

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

Umweltcluster Bayern (UCB)

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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. SIO2 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 Umweltcluster Bayern (UCB)
- Lessons learned by Umweltcluster Bayern (UCB)
- 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:	<b>Planning digitalised CE processes in Alpine Space area addressed to SMEs</b> Development of feasibility plans to foster digitalised CE processes in SMEs from the Alpine Space, according the 3 approaches: CE design, CE optimal use and CE value recovery.  Each feasibility plan includes plans for local actions defined by the relevant partners, according to the following distribution across the partnership:		
	CE design	CE optimal use	CE value recovery

		LP TPLJ & PP10 JSI PP4 aws PP5 ITG PP9 AURAE PP12 Confindustria Bergamo PP15 RISINGSUD	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	
	BWCON 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
Circular assessment Digital maturity assessment Access to self-learning materials	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.
Identification of innovation needs 1:1 assistance	Assistance provided either directly by the partners or in combination with external experts (most common case)
Development of recommendations focus 3 to 6 months (on the basis of the above)	Format of recommendations: business model canvas, transformation roadmap...

## Description of the local pilot action implemented by Umweltcluster Bayern

### Local context and CE approach

The pilot focused manufacturing SMEs in Bavaria including especially manufacturer in environmental technologies due to the membership structure of UCB. This is a focus, not a limitation. All other companies were invited to express their interest. The selection was made based on the analysis in WPTI but also on the characteristics of existing and developed tools. The tool "Check for linear risks and circular opportunities" that will mostly be used is targeted towards manufacturing companies.

The CE approach originally foreseen for UCB is value recovery. The selection was made based on our membership structure, including many waste-management and recycling companies. We do not see any added value in the focus on an approach. The idea of the circular economy is to turn away from linear and silo thinking. We also do not want to impose a specific approach on companies on the first hand. They should be free to decide which approach they deem the most important in their individual situation. Due to the low level of maturity of the topic with most Bavarian SMEs we need companies to start off from the basics and therefore a holistic approach to understanding CE is necessary, including all CE approaches.

## Methodology

SMEs based in Bavaria, preferably from the manufacturing sector, are invited to apply. The pilot is aimed at managing directors and executives of SMEs. The limited number of participants (22 as per AF) is admitted by the principle “first come, first served”, documented via an online application form.

1. **Initial needs assessment**

Applicants are contacted and invited to a 30 mins online initial conversation, understanding their individual needs and expectations.

2. **Kick off workshop: Raise awareness**

Next step is an online kick-off event and workshop to raise awareness on Circular Economy and digitalization as an enabler, to which all participants who have applied until the day before are invited. We decided to do two rounds of application phases and kick off workshops in order to reach the relevant number of SMEs. Application was then open three more months for the 1:1 assessment without organizing another kick-off workshop. Participants were invited to watch the kick-off recording and have a look at the material at TalentLMS.

3. **Phase of self-learning & 1:1 assistance (check for linear risks and circular opportunities)**

As a follow up of the kick-off workshop, appointments for 1:1 assistance are organized with each participating company and our external experts Dr. Sonja Eser as well as/or Andreas Jenne. Additionally, SMEs are invited to self-study CAT2.0 on the online learning platform Talent LMS. The 1:1 assistance appointment can be held online or in person at the individual company. The tool “Check for linear risks and circular opportunities” will identify circularity as well as digital maturity and potential during the 1:1 assistance. This tool is selected due to its low-level entry barrier and no need for specific company data. It best suits the needs of SMEs in Bavaria who are at an early stage of adopting Circular Economy principles. In case the tool does not fit the individual company’s needs, another tool from the CIRCULAR4.0 toolbox would have been chosen. This was not the case.

## Lessons learned and recommendations for the follow-up

As all assessments were performed by our external expert, Dr. Sonja Eser, she summarized the experiences and lessons learnt during consulting the SMEs. Her experiences include working with SMEs from Umweltcluster Bayern but also Salzburg Innovation and AWS:

### Actual problems SMEs are currently facing:

- 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:

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

## Status Quo

### Circular Economy

- Concept of Circular Economy is quite unknown: This can be confirmed by the Project partner as this also seems to be a reason for the limited number of participants. Communicating a support program for SMEs on becoming more circular and digital was difficult and generated very little interest. Participation numbers and characteristics in our webinar series also confirmed that the topic is relevant for many stakeholder groups but those businesses attending were usually larger enterprises and not SMEs.
- 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

- long-life 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 long-life 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

- 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:

- 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!

