative session

Topics:

- Focus: understanding of possible new circular business models and how digital technologies can support them

Tools:

- Creative tools (CE idea creation game: [https://www.katche.eu/knowledge-platform/tools-and-training-materials/katch\\_e-tools/katch\\_up-board-game/m](https://www.katche.eu/knowledge-platform/tools-and-training-materials/katch_e-tools/katch_up-board-game/m)) to stimulate the users to generate value ideas from a business challenge, applying circular design and circular business strategies. The tools should act as a guide to get an idea about an innovative product-service or to solve a real business problem and generate opportunities
- Outsourcing to external experts

<b>Title</b>	<b>Selection/identification of SMEs</b>	<b>Start date</b>	12.2021
		<b>End date</b>	03.2022
<p>In December 2021 we have published a press release as well as social media posts in order to find companies to take part in our pilot action. Moreover, we have sent out the information on our company newsletter (reaching hundreds of aws clients) as well as shared the information with our expert in order to circulate the ad.</p> <p>For any company that has sent us an e-mail stating their interest we have sent a form to fill out asking for the following information:</p> <ul style="list-style-type: none"> <li>- Why would you like to take part in the pilot action?</li> <li>- Have you already taken measures to introduce circular economy in your company and if so, which ones?</li> <li>- What are your expectations for the pilot action?</li> </ul>			
<p><b>Results</b></p> <p>Note: the results (or deliverables) will need to be documented and reported upon in Activity T3.2 in the report for each local pilot action. They should therefore be formulated in a way that enables monitoring and documentation of the implementation.</p>			
1	Selection/identification of SMEs	<b>Date</b>	12.2021 - 03.2022
		<b>Date</b>	
		<b>Date</b>	
		<b>Date</b>	

<b>Title</b>	<b>Modul 1</b>	<b>Start date</b>	01.2022
		<b>End date</b>	01.2022
<p>For modul 1 we plan to organize a kick-off meeting for all interested companies to introduce the principal concepts of circular economy and how to introduce them into their daily work.</p>			
<p><b>Results</b></p> <p>Note: the results (or deliverables) will need to be documented and reported upon in Activity T3.2 in the report for each local pilot action. They should therefore be formulated in a way that enables monitoring and documentation of the implementation.</p>			
1	Modul 1	<b>Date</b>	01.2022

		<b>Date</b>	
		<b>Date</b>	
		<b>Date</b>	

<b>Title</b>	<b>Modul 2</b>	<b>Start date</b>	02.2022
		<b>End date</b>	02.2022

For modul 2 every company taking part in the pilot to receive the opportunity for a 1:1 session with our experts for about 2-3 hours where they have the opportunity to discuss their individual business cases and undergo digital maturity assessments as well as a circularity assessment.

**Results**

Note: the results (or deliverables) will need to be documented and reported upon in Activity T3.2 in the report for each local pilot action. They should therefore be formulated in a way that enables monitoring and documentation of the implementation.

1	Modul 2	<b>Date</b>	01-02.2022
		<b>Date</b>	
		<b>Date</b>	
		<b>Date</b>	

<b>Title</b>	<b>Modul 3</b>	<b>Start date</b>	03.2022
		<b>End date</b>	03.2022

Circular business strategies in specific sectors (sector specific training)  
Objective: Know-how transfer & sector-specific workshops (building & construction, wood industry, recycling/water treatment, waste electronic equipment) - creative process.

**Results**

Note: the results (or deliverables) will need to be documented and reported upon in Activity T3.2 in the report for each local pilot action. They should therefore be formulated in a way that enables monitoring and documentation of the implementation.

1	Modul 3	<b>Date</b>	03.2022
		<b>Date</b>	
		<b>Date</b>	
		<b>Date</b>	

## Indicators (KPIs) and monitoring

This section shall describe what are the measurable objectives (qualitative and quantitative indicators) of the pilot action and how the progress will be monitored. The selection/definition of indicators shall refer to deliverable *D.T2.5.1 Evaluation methodology* and *D.T2.4.2 KPIs definition to assess the contribution of digitalisation on CE approaches* (templates available on Teams – see also next page).

A basic indicator for all pilot actions is the number of SMEs targeted (~20 on average).

One of the KPIs will be a satisfactory survey. As we have asked all companies taking part what their expectations are in the pilots, we will ask them after the pilots if we have met their expectations. We will define the exact KPIs as soon as all companies are identified.

Project Acronym: Circular 4.0

Project title: **Digital technologies as enabler to foster the transition to the circular economy by the SME in the Alpine Space area**

## **A.T3.1**

### Planning digitalised CE processes in Alpine Space area addressed to SMEs

#### Template for description (plan) of Local pilot actions (for use in D.T3.1.1/2/3)

WP n°: T.3.	Fostering CE processes in Alpine Space with digitalisation processes
Task n°: T.3.1	Planning digitalised CE processes in Alpine Space area addressed to SMEs
Author(s):	Lara Trikha, Luc Schmerber, bwcon Dr. Eva Schichl, UCB
Contributors:	Roberto Sandrini, TPLJ
Type:	<b>T -Template/R – Report, ITG</b>
Dissemination level:	<b>CO = confidential</b>
Revision:	<b>DRAFT 02</b>
Due Date:	November 2021
Date of submission:	December 2021

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# Overview of the local pilot action – Salzburg (ITG)

## Local context and CE approach

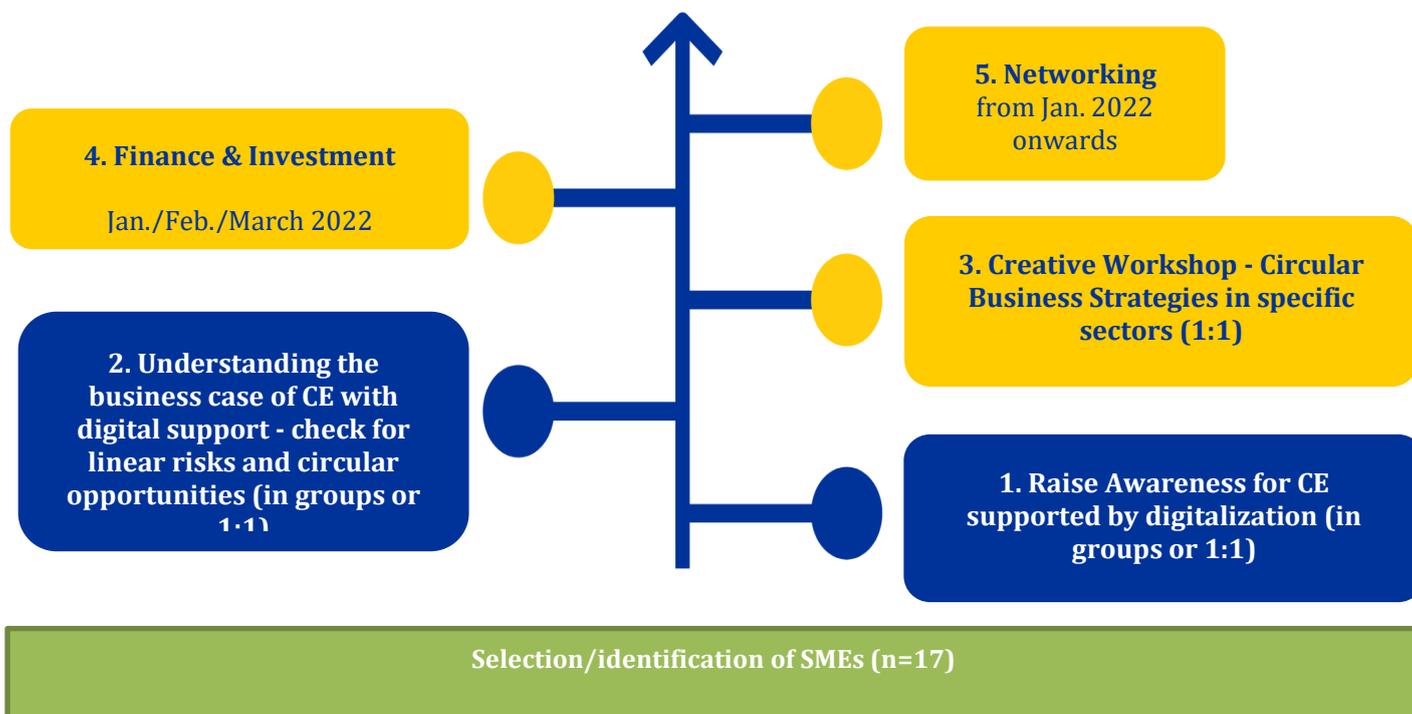
The focus of the ITG work in WP T3 is D.T3.1.1 AS feasibility plan to foster CE design model with digitalisation processes. ITG starts to gather information on possible organization, actions, resources, and equipment needed to set-up Alpine regional centers able to promote digitalised CE activities addressed to SMEs on the design model and eco-innovation in general. Therefore, desk research and an analysis of existing structures (within the region and beyond) and requirements on a regional political, economic, sociological, and technical basis is performed.

Due to the regional economy structure of Salzburg, SMEs from the following sectors are mainly targeted for the local actions:

- building and construction
- wood / timber industry
- plastics industry (not as a sector but as a material with great impact on many sectors)

## Methodology

In order to assist SMEs in their circular transformation, ITG developed together with the Austrian and German partners and an external expert five modules to promote and implement digitalised CE activities. Depending on the SME's individual demands/requirements, different modules are applied. This means, that not all modules are mandatory, except from the first one, as it is needed to get in contact with the SMEs and to build up the community. Right after the first module, 1:1 assistance starts by performing workshops for one company (CEO + additional employees) with checks for linear risks and circular opportunities within module 2. Modules 3,4, and 5 can be carried out either as individual 1:1 assistance or as group workshop, depending on the needs and requirements of the SMEs.



## Expected results

The aim of A.T3.2 is to foster CE design model with digitalisation processes in at least 17 SMEs mainly in the sectors building and construction, wood / timber industry and plastic industry. Awareness for CE activities will be raised on a very broad level e.g. by tenders on the homepage. These SMEs are coached in CE activities, at first by raising awareness to the importance and the chances of CE, secondly by the check for linear risks and circular opportunities. SMEs benefit from the checks and the detailed results they get after the workshop performed by the external expert. Additionally, SMEs are coached in further CE activities (modules 3-4), which should support them in developing a business strategy and a transformation plan. Networking and exchange with other SMEs are another aim of the pilot action (module 5). SMEs should be motivated and enthusiastic about further working on CE through knowing the chances and advantages of CE and by the help of an expert in the first steps of implementation CE activities.

Within the pilot action, the developed modules should be tested for their applicability and their usefulness. The tools and the generated knowledge on CE should be provided to more SMEs above the project framework. Thus, it is important that CE knowledge is provided on a low level and it should be easily applicable. In the long run, the knowledge collected during pilots should be made available to other SMEs within the region of Salzburg.

## Planned activities

### 11. Selection/identification of SMEs

ITG decided to focus on the following sectors:

- **Building and construction**

This sector is an especially lively one in most project areas and certainly a sector with a lot of potential to work with during the course of the project. In Austria, more specifically in Salzburg, there are almost 3000 companies within this sector. According to the economic cycle of the construction industry in Salzburg, the following picture emerges: the positive economic development in the construction industry in recent years has continued so far. Despite the Corona crisis, the construction industry in Salzburg can record a high level of workload, which reliably keeps an important part of the regional economy running and secures thousands of jobs. Digitalization and circular economy are currently seen as the greatest challenges but also opportunities in the sector (cf. member survey of the building and construction industry of Salzburg). For these reasons, regional research institutes, such as the Kompetenzzentrum Bauforschung (competence center for research within the sector of building and construction), deal with the building industry in connection with circular economy issues.

For the Austrian government authorities, the promotion of circular economy and material efficiency is very important. In particular, the preparation for the reuse of components and the ensuring of a high quality of recycled building materials to recycle construction and demolition waste is supported by regulations.

- **Wood / timber industry**

The wood and timber industry are also very present in Salzburg. The only cluster the region of Salzburg has so far, is the cluster in timber industry. Therefore, this sector has also been chosen for CE activities.

- **Plastics industry** (not as a sector but as a material with great impact on many sectors)

As the aim is to include at least 17 SMEs in the pilot actions, ITG might not only to include SMEs from the three above mentioned sectors but expand the target group also to other sectors like print and life sciences.

ITG publishes the invitation for the participation in the workshops on their homepage and, additionally, invites and contacts SMEs directly to apply for the participation in these workshops. Selected SMEs (First Come – First Served) are chosen to participate in the workshops. Additionally, SMEs in the wood and timber industry will be contacted via the Holzcluster Salzburg.