## Own first evaluation

- Companies need very specific guidance for their products/equipment/processes/material selection/product design.
- Got from all companies best feedback that the check was valuable, helped to rethink, think about more sustainability, think about issues they have not developed yet etc.
- The check 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.
- Forgot to include topics for biomass and biological cycle

## Durability and follow-up

The tools gained from the project, especially the “Check on linear risks and circular opportunities” will be used in further innovation assistance with UCB member companies wanting to learn about Circular Economy. As project manager Dr. Eva Schichl was part of most

1:1 assessment with companies during the local pilot action she will use the check to assist further companies in the future. She will also pass on the knowledge to selected team members at UCB. Additionally, we have been applying for further Interreg projects that are capitalizing on the learnings from CIRCULAR4.0, developing additional tools and a support system towards our member companies as we strongly believe that circular economy will become very relevant for them in the near future, even though they have not yet showed a lot of interest.

## Annex

- D.T3.1.3 - AS feasibility plan to foster CE value recovery approach with digitalisation processes
- D.T3.2.3 - Local actions to implement CE value recovery approaches with digitalisation processes (4 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: A.T3.1 Planning digitalised CE processes in Alpine Space area addressed to SMEs**

**Deliverable: D.T3.1.3 AS feasibility plan to foster CE value recovery approach with digitalisation processes**

**Author: TPLJ and inputs by PPs (CCIAA DL VERO/VENINN, TUAS, UCB, Biz-up)**

**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 *D.T3.1.3 AS feasibility plan to foster CE value recovery approach 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.T3.1.3) is focusing on the development of AS feasibility plan to foster CE value recovery approach with digitalisation processes. BWCON collected inputs of each project partner from the value recovery model (in the case of Veneto Region of two project partners from Veneto collaborated – CCIAA DL VERO & Veneto Innovazione). Each PP from the group of value recovery model (CCIAA DL VERO & Veneto Innovazione, TUAS, UCB, Biz-Up) 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 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 or pilots (for Veneto: CCIAA DL VERO & Veneto Innovazione, TUAS, UCB, Biz-Up) are available in the appendix.

Appendix (inputs by PPs: Local detailed feasibility plans by PPs for the implementation of pilots –Veneto: CCIAA DL VERO/VENINN, TUAS, UCB, Biz-up)

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):	Valeria Bazzan, Ivan Boesso
Contributors:	Francesca Maccatrozzo
Type:	<b>T -Template/ R- report, CCIAA DL VERO &amp; VENETO INNOVAZIONE</b>
Dissemination level:	<b>CO = confidential</b>
Revision:	<b>DRAFT 02</b>
Date/Submission:	<b>December 2021</b>

<b>1. Overview of the local pilot action - Veneto (CCIAA VE RO and VENETO INNOVAZIONE).....</b>	<b>3</b>
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## 1. Overview of the local pilot action – Veneto Region (CCIAA VE RO and VENETO INNOVAZIONE)

The local pilot action in Veneto will be carried out in coordination and collaboration between Chamber of Commerce of Venice Rovigo and Veneto Innovazione.

The industrial sectors involved will mainly be constructions and buildings, which are very important in the area, have a very strong environmental impact but at the same time are usually not very involved or advanced in terms of circularity and/or digitalization.

Additional sectors, such as textile, nautical, manufacturing and tourism will also be taken into consideration since they are often strictly connected with our main targeted sector and are very relevant to the local economy.

The selection and involvement of enterprises will be carried out together by the two partners, while the following activities will respectively focus mainly on the following approaches (as foreseen in the ApplicationForm):

- 1) Value recovery for CCIAA VE RO (D.T3.2.3)
- 2) Optimal Use for Veneto Innovazione (D.T3.2.2)

Assistance to the SMEs shall be opened to include both approaches, and even Circular design models, if necessary.

- **Methodology**

The combined effort of the two partners will hopefully be particularly effective with regard to the selection and engagement of the SMEs and the content/professional competence required.

CCIAA VE RO and Veneto Innovazione will jointly organize the promotional activities and the workshops to present the pilot actions path to local entrepreneurs and promote opportunities offered on the matters of circularity and digitalization at local and at national level.

The local workshops will particularly focus on awareness and financial instruments offered to the SMEs to implement digitalization and transition to circularity.

The workshop will take place online within the first week of February and will consist in:

- Aperitivo for circularity

Originally planned as a presence event, a happening with SMEs involved in circularity processes and/or interested in starting and promoting more eco sustainable productions and approaches. Also, intermediaries involved in circularity will be targeted, in order to promote the exchange of ideas and spread knowledge, mainly among SMEs on the opportunities offered by CE approach (along with digitalization).

SMEs will be invited to apply for the public call that Chamber of Commerce and Veneto Innovazione will launch in January and intermediaries will be invited to give their support to disseminate the potential opportunity of the call among their stakeholders.

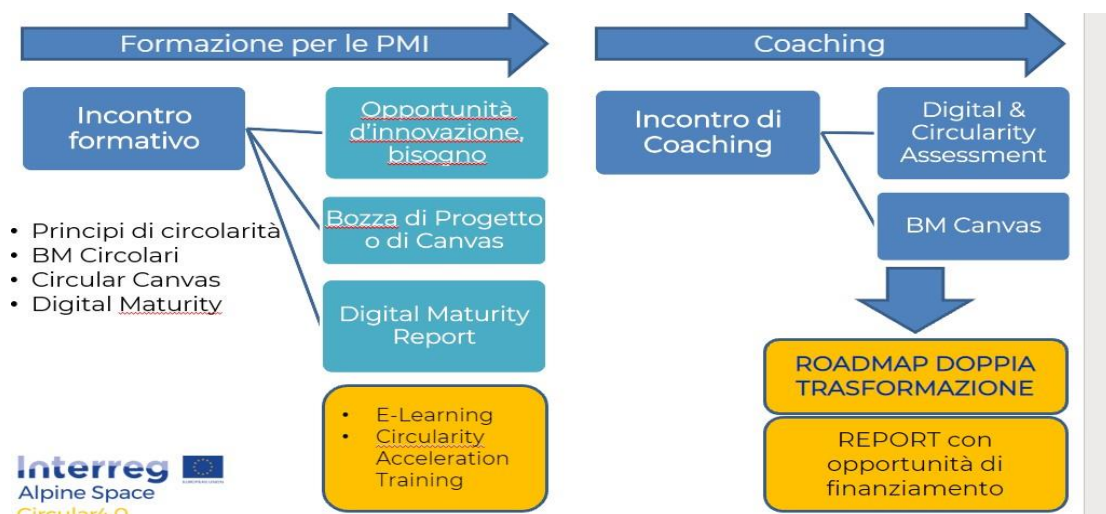
The call will give the opportunity to a maximum of 50 SMEs (selected according to the order of subscription to the call) to join the pilot action and be assisted by experts.

The experts, in strict coordination respectively with Chamber of Commerce and Veneto Innovazione, will carry out a digitalization assessment using Selfi 4.0 tool and a circularity capability by using CAS2.0 Tool of the selected SMEs. Both tools are included in the CIRCULAR4.0 Toolkit

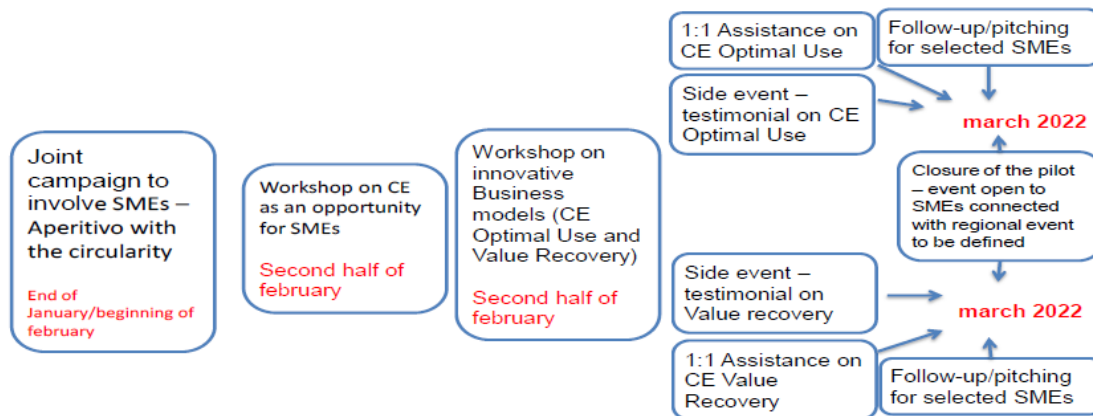
According to the combined results of the assessments carried out a customized plan of action will be elaborated and proposed to the SMEs. In this plan experts will suggest instruments and changes that could be adopted to improve the circularity and digitalization of the SMEs, also with regard of financial opportunities available to sustain the necessary activities.

The original plan of action was as follows:

First phase foresaw an informative meeting with SMEs, followed by personalized coaching, digital and circularity assessment, the drawing of a roadmap to improve on circular processes and digitalization, and finally some practical suggestions enlightening the financial sources to use to achieve the goals indicated in the roadmap.