Title	Selection/identification of SMEs	Start date	11.2021
		End date	03.2022
<b>Description</b>			
The aim of this activity is to select and identify at least 17 SMEs for participation in local action.			
<b>Sub-activities</b>			
<ul style="list-style-type: none"> <li>- Identification of sectors</li> <li>- Raising awareness among SMEs in sectors – Call for applications</li> <li>- Selection of SMEs</li> </ul>			

<b>Results</b>			
<ul style="list-style-type: none"> <li>- Sectors, the addressed SMEs are operating in, have been selected</li> <li>- Awareness is raised among SMEs in predefined sectors by publishing information and invitation to participate in local actions on homepage (call for applications); additionally, SMEs are contacted directly by email (direct approach) or via Holzcluster Salzburg</li> <li>- At least 17 SMEs are selected based on first come – first served principle for participation in local action</li> </ul>			
1	Identification of sectors	<b>Date</b>	Until 10/2021
2	Raising awareness / call for applications	<b>Date</b>	Until 03/2022
3	17 SMEs are selected for CE + digital maturity assessments	<b>Date</b>	Until 03/2022

## 12. Thematic workshops/seminars

Together with German-speaking partners and the external expert a module system has been developed to be able to foster CE activities in SMEs. The aim of the development of the modules is to reach SMEs on a low-threshold level to increase motivation, acceptability, and applicability of CE tools within SMEs. ITG developed these modules together with an external expert, whose knowledge, experience, and know-how are outstanding. Dr. Sonja Eser is circular design consultant and supports companies, administrations, and organisations in the development of products, processes, buildings, and areas for regenerative circular economy (<https://www.sinnen-wandel.de>). She will also be part of the training courses with SMEs until the knowledge building has reached an appropriate level ITG internally.

In summary, all these activities should ensure, that the modules can also be easily implemented from theory into practice to as many SMEs as possible within the region of Salzburg.

The following modules have been developed to be addressed to the SMEs:

- **Modul 1:** Raise Awareness for CE supported by digitalization (community building)  
Objective: to raise awareness of the opportunities of the circular economy through information events for specific sectors / several companies (building & construction, wood industry, recycling/water treatment, waste electronic equipment)
- **Modul 2:** Understanding the Business Case of CE  
Objective: create awareness / raise awareness of the business case of CE and digital transformation
- **Modul 3:** Circular business strategies in specific sectors (sector specific training)  
Objective: know-how transfer & sector-specific workshops (building & construction, wood industry, recycling/water treatment, waste electronic equipment) - creative process
- **Modul 4:** Finance & Investment  
Objective: advice on financing & investment options and imparting knowledge on the implications of circular business models for the financing structure of SMEs
- **Modul 5:** Networking  
Objective: regular exchange between companies (of one value chain or with similar challenges), between investors, between authorities, etc.

<b>Title</b>	Thematic workshops/seminars	<b>Start date</b>	11.2021
		<b>End date</b>	03.2022
<b>Description</b>			
<p>The aim of this activity is to organize local workshops/seminars with at least 17 SMEs where the developed tools (modules) are applied (in groups and/or in 1:1 workshops)</p>			
<b>Sub-activities</b>			
<ul style="list-style-type: none"> <li>- Organization of workshops with 17 SMEs (in groups and/or in 1:1 workshops)</li> <li>- Definition of training modules to be applied to 17 SMEs</li> </ul>			
<b>Results</b>			
<ul style="list-style-type: none"> <li>- Modul 1 – Raise awareness is applied to at least 17 SMEs (either in groups or in 1:1 workshops)</li> <li>- Modul 2 – Understanding the business case of CE is applied to at least 17 SMEs (in groups or 1:1 workshops)</li> <li>- Modul 3-5 are optionally applied to 17 SMEs</li> </ul>			
1	Modul 1 – Raise awareness is applied to at least 17 SMEs (either in groups or in 1:1 workshops)	<b>Date</b>	Until 10/2021
2	Modul 2 – Understanding the business case of CE is applied to at least 17 SMEs (in 1:1) workshops	<b>Date</b>	Until 03/2022

## Modules

1. Raise awareness for CE supported by digitalization
2. Understanding the business case of CE with digital support
3. Circular business strategies in den specific sectors (sector specific training)
4. Finance & Investment
5. Networking

Not all steps are mandatory – depending on the demands/requirements of the SMEs the different modules will be applied. Just the first module is more or less mandatory because we need it to come into contact with the SMEs and to build the community.

1:1 assistance starts immediately after the first module. Module 2 is implemented in the form of a workshop but just for one company (CEO + additional employees). Module 3, 4 and 5 can be carried out either as individual 1:1 assistance or as group workshops (depending on the demands/requirements of the SMEs)

## Modul 1

### Raise Awareness for CE supported by digitalization (community building)

Objective: to raise awareness of the opportunities of the circular economy through information events for specific sectors / several companies (building & construction, wood industry, recycling/water treatment, waste electronic equipment)

#### Format:

- Networking event/(online) workshop
- 1-2 hours
- An event is planned and carried out for each of the three sectors
- The entire value chain is invited

#### Topics:

- Presentation of the Circular 4.0 project
- Presentation of EU Circular Economy Action Plan
- Basics of the circular economy and how digitalization can support transformation (with focus on the respective sectors)
- Presentation of two (regional) case studies
  - Q&A + discussion
  - Forecast: what does Circular4.0 offer the participating companies?

#### Tools:

- Regional best practice cases

## Modul 2

### Understanding the Business Case of CE

Objective: Create awareness / raise awareness of the business case of CE and digital transformation

#### Format:

- (Online) coaching for one company - 1:1 assistance
- 2-4 hours

#### Topics:

- Entry point: linear risks and circular opportunities of sector - as a check
- Knowledge transfer of added value of the circular economy for company
- Opportunities at point of intersection of CE and digital technologies for various circular economy business models

#### Tools:

- Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)
- Katch-e CE Strategist (<https://www.katche.eu>)
- MOVECO Qualification tools (<http://www.interreg-danube.eu/news-and-events/programme-news-and-events/2577>)
- SMEs will receive:
  - an evaluation of the check for linear risks and circular opportunities (based on the example of the CAS) and digital maturity check (+ evaluation of contexts)
  - Circular business model canvas

## Modul 3

### Circular business strategies in specific sectors (sector specific training)

Objective: Know-how transfer & sector-specific workshops (building & construction, wood industry, recycling/water treatment, waste electronic equipment) - creative process

#### Format:

- Workshop for one sector, several companies
- The entire value chain is invited (if possible, cover the entire value chain of specific sector)
- Creative session

#### Topics:

- Focus: understanding of possible new circular business models and how digital technologies can support them

#### Tools:

- Creative tool (CE idea creation game: [https://www.katche.eu/knowledge-platform/tools-and-training-materials/katch\\_e-tools/katch\\_up-board-game/m](https://www.katche.eu/knowledge-platform/tools-and-training-materials/katch_e-tools/katch_up-board-game/m)) to stimulate the users to generate value ideas from a business challenge, applying circular design and circular business strategies. The tools should act as a guide to get an idea about an innovative product-service or to solve a real business problem and generate opportunities
- Outsourcing to external experts



## Modul 4

### Finance & Investment

Objective: advice on financing & investment options and imparting knowledge on the implications of circular business models for the financing structure of SMEs

#### Format:

- Handout and possibly reference to external experts (establish contact)
- Consultation
- 1-2 hours (+ self-study)

#### Topics:

- Specific funding options
- Typical challenges with circular business models; product service systems and pre-financing (e.g. via expert lecture)
- Presentation of the EU taxonomy and its implications for SMEs

#### Tools:

- Regional guidelines such as the Funding Guide for Environmental Protection and Energy from the Bavarian State Office for Environment:  
<https://www.umweltport.bayern.de/wertzeuge/foerderfibel/> (overview of all funding opportunities & financial instruments related to sustainability / circular economy)
- Booklet with collected funding opportunities from Circular4.0 with reference to digitization (compilation from Output D.T2.4.1 & D.T2.4.3)
- MOVECO Toolbox: Financing Instruments - <http://www.interreg-danube.eu/news-and-events/programme-news-and-events/2358> (List of Funding Instruments for the circular economy, Interregional match-making tool, Concept for Investor Day, Public-private partnership investment opportunities in the circular economy)
- Individual consultation on request



## Modul 5

### Networking

Objective: regular exchange between companies (of one value chain or with similar challenges), between investors, between authorities, etc.

#### Format:

- (Online) group of regulars
- Guests are invited for certain topics (e.g. topic financing: invite investors)
- Regular events & fixed dates
- 1 hour

#### Topics:

- General exchange between companies: state of the art, current developments
- Best Practices "Flagship Companies" from T2.2.1
- New guidelines, action plans (invitation of authorities from T2.2.4)
- Financing (e.g. investor brunch as a special format, investors from T2.4.2)

#### Tools:

- Networking-platform
- LinkedIn group

### 13. Circular CE capability/potentiality and Digital Maturity Assessment of SMEs

The following tools are used for the digital maturity and the CE assessment as part of module 2: understanding the business case of CE:

- Regional best practice cases
- Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)
- Katch-e CE strategist tool to help the user identify circular business opportunities and provide ideas and inspiration along the process of defining a circular business model.
- Katch-e CE idea creation game to stimulate the users to generate value ideas from a business challenge, applying circular design and circular business strategies. The tools should act as a guide to get an idea about an innovative product-service or to solve a real business problem and generate opportunities
- Moveco qualification tools – principles of circular economy & business models for the circular economy

<b>Title</b>	Circular CE capability/potentiality and digital maturity assessment of SMEs	<b>Start date</b>	10.2021
		<b>End date</b>	03-2021
<b>Description</b>			
<p>The following tools are used for the digital maturity and the CE assessment:</p> <ul style="list-style-type: none"> <li>○ Regional best practice cases</li> <li>○ Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)</li> <li>○ Katch-e CE strategist tool to help the user identify Circular Business Opportunities and provide ideas and inspiration along the process of defining a Circular Business Model.</li> <li>○ Katch-e CE idea creation game to stimulate the users to generate value ideas from a business challenge, applying circular design and circular business strategies. The tools should act as a guide to get an idea about an innovative product-service or to solve a real business problem and generate opportunities</li> <li>○ Moveco qualification tools – principles of circular economy &amp; business models for the circular economy</li> </ul>			
<b>Results</b>			
<ul style="list-style-type: none"> <li>- Circular CE capability/potentiality and digital maturity assessment is applied to at least 17 SMEs with the above defined tools within module 2: Understanding the business case of CE with digital support - check for linear risks and circular opportunities</li> </ul>			
1	Circular CE capability/potentiality and digital maturity assessment is applied to at least 17 SMEs with the above defined tools	<b>Date</b>	Until 03/2022

## 14. Identification of innovation needs and investment plan

SMEs participating in the training course will work through modules 1 & 2, as these are the obligatory modules. This means, that within a 1:1 session with the expert Dr. Sonja Eser, SMEs will be checked for linear risks and circular opportunities (based on the example of the CAS) and the digit check (evaluation of contexts). As a result, SMEs will be provided with the evaluation and the results of this check and will additionally get the circular business model canvas. Innovation needs, and – if appropriate – investment plans can be derived from these results. Each SME will receive a document established on the basis of the assessment and in collaboration with the SME (at least one bilateral meeting between the SME and the expert) at least one recommendation covering any of the following aspects of the transformation of the company towards higher circularity (this means an increase of maturity level) will be developed. This recommendation with a time horizon from 6 months up to one year can for example be:

- technology adoption
- new or improved process
- new or improved or transformed business model
- new or improved products
- new or improved services
- digitally supported (as far as possible)

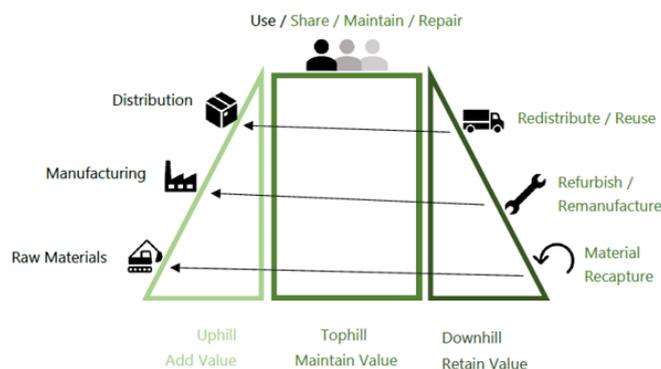
A standardized document for the delivery of the results from the check for linear risks and circular opportunities has been developed, here is an excerpt from the results for the SME (find the whole document in annex 1):



### Auswertung

#### Nützliche Circular Strategies für Ihr Unternehmen:

(identifizierte Lösungsstrategien werden in die Grafik eingetragen, CS1-CS10)



Es wird kurz umrissen, welche Gedanken dazu für das Unternehmen besprochen wurden:

<b>Title</b>	Identification of innovation needs and investment plan	<b>Start date</b>	11.2021
		<b>End date</b>	03.2022
<b>Description</b>			
<p>Each SME will receive the results based on the check for linear risks and circular opportunities. At least one recommendation covering any of the following aspects of the transformation of the company towards higher circularity (this means an increase of maturity level) will be developed. This recommendation with a time horizon from 6 months up to one year can for example be:</p> <ul style="list-style-type: none"> <li>- technology adoption</li> <li>- new or improved process</li> <li>- new or improved or transformed business model</li> <li>- new or improved products</li> <li>- new or improved services</li> <li>- digitally supported (as far as possible)</li> </ul>			
<b>Results</b>			
- 17 SMEs get the results from the check for linear risks and circular opportunities and can derive at least one recommendation for innovation needs to be implemented			
1	Recommendation for innovation needs to be implemented	<b>Date</b>	Until 03/2022

## Indicators (KPIs) and monitoring

To measure the results of the pilot action and the progress made, various key performance indicators (KPIs) have been defined beforehand (D.T2.5.2). These KPIs are part of the company dashboard and derive from the instruments used in module 2.

Additionally, the trainee's level of satisfaction, maturity improvements, and the impact on CE related to the pilot action are part of the monitoring.

To document the trainee's level of satisfaction, the participating SMEs will fill in a short questionnaire before the workshop takes place. This is also important to identify the expectations from and needs of the SMEs beforehand. After the workshop(s) took place, SMEs will fill in another questionnaire to ask for their satisfaction, if their expectations were fulfilled and if an added value was created to the company. Additionally, SMEs are asked, if they are motivated to further push the implementation of CE and if the contents and tools within the workshop were clear, practicable, understandable, and applicable. Participants are asked if all relevant topics have been covered, if the content is applicable to the company environment. Finally, SMEs are asked if they were satisfied with the organisation of the workshop, with the workshop instructor and with the duration of the workshop.

The exact tools for the measurement of maturity and the impact on CE will be defined later depending on the SMEs selected.

Project Acronym: Circular 4.0

Project title: **Digital technologies as enabler to foster the transition to the circular economy by the SME in the Alpine Space area**

## **A.T3.1**

### Planning digitalised CE processes in Alpine Space area addressed to SMEs

#### Template for description (plan) of Local pilot actions (for use in D.T3.1.1/2/3)

WP n°: T.3.	Fostering CE processes in Alpine Space with digitalisation processes
Task n°: T.3.1	Planning digitalised CE processes in Alpine Space area addressed to SMEs
Author(s):	Lara Trikha, Luc Schmerber, bwcon Dr. Eva Schichl, UCB
Contributors:	Roberto Sandrini, TPLJ
Type:	<b>T -Template/ R- Report, AUREAE</b>
Dissemination level:	<b>CO = confidential</b>
Revision:	<b>DRAFT 02</b>
Due Date:	<b>26/11/2021</b>
Date of submission:	<b>26/11/2021</b>

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# Overview of the local pilot action – AUVERGNE RHONE ALPES ENTREPRISES

*This is the place where to describe in 2-3 pages the pilot action in its entirety, without entering into deep operational details related to its implementation. It is a summary-like or elevator pitch like approach.*

The description should encompass at least the following elements:

- **Local context and CE approach**

*Sectors, geographical area, type of businesses targeted, etc.*

*Any other information on the context, as relevant.*

*Please mention which is the CE approach originally foreseen for your pilot (among those listed in the project: design, optimal use, value recovery) and add the justification – if relevant - to include one or more CE additional approaches.*

Our agency is missioned by the Auvergne-Rhône-Alpes Region to support companies of the industry and service to industry sectors.

We have identified 10 000 SME's that have significant size or activity that we follow and support. Among them, 300 have been identified as "High potential" because of the progression of their turnover, their activity, and projects.

For the pilot action, we finally decided not to focus on a particular sector nor to a particular CE approach but to open it to all the interested companies.

The first criteria is the motivation of the CEO. We have noticed that companies that engage in the circular economy often do so out of the manager's conviction and it is the best way to get results.

- **Methodology**

*This part shall provide an overview of the methodology that will be used to select and assist SMEs in their circular transformation (common to all pilots).*

*Please specify which tools will be used (among those listed in the toolkit – D.T2.3.3) and the justification for their selection.*

We build our pilot actions on different levels:

- Circular industry path, the core of the pilot action, dedicated to support 25 SMEs with collective training and individual support
- Intervention in events organized by partners, during which we present our tools and the circular industry path
- Tools developed during the WP2, that are used to support the 25 SMEs but also other companies interested.
- Actions to raise awareness on CE internally.

The main action of our pilot action is the **Circular Industry Path**, aimed at raising awareness of SMEs on CE and helping them to define a roadmap to CE. It is a first step in CE, and this path has to be followed up by complementary support to implement the roadmap.

**GOALS and ADDED VALUE For the SMEs:**

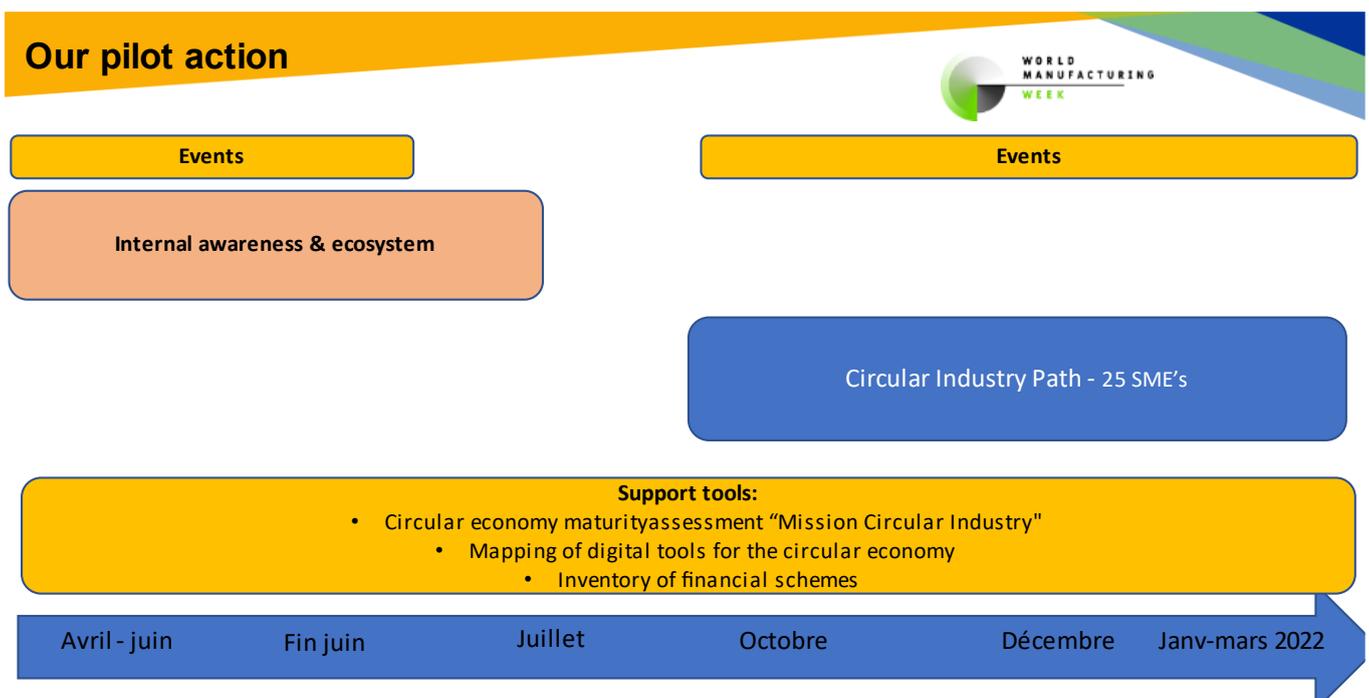
- Anticipate the challenges of ecological transition
- Understand what the circular economy is for industrial companies & identify opportunities
- Imagine how to integrate this concept into their business

- Identify if digital tools make it possible to facilitate its deployment
- Launch a meaningful project within the company
- Define their priorities and build a circular economy roadmap
- Differentiate and gain in competitiveness

The program is composed of these elements:

1. A webinar to introduce CE
2. CE Assessment
3. One-day training workshop
4. One day of individual support for each company by a consultant to define the action plan for the company,
5. Personalised **support by a project manager from AURA Entreprises** to deploy the action plan

⇒ **25 SMEs** engaged in the **pilot action Circular Industry path** that started at the end of August and will end by the end of the year



- **Expected results**

*This section shall explain the benefit / added value expected for the SMEs.*

With the program and pilot actions, the strategic objectives for our agency are to:

- Acquire tools to support companies towards the circular economy
- Propose complementary tools compared to already existing tools we already have to support SMEs
- Continue to build internal skills on these 2 priority themes: circular & digital economy

- Affirm our position in the ecosystem on these digital and circular economy topics

The pilot action will be successful if:

- The CEOs of the SMEs are motivated to carry on working on CE
- Companies have defined an action plan towards CE and have initiated at least 1 concrete action or a support program
- The program is followed by studies, investments, R&D programs

## Planned activities

*In this session, the activities planned for the roll-out of the approach described above shall be detailed. In order to have a significant degree of comparison among the different local pilot actions, we suggest using a set of common activities (= same title or heading, not the same methods). Those activities are the ones listed in the AF*

### 15. Selection/identification of SMEs

We decided to open widely the circular industry path.

We first sent an e-mail (cf following page) to all our 300 high potential SME's. We thought they could be interested in exploring CE, and that the size and potential of the companies could be relevant. The project managers of the agency also relayed this offer to the companies they were referent for.

The companies had to fill in a formular to explain their motivation and stakes for CE.

One month later, 10 high potential companies had filled the formular.

We than decided to open the program to all the SMEs that are supported by our agency. The e-mail was sent to 10 000 companies and relayed also by the agency project managers.

In 2 days, 15 companies answered and we closed the inscriptions.



## Parcours Industrie Circulaire

Intégrez les enjeux de demain dans votre business model  
grâce à l'économie circulaire

**20 PLACES**

Gratuit, car financé par le dispositif Interreg Alpine Space

Transitions écologique et numérique sont deux enjeux majeurs pour les entreprises.

85% des industriels considèrent l'économie circulaire comme une opportunité !\*

### Et vous ?



L'Agence vous propose de participer à ce parcours de formation-action inédit. Court et pragmatique, il vous permettra de :

- Comprendre ce qu'est l'économie circulaire pour les entreprises industrielles & d'identifier les opportunités
- Imaginer comment intégrer ce concept dans l'entreprise
- Identifier si des outils digitaux peuvent faciliter son déploiement
- Définir vos priorités et construire une feuille de route économie circulaire

Démarrage à partir de juillet ! Date limite d'inscription 28 juin

[En savoir plus](#)

[Inscrivez-vous](#)

(\* source : étude Ineco - Opeo « Pivoter vers l'industrie circulaire », avril 2021 sondage mené auprès de 63 acteurs industriels)

Contact : Isabelle Clouet - iclouet@arae.fr | 06 70 90 59 92

## 16. Thematic workshops/seminars

*This activity regroups the CAT2.0 or other training modules selected by the partners and addressed to SMEs.*

The program is composed of these elements:

1. A **webinar to introduce CE**: by our CE expert: 2 sessions programmed: 24/08/21 and 12/10/21
2. **CE Assessment: online on our website** – each SME fills in the assessment before the training
3. **One-day training workshop**: by consultant OPEO to understand how to integrate CE in the business model of the company: 3 sessions programmed: 31/08; 1/09 and 19/10/2021
4. **One day of individual support for each company** by a consultant: to define the action plan for the company – From October 2021 to end of January 2022.
5. **Personalized support by a project manager from AURA Entreprises**: to deploy the action plan  
The project managers also attend the one-day individual support and can contribute with their knowledge of the economic local actors, public programs or other interesting connections.

In April 2021, we published a tender to select consultants to:

- Lead the 3 trainings. We selected the consulting firm OPEO, that has a strong industry experience and had just published a survey called “Pivoting towards Circular economy” with the French national institute for CE.
- Support the companies. Due to the number of companies to support (25), we selected 5 consulting firms for their experience on CE and the methodology they proposed.

### 17. Circular CE capability/potentiality and Digital Maturity Assessment of SMEs

*This activity regroups the actions delivered to evaluate the CE and digital maturity of the SMEs. In this activity, the tools used should be specified.*

We decided to mix CE and digital maturity in a single assessment we called **Mission « Circular Industry »** we developed internally, inspiring by the assessment proposed by IJS and other French tools. Our objective was to propose a simple and pragmatic tool adapted for SMEs.

This tool is available on our website: <https://auvergnerhonealpes-entreprises.fr/testez-votre-maturite-sur-leconomie-circulaire>

Through around forty questions, the company can assess its level of maturity in each of the circular economy's areas of action and consider whether digital tools can facilitate its deployment. We developed the assessment on the Eval&Go platform, that can allow us to get easily a synthesis of the results.



**VOS ENJEUX & LEVIERS**

8. Quelle est votre niveau de connaissance actuel sur l'économie circulaire? \*

C'est un concept très flou, j'ai encore tout à apprendre

Je connais plusieurs leviers mais ne l'ai pas encore mis en pratique dans l'entreprise

Je connais bien le concept dans sa globalité et j'ai commencé à le déployer en partie dans l'entreprise

Je maîtrise le sujet et j'ai déjà mis en pratique plusieurs leviers dans l'entreprise. Nous avons des offres qui contribuent à l'économie circulaire.

9. Quelles sont ou quelles seraient vos motivations pour aller vers l'économie circulaire? \*

	non, pas du tout	non, pas vraiment	oui, en partie	oui, totalement
Conscience environnementale	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sécurisation ou gain de parts de marché	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Améliorer la performance de l'entreprise / Réaliser des économies (réduction des coûts des matériaux, énergie, transport et traitement des déchets...)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Valorisation de l'image de l'entreprise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opportunités d'innovation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Modifications réglementaires récentes ou à venir (ex: loi AGEC, loi transition énergétique...)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Motivation des salariés et attrait de talents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

For the digital part of the program, we also developed a **mapping of regional digital solutions** for the circular economy. We identified 100 solutions that meet the challenges of the circular economy, most of them are regional but we also added national solutions for very specific needs.

The solutions are presented on the PowerBI Platform.

Entreprise	Description de la solution	Site
CYCLE UP	produits et les services pour déconstruire, construire et gérer vos bâtiments en économie circulaire.	
Beelse	Plateforme professionnelle de réemploi des matériaux du bâtiment et de l'immobilier	
Auvergne Rhône Alpes Entreprises	Logiciel de commande de pièces détachées et de gestion des stocks donnant accès à des moyens de production en Fabrication Additive partout dans le monde en capacité de reproduire les pièces de l'entrepôt numérique du client à l'identique.	
Fretly	Plateforme web pour la mise en relation/le matching automatisé via une base de données très qualifiée sur les compétences des entreprises régionales industrielles, services à l'industrie; permettre de trouver des clients/fournisseurs; renforcer l'activité des entreprises régionales et favoriser la préférence locale; aider les entreprises, les pôles et clusters, les chargés d'affaires de l'Agence à rassembler des données sur la recherche de compétences.	
FCBA	Conseil achats, transports : par l'étude des contrats, offres, localisation des stocks et sites logistique, Fretly propose une optimisation de la logistique de ces clients. Parmi les solutions : négociation de contrats, géolocalisation de l'emplacement géographique idéal pour stocker les marchandises, mais aussi réduction des km parcourus et sélection de transporteurs écoresponsables.	
	La base de la FCBA contenant des milliers de références classées en 3 catégories : MATERIAUX / PROCEDES / SYSTEMES. Chaque référence est rigoureusement sélectionnée par un comité sur différents critères (degrés d'innovation, solution technique apportée, transfert technologique possible...) et est ensuite enregistrée sous forme de fiche technique contenant les	

**Enjeu de l'économie circulaire 1**

- 1. Approvisionnement & supply chain durable
- 2. Ecoconception
- 3. Production efficiente
- 4. Economie de fonctionnalité
- 5. Allongement de la durée d'usage
- 6. Recyclage
- 7. Synergies locales
- 8. Sobriété numérique

**Solution numérique**

- Bases de données
- Intelligence artificielle
- IOT, capteurs, RFID
- Outils de monitoring, ERP, MES, SI
- Plateformes web
- Plateformes web & applis
- Prototypage virtuel / outils de simulati...

**Besoin technologique généré**

- Connecter l'offre & la demande
- Fabriquer le juste nécessaire
- Identifier des matériaux de substitution
- Optimiser la logistique

6  
Nombre de SIRET

### 18. Identification of innovation needs and investment plan

As discussed during the partner meeting on 02.11.2021, each company supported should receive a document established on the basis of the assessment and in collaboration with the SME (at least one bilateral meeting between the SME and an expert/consultant during the process) and encompassing at least one recommendation covering any of the following aspects of the transformation of the company towards higher circularity (= increase of maturity level)

- Technology adoption
- New or improved process
- New or improved or transformed business model
- New or improved products
- New or improved services
- Digitally supported (as far as possible)
- With a time horizon from 6 months up to 1 year

Consequently, this activity should describe the process for the draft of those recommendations, like for instance involvement of experts and setup of a roadmap (example for AURA-E).

Each of the above activity can be split into several steps (sub-activities) as relevant for each pilot action. But we recommend keeping it simple.

For the description of each activity (or sub-activity if relevant), we suggest using the following table:

Title	Name of activity	Start date	MM.YYYY
		End date	MM.YYYY
<b>Description</b>			
Describe here the activity			

<b>Add sub-activities if necessary</b>			
<b>Results</b>			
Note: the results (or deliverables) will need to be documented and reported upon in Activity T3.2 in the report for each local pilot action. They should therefore be formulated in a way that enables monitoring and documentation of the implementation.			
1	Example: 3 online workshops ...	<b>Date</b>	
2	Example: 1 call for applications	<b>Date</b>	
3	Example: 25 CE+digital maturity assessments of SMEs	<b>Date</b>	
n		<b>Date</b>	

Each company that follows the Circular Industry path has to sign a participation contract to commit to follow the support. This document also aims to promote the European funding of the program.

At the end of each individual one-day support, the deliverable of the consultant is:

- a roadmap to CE
- an action plan for the next 3-6 months

The Agency project managers contribute also by:

- identifying if complementary support is needed: other relevant public schemes or financing schemes.
- identifying if digital tools could be relevant to deploy the action plan, with the help of the mapping of the 100 solutions.

We prepared a specific document for these purposes that we enclosed in Annex (“Bilan & feuille de route”).

At the end of the pilot action, we will be able to measure the number of companies:

- that followed the Circular Industry path
- that filled the “mission Circular industry” assessment and their CE maturity
- that launched new CE projects.

## Indicators (KPIs) and monitoring

This section shall describe what are the measurable objectives (qualitative and quantitative indicators) of the pilot action and how the progress will be monitored. The selection/definition of indicators shall refer to deliverable D.T2.5.1 Evaluation methodology and D.T2.4.2 KPIs definition to assess the contribution of digitalisation on CE approaches (templates available on Teams – see also next page).

A basic indicator for all pilot actions is the number of SMEs targeted (~20 on average).

⇒ We will use the tool proposed below by the program at the end of the pilot action to measure the results.

Company dashboard											Full project partner dashboard					
	CE Strategy/Business model		Commitment level Investments		Digital technologies awareness		Commitment level Investments		Other relevant item linked to the pilot action considered		Trainee level of satisfaction	Maturity improvement		Impact on CE related to the pilot action		
Goals	CE Readiness level assessment		Trainee motivation toward CE implementation		Digital Technology Readiness level assessment		Financial effort foreseen during the pilot action		.....		Satisfaction level on tools and trainings provided	Project maturity phase to be reached *		Circular metrics to be improved *		
Phase	Initial State	Outputs	Initial State	Outputs	Initial State	Outputs	Initial State	Outputs	Initial State	Outputs	Quality of trainers and tool, relevance, applicability ...	Initial level	Level reached	Initial measure	Results achieved **	
Means indicator *																
Comments **	Describe the inputs needed	Describe what has been done	Describe the inputs needed	Describe what has been done	Describe the inputs needed	Describe what has been done	Describe the inputs needed	Describe what has been done	Describe the inputs needed	Describe what has been done			Describe the Improvement		Describe the Improvement	

# ANNEX - CIRULAR INDUSTRY PATH



Participez à un parcours de formation-action gratuit pour intégrer les enjeux de demain dans votre business model, grâce à l'économie circulaire.

✓ **85%\* DES INDUSTRIELS CONSIDÈRENT L'ÉCONOMIE CIRCULAIRE COMME UNE OPPORTUNITÉ !**

### ET VOUS ?

Transitions écologique et numérique sont deux enjeux majeurs pour les entreprises.

Une gestion efficace de vos ressources peut vous permettre de tendre vers une industrie flexible, performante et responsable. A cet effet, l'économie circulaire et les outils digitaux sont de précieux leviers pour repenser vos procédés, produits et services.

Dans le cadre du programme européen Circular 4.0, Auvergne-Rhône-Alpes Entreprises vous propose un parcours de formation-action inédit pour engager votre entreprise vers l'économie circulaire.



\*source : étude Inec - Opeo « Pivoter vers l'industrie circulaire », avril 2021 sondage mené auprès de 63 acteurs industriels

### POUR QUI ?

- 20 Entreprises industrielles situées sur le territoire de l'ex région Rhône-Alpes, souhaitant identifier les opportunités offertes par l'économie circulaire et désirant s'engager dans cette démarche
- Dirigeants ou membres de comités de direction

### POURQUOI PARTICIPER AU DISPOSITIF ?

- Anticiper les enjeux de la transition écologique
- Comprendre ce qu'est l'économie circulaire pour les entreprises industrielles & identifier les opportunités
- Imaginer comment intégrer ce concept dans son entreprise
- Identifier si des outils digitaux permettent de faciliter son déploiement
- Lancer un projet porteur de sens au sein de votre entreprise
- Définir vos priorités et construire une feuille de route économie circulaire
- Vous différencier, gagner en compétitivité



### CONTENU

- Un webinaire d'introduction à l'économie circulaire  
> 2 sessions : 24 août - 14 octobre
- Un diagnostic « Mission Industrie circulaire » pour tester votre maturité sur le sujet
- Un atelier de formation d'une journée autour de mises en situation et cas pratiques pour identifier les opportunités offertes par l'économie circulaire & les clés pour l'intégrer au modèle de l'entreprise. L'atelier sera animé par le cabinet OPEO et se basera sur de nombreux exemples tirés de l'étude « Pivoter vers l'industrie circulaire », menée auprès de 63 industriels.  
> 3 sessions : 31/08 : Le Bourget du lac - 01/09 : Lyon - 19/10 : Lyon
- Une journée d'accompagnement individualisé par un consultant expert pour définir votre feuille de route économie circulaire.  
> A partir de septembre

A l'issue du programme, l'Agence vous propose un accompagnement personnalisé pour la mise en œuvre de la feuille de route établie (mise en relation partenariales, prescription de dispositifs d'accompagnement et financiers, recherche d'outils digitaux pertinents pour faciliter le déploiement de l'économie circulaire).  
> A partir de septembre

### POUR EN SAVOIR PLUS :

Isabelle CLOUET  
iclouet@arae.fr - 06 70 90 59 92

Formulaire de candidature :  
<https://cut.jy/8bbd8n1>

Nombre de places disponibles : 20

### DATE LIMITE D'INSCRIPTION :

20 JUILLET 2021

**ENTREPRISE :**

**ACTIVITE :**

**CONTACT (Nom & fonction) :**

**Date du bilan :**

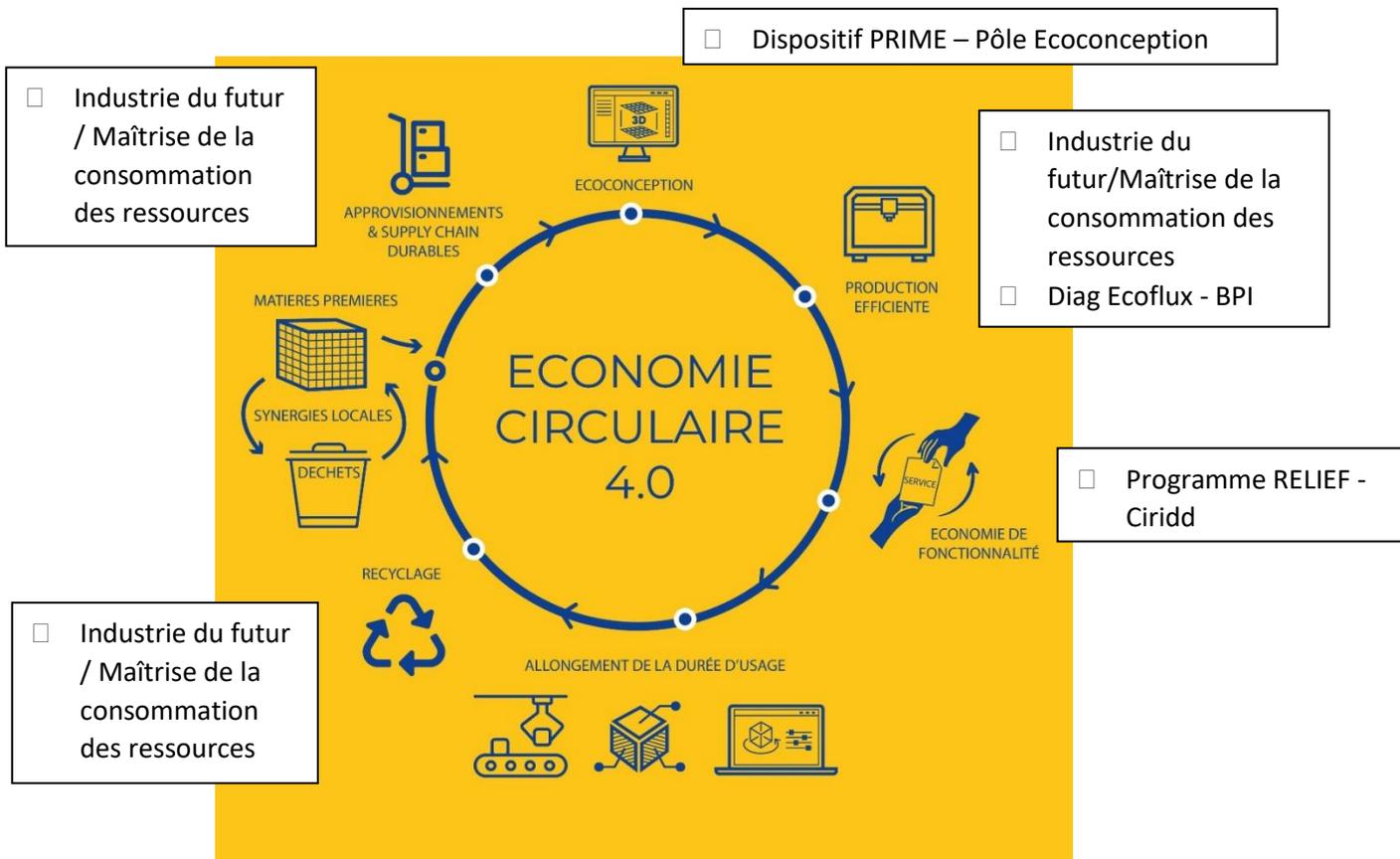
**NOTRE FEUILLE DE ROUTE ECONOMIE CIRCULAIRE** (*format libre selon méthodologie consultant*)

**Plan d'actions pour les 3 à 6 prochains mois :**

## Besoins d'accompagnement complémentaire :

Pour mener à bien sa feuille de route, quels sont les besoins d'accompagnement complémentaires de l'entreprise ?

A-t-elle besoin de compléter l'accompagnement par l'un des programmes suivants ?



### Plus d'informations sur les programmes :

- Industrie du futur / Maîtrise de la consommation des ressources : [file:///C:/Users/ICLOUE~1.AGE/AppData/Local/Temp/INDUSTRIE\\_DU\\_FUTUR\\_AMELIORATION\\_PROCE\\_DES\\_PRODUIRE.pdf](file:///C:/Users/ICLOUE~1.AGE/AppData/Local/Temp/INDUSTRIE_DU_FUTUR_AMELIORATION_PROCE_DES_PRODUIRE.pdf)
- Dispositif PRIME – Pôle Ecoconception : <https://www.eco-conception.fr/static/PRIME-ecoconception-AURA.html>
- Programme RELIEF – CIRIDD : <https://www.ciridd.org/appui-a-l-innovation-et-animation-territoriale#relief>
- Diagnostic EcoFlux BPI: <https://diagecoflux.bpifrance.fr/>

## QUESTIONNAIRE DE SATISFACTION:

**CONTACT (Nom & fonction) :**

	--	-	+	++
Comment évaluez-vous le contenu de la formation ?				
Connaissance du sujet et pédagogie de l'intervenant				
Comment évaluez-vous le contenu de la journée d'accompagnement individuel?				
Connaissance du sujet et pédagogie de l'intervenant				
Que pensez-vous du degré de transfert dans votre entreprise ?				
Ce parcours vous a-t'il fourni des outils pratiques et méthodologiques pour avancer vers l'économie circulaire?				
Comment évaluez-vous l'organisation du parcours ? (durée, logistique...)				
Ce parcours a-t'il répondu à vos attentes ?				

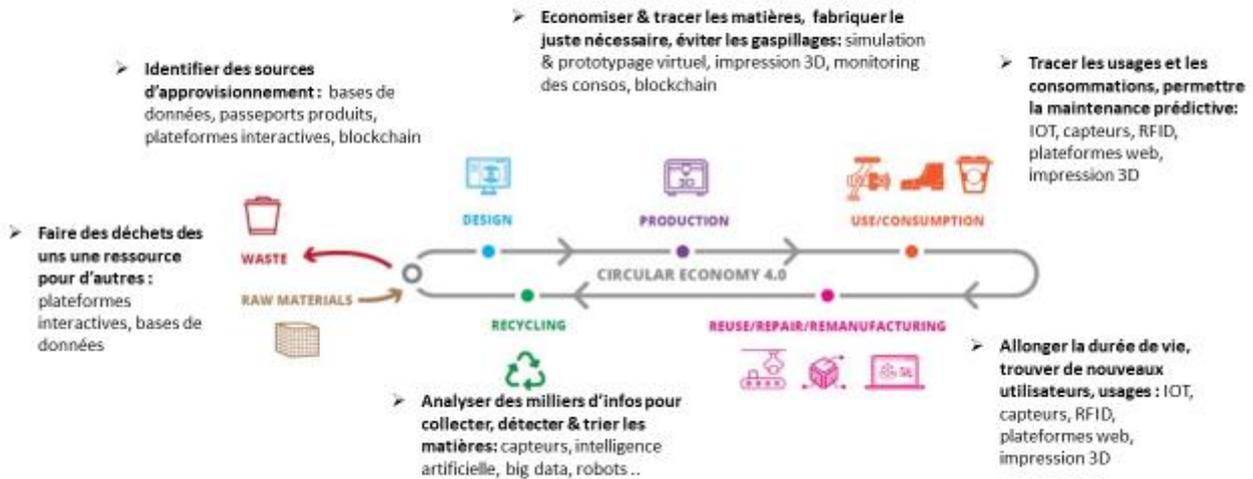
**Commentaires :**

**Suggestions d'améliorations :**

# 1. Outils numériques pour l'économie circulaire?

Au regard de la feuille de route et des projets de l'entreprise, y a-t-il des outils numériques qui pourraient faciliter le déploiement de l'économie circulaire ?

## L'économie circulaire au fil du cycle de vie des produits



## Solutions numériques pour l'économie circulaire



**Avantages numériques clés**

- ✓ Optimiser l'usage des matières
- ✓ Concevoir l'offre & la demande
- ✓ Identifier des opportunités de valorisation
- ✓ Optimiser le supply chain
- ✓ Faciliter les échanges

**Avantages numériques**

- ✓ Réduire les déchets
- ✓ Augmenter la durée de vie
- ✓ Optimiser le supply chain
- ✓ Faciliter les échanges

**5 axes de focus sur les usages**

- 1. Approvisionnement & supply chain durable
- 2. Simulation
- 3. Impression de la 3D via Cloud
- 4. Recyclage
- 5. Usages locaux

Entreprise / Solution	Description de la solution	Département	Site internet
PREDUCTIVITS - OPEN STUDIO	Création de tableaux personnalisés, les experts ne s'occupent que sur des données structurées.		
TRACUP	Plateforme professionnelle de rétroaction des matériaux du bâtiment et de l'immobilier	Piém	tracup.fr
THARCO BUSINESS	Plateforme web pour la mise en relation et matching automatisé via une base de données 3D qui permet aux professionnels des secteurs des équipements, matériaux, services & l'industrie, permettre de trouver des fournisseurs locaux, réduire l'impact des entreprises régionales et faciliter la plateforme locale aider au commerce, les villes et les usagers, les échanges d'offres de l'Algérie à gagner du temps sur la recherche de compétences.	Rhône	tharco.fr
EC-SOURCE	La Source se présente comme une place de marché digitale vous permettant de vous inscrire en tant que fournisseur dans les villes des alentours et permettre de la construction proche de chez vous. Des membres, votre site internet numérique par email sont utilisés à la base. Il s'agit de : - les fournisseurs, - les clients de sites de commandes ou de production, - les fournisseurs de clients.	Rhône	ec-source.fr

## **2. Bilan des actions réalisées par l'entreprise suite au parcours Industrie circulaire**

Project Acronym: Circular 4.0

Project title: **Digital technologies as enabler to foster the transition to the circular economy by the SME in the Alpine Space area**

## **A.T3.1**

### Planning digitalised CE processes in Alpine Space area addressed to SMEs

#### Template for description (plan) of Local pilot actions (for use in D.T3.1.1/2/3)

WP n°: T.3.                      Fostering CE processes in Alpine Space with digitalisation processes

Task n°: T.3.1                Planning digitalised CE processes in Alpine Space area addressed to SMEs

Author(s):                      Lara Trikha, Luc Schmerber, bwcon  
Dr. Eva Schichl, UCB

Contributors:                 Roberto Sandrini, TPLJ

Type:                              **T -Template/ R- Report, Rising SUD**

Dissemination level:        **CO = confidential**

Revision:                        **DRAFT 02**

Due Date:

Date of submission:

1. Overview of the local pilot action – Région SUD Provence-Alpes-Côte d’Azur (risingSUD).....	7
2. Planned activities.....	11
3. Indicators (KPIs) and monitoring.....	13

# Overview of the local pilot action - Région SUD Provence-Alpes-Côte d'Azur (RisingSUD)

- **Local context and CE approach**

As risingSUD was a member of the Ecodesign transnational working group, this approach was kept while selecting the companies and coaching them. The aim was to look at the earliest stage of the lifecycle of products and services offered by the companies. However, some sectors were added to the initial list of sectors targeted. Initially, risingSUD targeted the food and water sector. If some companies belonged to that sectors other were added, consistent with 3 of the 8 key strategic sectors of Région SUD Provence-Alpes-Côte d'Azur: Natural living (including food and water), Blue economy and Industry.

- **Methodology**

The program is composed by two different parts:

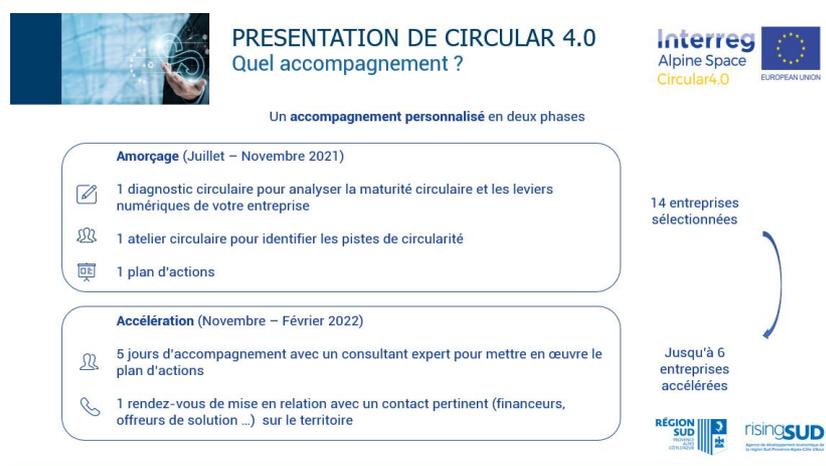
## 1- Initiation (11<sup>th</sup> June- 19<sup>th</sup> of November)

5 collective online workshops are organised covering module 0,1 and 3 of the CAT, with a slight adaptation with an adapted auto diagnosis. It is open to all companies with no selection process. The workshop was organised in close cooperation with OPEO and Institut national de l'économie circulaire, two organisations that are experts in circular economy. The goal was twofold: assess the maturity of the companies in the region, and inform them about the potentialities of circular economy, and Circular4.0 project.

Several on site one-to-one workshops covering module 2, 4, 5 with a restitution workshop to validate with the company the transformation plan covering modules 6, 7. These workshops meetings are either animated by risingSUD and its partner the Chamber of Commerce of Provence-Alpes-Côte d'Azur. Companies apply with an Expression of interest. The applications of the companies are validated by a selection committee composed by members of Région SUD Provence-Alpes-Côte d'Azur and risingSUD.

## 2- Acceleration (19<sup>th</sup> of November- 28<sup>th</sup> of February)

Selected companies selected among the companies of the first phase benefit from a one-to-one support by an expert selected through a dedicated tenure to implement one priority action of the action plan. The companies benefit from 5 days of consulting services.



- **Expected results**

After the “Initiation phase” phase, companies should:

- Understand, rethink and accelerate their transition toward circular economy thanks to the online workshop
- Have a diagnostic report on their circular and digital maturity
- Have a complete transformation plan and know what actions to undertake on their own, require further assistance to be implemented.

After the “Acceleration” phase, companies should have worked with a consultant on one priority action of the action plan and get at least one contact with an investor or solution provider.

## Planned activities

### 19. Selection/identification of SMEs

Title	Identification / identification of SMEs	Start date	06.2021
		End date	10.2021
<b>Description</b>			
<p>risingSUD launches a series of collective online workshops between June and October 2021, in order to inform companies about the potentialities of circular economy, and Circular4.0 project.</p> <p>During this period of time, the selection committee meets several time to select the companies that will benefit from the one-to-one coaching service. This committee is composed by member of risingSUD and members of Région SUD Provence-Alpes-Côte d'Azur.</p>			
<b>Results</b>			
4 online workshops			
14 companies to be selected			
1	Online workshop #1	Date	06.2021
2	Online workshop #2	Date	06.2021
3	Launch of the call for applications	Date	06.2021
4	Online workshop #3	Date	07.2021
5	Selection committee #1	Date	07.2021
6	Selection committee #2	Date	10.2021
6	Online workshop #4	Date	09.2021
7	Selection committee #3	Date	09.2021
9	Selection committee #4	Date	10.2021



## L'ACCOMPAGNEMENT CIRCULAR 4.0 Comment candidater ?

- 1 Répondre à l'appel à manifestation d'intérêt : <https://sphinxdeclic.com/d/s/n0910m>
- 2 L'équipe CIRCULAR 4.0 vous rappelle pour vérifier les conditions d'éligibilité et demander les éléments complémentaires du dossier de candidature
- 3 Compléter le diagnostic circulaire
- 4 Le comité de sélection CIRCULAR 4.0 valide les candidatures au fil de l'eau

Jusqu'au 30 septembre

### 20. Thematic workshops/seminars

This activity regroups the CAT2.0 or other training modules selected by the partners and addressed to SMEs.

Title	Collective workshop for the selected SMEs	Start date	10.2021
		End date	11.2021
<b>Description</b>			
For the selected companies that did not attend the online workshop, a specific session is organised. The goal is the same that the previous online workshop: inform companies about the potentialities of circular economy.			
<b>Results</b>			
1 online workshop			
1	Online workshop #5	Date	10.2021

Title	One-to-one workshops and transformation plans	Start date	10.2021
		End date	11.2021
<b>Description</b>			

For the selected companies, one-to-one workshops are organised to coach individually the companies toward more circular business models. These workshops are adapted according to the level of maturity of the project as described in the CAT: either a workshop of identification of the sources of circularity in their organisation and business model or an assessment of the potential of the transformation project.

### Results

14 one-to-one workshops to identify with the company the sources of circularity / assess the potentiality of the potential transformation project

14 transformation plans with one priority action

1	Launch of the one-to-one workshops and transformation plans	Date	09.2021
2	End of the one-to-one workshops and transformation plans	Date	11.2021

Title	Final selection of SMEs the implementation of the priority action of the transformation plan	Start date	11.2021
		End date	11.2021

### Description

The selection committees meet one last time to select the companies that will benefit from the one-to-one assistance to implement their transformation plan. To be selected for this second phase, companies must fill a letter of intent describing the priority action to put in place and committing to full investment to the program.

### Results

6 companies to be selected

1	Selection committee #1	Date	11.2021
---	------------------------	------	---------

Title	Implementation of the priority action of the transformation plans	Start date	11.2021
		End date	03.2022

### Description

The final selection of companies benefits from 5 days of assistance by an expert to implement the priority action identified in the action plan. The experts are selected by risingSUD after a tenure, based on their quality of their proposal, their competence in the field as well as the price.

### Results

6 priority actions of the action plan implemented

1	Launch of the tenure for experts to assist companies	Date	11.2021
---	--	------	---------

2	Selection of the experts	Date	12.2021
3	Launch of the One-to-one assistance for the implementation of the transformation plans	Date	12.2021
4	End of the one-to-one assistance for the implementation of the transformation plans	Date	03.2022

## 21. Circular CE capability/potentiality and Digital Maturity Assessment of SMEs

To assess the Circular and the digital maturity, risingSUD uses a diagnosis derived from the tool built from the project. It was built in close cooperation with the French partners of the project to adapt to the specificities of the three regions (language, size of companies etc.). This diagnosis indicates:

- the leverage to be used in order to remove the breaks to initiative or accelerate the transition towards circular economy

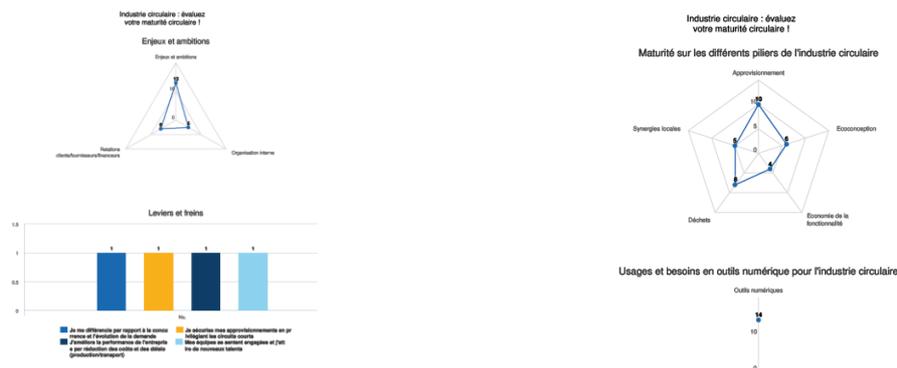
- some initial lines of enquiry for the sources of circularity in their business model and organisation

- the application potential of digital tools to facilitate the implementation of circular economy actions

risingSUD uses the online tool “eval&go” to enhance the accessibility of the diagnosis and get a clean report.

Companies can fill the questionnaire either with the help of risingSUD during the collective online workshop or a one-to-one workshop, or by themselves. In any case, a [link](#) to access the questionnaire is provided to them to access the online questionnaire.

Each company assessed with this diagnosis receives a detailed report with some elements of analysis.



## 22. Identification of innovation needs and investment plan

As described before after the “Initiation phase” phase, companies should receive a complete transformation plan (from 6 to 12 months) mentioning which actions to undertake on their own, and which actions require further assistance to be implemented. This transformation plan is the result of the one-to-one workshop with the company, and may encompass either new or improved process, products, services or business model. It may be digitally supported if necessary and may require the adoption of a new technology.

This transformation plan is given to the company in the form of a PowerPoint presentation or a word document.

After the “Acceleration” phase, companies should have worked with a consultant on one priority action of the action plan and get at least one contact with an investor or solution provider.

## Indicators (KPIs) and monitoring

RisingSUD will use the data retrieved by diagnosis tool at the beginning to measure an initial level of maturity on the circular and digital aspects and compare it with the results with selected questions from the same diagnosis tool at the end of the pilot action. It will be associated with questions analysing the progress regarding the main challenges identified, as well as the future actions of the action plan to be implemented. Finally, general question will be added to improve the support scheme, and possible ways of improvements.

Program Priority: SO1.1 - Improve the framework conditions for innovation in the Alpine Space

Work Package: WPT3 Fostering CE processes in Alpine Space with digitalisation processes

Activity: A.T3.2 Experimenting transnational actions to foster CE approaches through digitalisation

Deliverable: D.T3.2.1 Local actions to implement CE Design Model approaches with digitalisation processes

Reporting on local pilot actions – AWS

Author: Bianca Anna Kahr, PP4 – AWS

Version: FINAL

Month, YEAR: June, 2022

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# 1. Introduction

The aim of A.T3.2 is to foster CE design model with digitalization processes in at least 17 companies mainly in the sectors of building and construction.

In order to achieve this goal local pilot actions were planned by all project partners. As aws we planned our pilot action together with the other German speaking project partners and our respective experts as developed 5 moduls. AWS has worked with two experts in the field of circular economy and business support, Dr. Sonja Eser (Sinnenwandel and Fachhochschule Salzburg) and Dr. Rainer Pamminger (Technical University of Vienna). Both experts concluded a Circular Economy Assessment as well as a Digital Maturity Assessment with each company that took part in our pilot action and produced a detailed report as a result of this 1:1 assistance. They provided valuable input, learnings and insights, which are included in this pilot action report.

The present deliverable displays for the local pilot action in (Austria, Vienna) the:

- activities delivered,
- results achieved,
- lessons learned to foster CE approaches through digitalization.

## 2. Local pilot actions in Austria (Vienna), (aws) - Overview

In order to plan our local pilot action we developed the following structure:



### Modules

1. Raise awareness for CE supported by digitalization
2. Understanding the business case of CE with digital support
3. Circular business strategies in den specific sectors (sector specific training)
4. Finance & Investment
5. Networking

Not all steps are mandatory – depending on the demands/requirements of the SMEs the different modules will be applied. Just the first module is more or less mandatory because we need it to come into contact with the SMEs and to build the community.

1:1 assistance starts immediately after the first module. Module 2 is implemented in the form of a workshop but just for one company (CEO + additional employees). Module 3, 4 and 5 can be carried out either as individual 1:1 assistance or as group workshops (depending on the demands/requirements of the SMEs

## Modul 1

### **Raise Awareness for CE supported by digitalization (community building)**

Objective: to raise awareness of the opportunities of the circular economy through information events for specific sectors / several companies (building & construction, wood industry, recycling/water treatment, waste electronic equipment)

#### **Format:**

- Networking event/(online) workshop
- 1-2 hours
- An event is planned and carried out for each of the three sectors
- The entire value chain is invited

#### **Topics:**

- Presentation of the Circular 4.0 project
- Presentation of EU Circular Economy Action Plan
- Basics of the circular economy and how digitalization can support transformation (with focus on the respective sectors)
- Presentation of two (regional) case studies
- Q&A + discussion
- Forecast: what does Circular4.0 offer the participating companies?

#### **Tools:**

- Regional best practice cases

## Modul 2

### **Understanding the Business Case of CE**

Objective: Create awareness / raise awareness of the business case of CE and digital transformation

#### **Format:**

- (Online) coaching for one company - 1:1 assistance
- 2-4 hours

#### **Topics:**

- Entry point: linear risks and circular opportunities of sectors - as a check
- Knowledge transfer of added value of the circular economy for company

- Opportunities at point of intersection of CE and digital technologies for various circular economy business models

**Tools:**

- Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)
- Katch-e CE Strategist (<https://www.katche.eu>)
- MOVECO Qualification tools (<http://www.interreg-danube.eu/news-and-events/programme-news-and-events/2577>)
- SMEs will receive:
- an evaluation of the check for linear risks and circular opportunities (based on the example of the CAS) and digital maturity check (+ evaluation of contexts)
- Circular business model canvas

Modul 3

## **Circular business strategies in specific sectors (sector specific training)**

Objective: Know-how transfer & sector-specific workshops (building & construction, wood industry, recycling/water treatment, waste electronic equipment) - creative process

**Format:**

- Workshop for one sector, several companies
- The entire value chain is invited (if possible, cover the entire value chain of specific sector)
- Creative session

**Topics:**

- Focus: understanding of possible new circular business models and how digital technologies can support them

**Tools:**

- Creative tools (CE idea creation game: [https://www.katche.eu/knowledge-platform/tools-and-training-materials/katch\\_e-tools/katch\\_up-board-game/m](https://www.katche.eu/knowledge-platform/tools-and-training-materials/katch_e-tools/katch_up-board-game/m)) to stimulate the users to generate value ideas from a business challenge, applying circular design and circular business strategies. The tools should act as a guide to get an idea about an innovative product-service or to solve a real business problem and generate opportunities
- Outsourcing to external experts

## Finance & Investment

Objective: advice on financing & investment options and imparting knowledge on the implications of circular business models for the financing structure of SMEs

### Format:

- Handout and possibly reference to external experts (establish contact)
- Consultation
- 1-2 hours (+ self-study)

### Topics:

- Specific funding options
- Typical challenges with circular business models, product service systems and pre-financing (e.g. via expert lecture)
- Presentation of the EU taxonomy and its implications for SMEs

### Tools:

- Regional guidelines such as the Funding Guide for Environmental Protection and Energy from the Bavarian State Office for Environment:  
<https://www.umweltpakt.bayern.de/werkzeuge/foerderfibel/> (overview of all funding opportunities & financial instruments related to sustainability / circular economy)
- Booklet with collected funding opportunities from Circular4.0 with reference to digitization (compilation from Output D.T2.4.1 & D.T2.4.3)
- MOVECO Toolbox: Financing Instruments - <http://www.interreg-danube.eu/news-and-events/programme-news-and-events/2568> (List of Funding instruments for the circular economy, Interregional match-making tool, Concept for Investor Day, Public-private partnership investment opportunities in the circular economy)
- Individual consultation on request

## Networking

Objective: regular exchange between companies (of one value chain or with similar challenges), between investors, between authorities, etc.

### Format:

- (Online) group of regulars
- Guests are invited for certain topics (e.g. topic financing: invite investors)
- Regular events & fixed dates
- 1 hour

**Topics:**

- General exchange between companies: state of the art, current developments
- Best Practices “Flagship Companies” from T2.2.1
- New guidelines, action plans (invitation of authorities from T2.2.4)
- Financing (e.g. investor brunch as a special format, investors from T2.4.2)

**Tools:**

- Networking platform
- LinkedIn group

### **3. Identification and involvement of the SMEs for the Pilot Action**

In order to identify and recruit companies to join our local pilot actions we decided to use the AWS social media channels. Even though we have published an open call (open to all companies as we anticipated difficulties asking only companies from the building and construction sector to apply) we have not received many responses. Most people called or sent an e-mail to ask questions about the programme but hesitated when they were asked to check the “de minimis” box. The “de minimis” rule was necessary according to our legal department and therefore necessary for every company to agree too.

Once the companies contacted us with an expression of interest, they were sent a one pager on the pilot with further information as well as a short survey to answer and to sign the data protection and de minimis regulations.



Austria Wirtschaftsservice

10 February · 🌐



👤 Die Anmeldung zum EU-Pilotprojekt des aws Interreg Projekts CIRCULAR4.0 für #KMU und #Startups wurde bis zum 21.2.2022 verlängert.

Österreichische KMU und Start-ups, die die mit Hilfe digitaler Technologien die Einführung von #Kreislaufwirtschaft in ihrem Unternehmen vorantreiben wollen, haben die Möglichkeit an dem maßgeschneiderten Trainingsprogramm mit internationalen #Expertinnen und #Experten kostenfrei teilzunehmen. ♻️ 📡

Das Pilotprogramm beinhaltet #Onlineworkshops zum Thema „Chancen der Kreislaufwirtschaft durch Digitalisierung“, sowie zum Thema „Finance and Investment“ und „Circular Design and Circular Business Strategies“, sowie die Möglichkeit von 1:1 Coachings. 🎯

!?! 🙋🏻📧 Alle Fragen rund um die Teilnahme und weiteren Inhalten des Programmes beantwortet gerne unsere aws Expertin Bianca Kahr: b.kahr@aws.at 📧

**Anmeldefrist für KMU verlängert!**

**Bis zum 21.02.2022 anmelden und am Trainingsprogramm teilnehmen!**

Interreg  
Alpine Space  
Circular4.0

Newsletter post sent to people via aws Newsletter:

### KMU für EU-Pilotprogramm gesucht

Einreichen noch bis 14.01.2022

Im Rahmen des Interreg Projekts CIRCULAR4.0 werden kleine und mittelständische Unternehmen aller Branchen in Österreich gesucht, die mit Hilfe digitaler Technologien die Einführung von Kreislaufwirtschaft in ihrem Unternehmen vorantreiben wollen. Die Einreichfrist läuft noch bis zum 14.01.2022.

Details und Bewerbung zu CIRCULAR 4.0

<https://www.aws.at/circular40/>



Austria Wirtschaftsservice

9,683 followers  
3mo •

Die Anmeldung zum #EU-Pilotprojekt des #aws Interreg Projekts CIRCULAR4.0 für #KMU und #Startups wurde bis zum 21.2.2022 verlängert!

✅ Österreichische #KMU und #Startups, die die mit Hilfe digitaler #Technologien die Einführung von #Kreislaufwirtschaft in ihrem Unternehmen vorantreiben wollen, haben die Möglichkeit an dem maßgeschneiderten Trainingsprogramm mit internationalen #Expertinnen und #Experten kostenfrei teilzunehmen.

✅ Das Pilotprogramm beinhaltet #Onlineworkshops zum Thema „Chancen der Kreislaufwirtschaft durch Digitalisierung“, sowie zum Thema „Finance and Investment“ und „Circular Design and Circular Business Strategies“, sowie die Möglichkeit von 1:1 Coachings.

✅ Alle Fragen rund um die Teilnahme und weiteren Inhalten des Programmes beantwortet gerne unsere aws Expertin Bianca Kahr: [b.kahr@aws.at](mailto:b.kahr@aws.at)

[See translation](#)



We also published a press release in order to recruit companies (see also annex):

[https://www.ots.at/presseaussendung/OTS\\_20211221\\_OTS0056/eu-pilotprogramm-zum-thema-kreislaufwirtschaft-anmeldefrist-fuer-oesterreichische-kmu-laeuft-bis-14012022](https://www.ots.at/presseaussendung/OTS_20211221_OTS0056/eu-pilotprogramm-zum-thema-kreislaufwirtschaft-anmeldefrist-fuer-oesterreichische-kmu-laeuft-bis-14012022)

## 4. Implementation report

This chapter consists of a **detailed reporting** on the activities performed. It should address all the activities (planned initially or added during the implementation) by building on the detailed description of activities used in activity A.T3.1.

**Important:** Technically speaking, additional activities with respect to the original plans (D.T3.1) are also “deviations”. A specific paragraph has been added for deviations.

## Modul 1 – Raising Awareness

<b>Titl e</b>	Modul 1 – Raising Awareness	<b>Star t date</b>	31.03.202 2
		<b>End date</b>	31.03.202 2
<b>Description</b>			
<p>Objective: to raise awareness of the opportunities of the circular economy through information events for specific sectors / several companies (building &amp; construction, wood industry, recycling/water treatment, waste electronic equipment).</p> <p>We invited all the companies that had already signed up for the pilots at this point to join our raising awareness workshop, with contributions from Dr. Sonja Eser and Dr. Rainer Pamminger.</p>			
<b>Results</b>			
<p>Please list below the results achieved, including the items available for documentation of the results (those items shall be put in the annexes to the deliverable).</p>			
1	<p><i>Online: Raising Awareness Workshop</i></p> <p><b><u>AGENDA:</u></b></p> <p>11:00 – 11:10 Begrüßung und Circular 4.0 Projektvorstellung Bianca Kahr</p> <p>11:10 – 11:50 Circular Economy – Zeit zu handeln Dr. Sonja Eser</p>	<b>Dat e</b>	31.03.202 2

Einführung in die Circular Economy, relevante Hebel und neue Geschäftsmodelle

11:50 – 12:20 Circular Design

Dr. Rainer Pamminger

Kreislaufgerechte Produktgestaltung – Strategien, Tools und Umsetzungsbeispiele

12:20 – 12:30 Q&A

The screenshot shows a Zoom meeting interface. The main content is a presentation slide titled "GESCHICHTE DER CIRCULAR ECONOMY". The slide text states: "Circular Economy ist kein völlig neues Konzept, sondern basiert auf einer Kombination von Grundkonzepten wie Industrial Ecology, Biomimicry, Naturkapitalismus, Regenerative Design, Cradle to Cradle und Blue Economy." Below the text are three diagrams: the Cradle to Cradle logo, a circular flow diagram for Industrial Ecology, and a butterfly diagram for LIFES PRINCIPLES. At the bottom of the slide, there is a citation: "Sakrhi, M. (2017). How to Assess Product Performance in the Circular Economy? Proposed Requirements for the Design of a Circularity Measurement Framework. Recycling 2017, 2,6. <http://www.elsevier.com/bs>. <http://www.sciencedirect.com>. <http://www.nature.com/>". The Zoom interface includes a top menu bar with options like File, Edit, Share, View, Audio & Video, Participant, Meeting, Breakout Sessions, and Help. A top row of video thumbnails shows participants: Stefan Schott Wastics, Sonja Eser, and Stefan Lachmann. A right-hand sidebar lists "Participants (6)" with names and icons. At the bottom, there are controls for Unmute, Stop video, Share, Record, and other meeting functions.

The screenshot shows a Zoom meeting interface. The main content is a presentation slide titled "Ressourcenverbrauch in Österreich pro Kopf (2018)". The slide features a donut chart showing resource consumption per capita in Austria in 2018. The data is as follows:

Resource Category	Consumption (Mt/a)
Andere Produkte	1
Biomasse	38
Fossile Energieträger	24
Metalle	8
Nicht-metallische Mineralstoffe	95

The total consumption is 167 Mt/a, which translates to 19 t/cap/a. The slide also states: "EU-Durchschnitt: 14 t pro Jahr" and "Österreich: 19 t pro Jahr → 36% über EU Durchschnitt". At the bottom, it says "Quelle: Ressourcennutzung in Österreich, 2020" and includes the TU ECODESIGN logo.

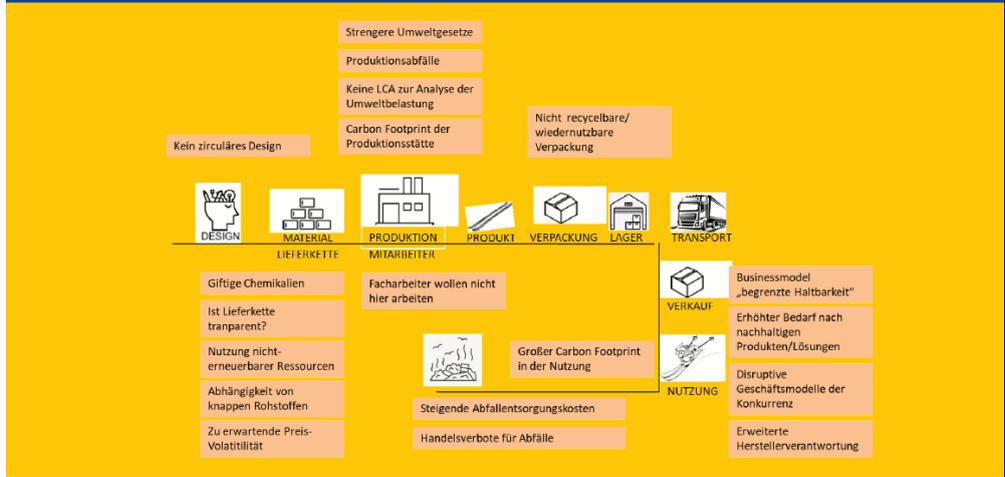
2	Direct contact with companies who have signed up for the pilot	Date	
3	<p>We had three companies that joined for our Raising Awareness workshop which was not as many as we had hoped but nevertheless it was a very lively workshop.</p> <p>Dr. Sonja Eser gave a very interesting introduction into CE and the business models. Dr. Rainer Pamminer afterwards went into more detail when it came to Circular Design, strategies, tools and some good practice examples.</p> <p>Main outcomes/learnings:</p> <p>It became clear that either the companies were already very knowledgeable concerning CE and were very willing to make some changes and/or receive input or that the companies had little to no knowledge concerning circular economy. There were many questions on regulations (national and regional) as well as specific questions on how they could design their respective product to make it more CE and cost friendly.</p>	Date	

## Modul 2 – 1:1 assistance

Modul 2 – 1:1 assistance	<b>Start date</b>	01.03.2022
	<b>End date</b>	31.06.2022
<b>Description</b>		
Understanding the Business Case of CE		

Objective: Create awareness / raise awareness of the business case of CE and digital transformation		
<b>Results</b>		
Please list below the results achieved, including the items available for documentation of the results (those items shall be put in the annexes to the deliverable).		
<b>Description</b>		
<p>The following tools were used for the digital maturity and the CE assessment:</p> <ul style="list-style-type: none"> <li>○ Regional best practice cases</li> <li>○ Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts) – developed by Dr. Sonja Eser</li> <li>○ Check for most relevant CE business models (“Value Hill”)</li> </ul> <p>The following tools were not used during 1:1 assistance, as the tool “check for linear risks and circular opportunities” was considered as the most appropriate one for the 1:1 consultancy:</p> <ul style="list-style-type: none"> <li>○ Katch-e CE strategist tool to help the user identify Circular Business Opportunities and provide ideas and inspiration along the process of defining a Circular Business Model.</li> <li>○ Katch-e CE idea creation game to stimulate the users to generate value ideas from a business challenge, applying circular design and circular business strategies. The tools should act as a guide to get an idea about an innovative product-service or to solve a real business problem and generate opportunities</li> <li>○ Moveco qualification tools – principles of circular economy &amp; business models for the circular economy</li> </ul> <p>Results: 11 reports</p> <p>No deviations besides the extensions of the timeframe for the 1:1 assistances</p>		

Bitte kreuzen Sie für Ihr Unternehmen relevante Risiken und Ineffizienzen in der Grafik an:



### Modul 3 – Circular business strategies in specific sectors (sector specific training)

<b>Title</b>	Modul 3 – Circular business strategies in specific sectors (sector specific training)	<b>Start date</b>	31.03.2022
		<b>End date</b>	31.03.2022

**Description**

Know-how transfer & sector-specific workshops (building & construction, wood industry, recycling/water treatment, waste electronic equipment) - creative process

- Workshop for one sector, several companies
- The entire value chain was invited (if possible, cover the entire value chain of specific sector)
- Creative session

Focus: understanding of possible new circular business models and how digital technologies can

**Tools:**

Creative tools (CE idea creation game: [https://www.katche.eu/knowledge-platform/tools-and-training-materials/katch\\_e-tools/katch\\_up-board-game/m](https://www.katche.eu/knowledge-platform/tools-and-training-materials/katch_e-tools/katch_up-board-game/m)) to stimulate the users to generate value ideas from a business challenge, applying circular design and circular business strategies. The tools should act as a guide to get an idea about an innovative product-service or to solve a real business problem and generate opportunities

Outsourcing to external experts

**Results**

Please list below the results achieved, including the items available for documentation of the results (those items shall be put in the annexes to the deliverable).

1		Date	11.04.2022
	<p>On site workshop in Gemini Startup Base in Salzburg</p> <p><i>GEMINI - STARTUP BASE</i></p> <p><i>Gewerbestraße 8</i></p> <p><i>5300 Hallwang</i></p> <p><i>AUSTRIA</i></p> <p><b><u>PARTICIPANT LIST:</u></b></p>		

Albert Anglberger
Angela Thiel
Anita Agić
Bernhard Neubauer
Bettina Hauser
Bianca Kahr
Christian Preinfalk
Daniela Reiningger
Dr. Sonja Eser
Fabian Schmied
Florian Reiningger
Gabriel Danieli
Hans Söllinger
Jörg Egger
Karl Reiningger
Klara Baara
Lisa Schiefer
Lorenz Maschke
Mag. Christine Schnell
Manuel Loipold
Martin Ebner
Michael Buchebner
Patricia Gandl
Paul Wögerer
Peter Buchegger
Pia Dietacher
Robert
Roman Lechner
Stefan Jindra
Tobias Schrammel
Valentin Motsch
Vinzent Weiler
Werner Balika
Wolfgang Danninger

	<p><b>Agenda:</b></p> <hr/> <p>10:00 Uhr Start</p> <ul style="list-style-type: none"> <li>- Check-In</li> <li>- 10:30 Uhr Impuls: Circular Economy Grundlagen und Innovationspotentiale</li> <li>- 11:15 Gemeinsame Analyse der vor Ort vorhandenen Materialien, Ideensammlung zur Schließung von Kreisläufen</li> <li>- ca. 12:30-13:30 Uhr gemeinsames Mittagessen &amp; Networking</li> <li>- 13:35 Impuls: Circular Design Strategien und Umsetzungsbeispiele</li> <li>- 14:00 Planspiel Simplycycle und Anknüpfungspunkte für Circular Design im eigenen Unternehmen</li> <li>- 15:30 Gemeinsame Auswertung</li> <li>- Check-Out</li> </ul> <p>16:00 Uhr offizielles Ende – Networking</p>		
2	<p>Gemini Start Up Base is an incubator in Salzburg, Austria and offers creative working space to currently over 70 companies. The project partner “Innovation Salzburg” had previously worked with the incubator and we have agreed to continue the work they had started in their pilot and organized the creative workshop with the interested companies that rent a space in the Gemini Premises.</p>	<b>Date</b>	

	<a href="https://gemini.co.at/">https://gemini.co.at/</a>		
3	<p>Dr. Eser has had the opportunity to hold many 1:1 assistance talks directly during the workshop or organize a meeting for after the workshops. The main findings and learnings from these 1:1 assistances are included under the information for Activity 2.</p> <p>As for the learnings for the workshop that took place on site, it was very helpful to be able to talk to the companies face to face and learn about their goals and their specific business cases.</p> <p>Moreover, the networking opportunities, that were planned as a entire sperate Modul, was somewhat integrated in the workshop in group works and during a networking lunch.</p> <p>One of the topics for example was resource availability in the area. Companies had to name the resources that they could provide and have therefore leftover, resources that they needed and knowledge they could provide. This turned out to be a very successful activity as the sometimes very small companies found synergies and an overlap of interests.</p>	Date	

## 5. Deviations from the pilot action plan (D.T3.1)

Originally, we had planned most of the activities in physical form but eventually deviated to online meetings due to Covid-19.

Moreover, we planned a separate workshop for finance topics (Modul 4) and for networking opportunities (Modul 5). As it was difficult to find companies to take part in these activities, we integrated these topics in the workshops that we already had planned and in the 1:1 assistances.

Moreover, we had to approach companies from all sector and not only, as originally planned, only from the building and construction sector due to the fact that we did not receive enough applications for the pilot action.

The KPI for aws was to assist around 17 companies.

However, we were only able to assist 11 companies. This was due to the following reasons:

- 1) The de-minimis rule was something that hindered companies to participate in the pilots – this was mostly communicated through personal conversations with the companies.
- 2) Due to Covid-19 the focus for many companies seemed to have shifted and there was not as much of a demand for coaching or the readiness to put in some time.
- 3) aws does not have a wide network that consists of companies that have a circular economy focus. Even though we were addressing all companies (which aws has a network of) we were not able to easily connect to companies that already had done some work in the field of CE and digitalization or started their transition to circular economy.
- 4) Three companies that received a 1:1 assistance were unfortunately not very transparent or truthful in the data they gave and/or were not willing to receive input. Therefore, these three 1:1 assistances were not included in the pilots.

Moreover, the 1:1 assistances were partly planned to take place as a physical meeting but was re-organized to online meetings due to Covid-19

## 6. Communication activities implemented to support the pilot action

Screenshots of communication activities can be found under chapter 3 and in the Annex.

## 7. Summary of the achievements - lessons learnt

### Achievements

The following achievements can be reported:

KPI	number of SMEs assisted	Identification of circular opportunities	Commitment level to CE implementation
<i>Goal</i>	<i>Reach at least 17 SMEs in 1:1 consultancy</i>	<i>100% of assisted companies identified a potential circular opportunity for their business</i>	<i>The overall aim was to increase the level of commitment, ideally in connection with a digital solution</i>
<b>Achievement</b>	11 SMEs in 1:1 consultancy	All 11 companies received concrete recommendations based on the assessments and 1:1 meeting.	All participants in the 1:1 assistance committed verbally their goal to keep working towards higher circularity. The real level of commitment and the concrete activities and results cannot be realistically estimated in the short timeframe of the pilot.

## Lessons learnt

Nearly all 1:1 assistances were undertaken by Dr. Sonja Eser. Therefore, she summarized all experiences and lessons learned and also include those from her work with Salzburg and Umweltcluster Bayern:

### SUMMARY OF PILOT FINDINGS:

#### actual problems:

- - increased resource and energy prices – between 300 – 700%
- problems to get material at all – delivery shortages
- even recycled material has become scarce
- more employees needed to source material from new suppliers
- bottlenecks due to corona diseases
- renegotiations of customer contracts due to price increases, old prices could no longer be maintained

#### digital technologies:

- The expert could not confirm digital technologies as relevant lever for CE, though for several applications it will be necessary or improving customer experience

## STATUS QUO

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### CE

- CE quite unknown
- very few have already circular products or business models but do not know that they are CE strategies
- environmental impacts of specific sectors are often unknown, ecological consequences also often ignored
- systemic approach is unknown and not practiced, i.e., organizations take into account all interactions and dependencies of their decision sand actions that impact their organization and the environmental, social, and economic systems, and identify unintended consequences of decisions or actions before they are implemented and manage these interactions effectively.

### Sustainability

- longlife products are the norm, constructed with material efficiency – now we have problems to bring these products into **cycles (long** times until products come back, construction is not detachable, lightweight constructions with material mixes)
- own products as longlife are supposed to be already sustainable enough, more interest in process improvements and cost reductions
- when sustainable strategies are already implemented, circularity is none
- use of recycling material is very low due to lacking quality
- compostable products are seen as good alternatives, though the problematic environmental impacts and problems with closing the loop are not known

- no RFL at most companies, toxic ingredients are not known
- sustainable requirements from customers (private or public) are very new and cannot be answered accordingly now (lacking data)

### production and supply chain

- a lot of companies do only final assembly – getting back their product or material will not reduce costs or help them, that would help the suppliers
- material changes would mean an intensive discussion/research together with suppliers as they buy in components
- not much companies have good connections or cooperations with their suppliers
- most companies do not know their input materials exactly or to 100ppm
- site-based sustainability is mostly well developed, some water or energy cycles can be closed

### business models

- products are sold, to make a product-service-system is not very popular
- involvement of customers only in exceptional cases (medical products)
- issues with regulations or norms currently prevent closing loops for some products
- very few have already circular products or business models but do not know that

### Innovation and cooperation

- most companies are already innovative and have developed niche products

## INTERESTING ACTIVITIES DISCUSSED

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- use production waste as new input/ improve selection to sell high quality material
- use 100% renewable energy from all accruing material on the site
- product passports
- remanufacturing of bigger products as new business models
- sustainability activities not clearly targeted, some actions that are thought are sustainable – no clear strategy, CE can help to work on a clear sustainability strategy for the companies
- discussion about developing new markets
- few new biological products
- establish clean and high-quality material streams
- develop circular products but also circular systems for closing the loops
- improving packaging, e.g. reuse
- close water or chemical cycles in production
- improve/rethink material selection and purchasing with criteria for circular materials
- glues are needed in several applications, no detachable connection techniques currently available
- cooperation with other companies to do research on material/glues/construction issues
- industrial symbiosis with neighboring companies
- procurement include circular sourcing
- discussions on business model and improvements with circular activities

## INCLUDED ADDITIONAL INFORMATION FOR

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- instructions for specific industries/products e.g. construction
- networks
- material fitting for circularity
- design strategies
- how to talk to customers about CE, sustainable products
- product passports
- national CE strategies
- how do we measure circularity
- learning material
- environmental impacts of specific sectors are often unknown!

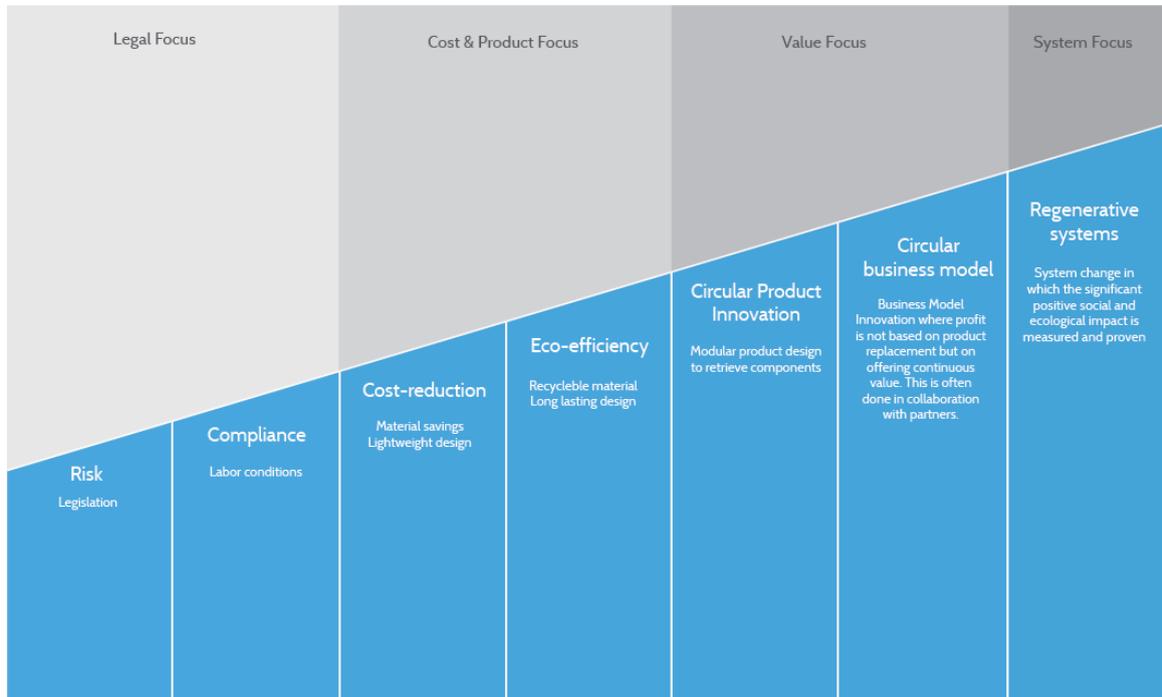
## FIRST EVALUATION

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- Companies need very specific guidance for their products/equipment/processes/material selection/product design.
- We received from all companies great feedback that the check was valuable, helped to rethink, think about more sustainability, think about issues they have not developed yet etc.
- The check that was developed is quite detailed and helps to interesting discussions about a wide variety of important topics. The step-by-step process helped to guide the discussion and rethink the own processes.
- A too simple check would serve more the intermediaries but not the companies, so it was good that we improved the check in this way.
- Forgotten was to include topics for biomass and biological cycle

CE maturity assessment over all SMEs consulted through Dr. Sonja Eser via UCB, AWS and Innovation Salzburg:

**Risk to Opportunity Map**  
Develop an internal vision



Most companies were eco-efficiency or in the phase for circular product innovation

## 8. Annex

### Annex 1: Communication

#### PRESSEMITTEILUNG

EU-Pilotprogramm zum Thema Kreislaufwirtschaft: Anmeldefrist für österreichische KMU läuft bis 14.01.2022

**Mit dem EU-Projekt CIRCULAR4.0 werden KMU fit für die Kreislaufwirtschaft. Expertinnen und Experten unterstützen die Unternehmen bei Workshops und Trainings. Die Teilnahme ist für KMU kostenlos möglich.**

**Wien.** Kreislaufwirtschaft und Digitalisierung gehören eng zusammen und bedingen sich in vielen Fällen gegenseitig. So können durch neue digitale Technologien Rohstoffe nicht nur effizienter genutzt und verarbeitet werden, sondern auch die Wiederverwendung und -verwertung wird dadurch erleichtert.

Im Rahmen des Interreg Projekts CIRCULAR4.0 werden Start-Ups bzw. kleine und mittelständische Unternehmen in Österreich gesucht, die mit Hilfe digitaler Technologien die Einführung von Kreislaufwirtschaft in ihrem Unternehmen vorantreiben wollen.

Ausgewählte KMU nehmen an einem maßgeschneiderten Trainingsprogramm von Jänner – März 2022 mit internationalen Expertinnen und Experten teil.

#### **Inhalte des Pilotprogramms**

Das Pilotprogramm beinhaltet Onlineworkshops zum Thema „Chancen der Kreislaufwirtschaft durch Digitalisierung“, sowie zum Thema „Finance and Investment“ und „Circular Design and Circular Business Strategies“. Unter anderem besteht auch die Möglichkeit für eine 1:1 Beratung mit Check auf lineare Risiken und zirkuläre Chancen mit internationalen Expertinnen bzw. Experten.

#### **Wer kann sich bewerben**

Start-Ups und KMU (alle Branchen) mit Firmensitz in Österreich

#### **Bis wann kann man sich bewerben**

Freitag, 14. Januar 2022

#### **Wie kann man sich bewerben**

Richten Sie bitte Ihr Interesse an der Teilnahme oder Fragen zum Programm per E-Mail an Frau Bianca Kahr unter [b.kahr@aws.at](mailto:b.kahr@aws.at)

#### **Über das Projekt CIRCULAR4.0**

Das Hauptziel des Projekts CIRCULAR4.0 ist die Stärkung der Digitalisierungsprozesse von KMU, um Innovationsprozesse zu fördern und den Übergang zur Kreislaufwirtschaft im Alpenraum zu beschleunigen. Neue Technologien ermöglichen die Entwicklung und die Einführung neuer CE-Geschäftsmodelle (Circular Economy). Das Projekt verspricht Unternehmen aus der Region Information und Unterstützung zu verschiedenen Konzepten der Kreislaufwirtschaft.

Mehr Information zum Projekt finden Sie [hier](#).

## Über Austria Wirtschaftsservice GmbH (aws)

Die Austria Wirtschaftsservice GmbH (aws) ist die Förderbank des Bundes. Durch die Vergabe von zinsgünstigen Krediten, Garantien, Zuschüssen sowie Eigenkapital unterstützt sie Unternehmen von der ersten Idee bis hin zum Markterfolg bei der Umsetzung ihrer innovativen Projekte. Die aws berät und unterstützt auch in Bezug auf den Schutz und die Verwertung von geistigem Eigentum. Ergänzend werden spezifische Vernetzungs-, Informations-, Beratungs-, Service- und Dienstleistungen für angehende, bestehende und expandierende Unternehmen angeboten.

## Rückfragen & Kontakt

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Circular4.0

Kreativwirtschaft / Entrepreneurship

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## Annex 2: Overview of companies assisted

ID° (partner acronym +no.)	Company type	Company Region	Sector of reference	CE maturity assessment	CE maturity assessment tool	Digital maturity assessment	DM assessment tool	1:1 meeting	Action Plan
aws01	SME	Salzburg	Manufacture	11.04.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	11.04.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	11.04.2022	
aws02	SME	Salzburg	Manufacture	11.04.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	11.04.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	11.04.2022	...
aws03	SME	Salzburg	Clothing	11.04.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	11.04.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	11.04.2022	
aws04	Start-Up	Graz	Deep tech	23.03.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	23.03.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	23.03.2022	

aws05	SME	Salzburg	Watch manufacture	11.04.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	11.04.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	11.04.2022	
aws06	Start-Up	Vienna	Recycling of batteries	01.04.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	01.04.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	01.04.2022	
aws07	SME	Salzburg	Manufacture	11.04.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	11.04.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	11.04.2022	
aws08	SME	Salzburg	Food	11.04.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	11.04.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	11.04.2022	
aws09	SME	Salzburg	Waste management	11.04.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	11.04.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	11.04.2022	
aws10	Start-Up	Vienna	Waste management	29.03.2022	Check for linear risks and circular opportunities	29.04.2022	Check for linear risks and circular opportunities	29.03/04.2022	

					(based on the example of the CAS) + digi check (evaluation of contexts)		(based on the example of the CAS) + digi check (evaluation of contexts)		
aws11	SME	Salzburg	Interior Design	11.04.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	11.04.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	11.04.2022	