## The expected Plan for January/March 2022



- **Expected results**

According to the Application form:

- 1 local event “Aperitivo” to launch the Call
- 2 local workshops/awareness action will be addressed to SMEs
- 40 SMEs (Minimum 23+15 SMEs) 1:1 assisted:
  - Digital maturity assessment
  - CE capability
  - “customized plan”

## 2. Planned activities

### 1. Selection/identification of SMEs

Targeting of enterprises, which will mainly be constructions and buildings and additional sectors, such as textile, nautical, manufacturing and tourism to be involved in the promotional events.

Invitation to Workshops will be carried out by email, websites, social media channels and the cooperation of intermediaries. (End of January/beginning of February).

A public call will be launched for SMEs to apply to the assisted procedure of assessment and elaboration of a roadmap to improve circularity and digitalization.

### 2. Thematic workshops/seminars

Aperitivo with SMEs and two thematic workshops will take place online to promote the participation to the call and to involve SMEs and intermediaries in the activities (end of January/beginning of February).

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

SMEs applying for the assisted procedure will be guided by experts through digitalization and circularity capability assessment using respectively SELFI 4.0 and CAS 2.0.

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

After the assessment SMEs representatives will receive from the experts a proposal of roadmap to improve their skills and solve potential weaknesses. Also, information on potential financial instruments to fulfil the actions required will be offered (march).

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

Title	Identification of the SMEs and preparatory activities	Start date	12.2021
		End date	01.2022
<b>Description</b> Veneto Innovazione and CCIAA VERO both will launch a public tender to hire experts to support the pilot implementation. The procurement procedure will last several weeks and will be completed hopefully by January 2022 In the meantime, the following preparatory activities will be carried out: a) Scouting and analysis of the entrepreneurial environment b) Analysis of the tools (SELF4.0 and CAS2.0) to be adopted and their adaptation for the local use c) Organization and launch of the communication campaign  <b>Add sub-activities if necessary, no sub-activities are planned</b>			
<b>Results</b>			
		Date	

Title	Involvement of the SMEs	Start date	12.2021
		End date	03.2022
<b>Description</b> Veneto Innovazione and CCIAA VERO organize a communication campaign to invite SMEs to participate to the Pilot. An open call will be published on their website. This way, the SMEs will be selected, and the state-aids rules will be respected.			
<b>Add sub-activities if necessary, no sub-activities are planned</b>			
<b>Results:</b>			
1	List of SMEs interested in participating in the CCIAAVERO pilot	Date	31/03/2022
2	List of SMES interested in participating to the VENINN pilot	Date	31/03/2022

Title	Kick-off pilots' event	Start date	01.2022
		End date	02.2022
Description			
Veneto Innovazione and CCIAA VERO will organize one event to start the pilot action. Minimum 30 SMEs will participate.			
Add sub-activities if necessary			

<b>No sub-activities are planned</b>			
<b>Results:</b>			
1	One online kick-off event in form of aperitif jointly organized	<b>Date</b>	15/02/2022

Title	Raising knowledge by SMEs for CE-innovation oriented processes	Start date	02.2022
		End date	02.2022
<b>Description</b> Veneto Innovazione and CCIAA VERO will organize 2 online thematic seminars addressed to SMEs on the following topics: a) Thematic seminar on CE as an opportunity for SMEs b) Thematic seminar on CE business models connected with CE Value Recovery and CE optimal use.			
<b>Add sub-activities if necessary</b> <b>Sub-act1:</b> thematic seminar on Value recovery organized by CCIAAVERO <b>Sub-act2:</b> thematic seminar on Optimal use organized by VENINN			
<b>Results:</b>			
1	One kick-off event in form of aperitif jointly organized	Date	15/02/2022

Title	Assisting SMEs for sustainability transaction plans	Start date	02.2022
		End date	03.2022
<b>Description</b> Veneto Innovazione and CCIAA VERO, with the support of external experts, will organize 1:1 assistance to SMEs consisting with the following steps: a) Digital maturity level assessment with SELFIE tool b) CE capability assessment with CAS2.0 tool Elaboration of a report as result from the 1:1 assistance provided			
<b>Add sub-activities if necessary</b> <b>Sub-act1:</b> 1:1 assistance provided by CCIAAVERO for (estimated) 23 SMEs <b>Sub-act2:</b> 1:1 assistance provided by VENINN for (estimated) 15 SMEs			
<b>Results:</b>			
1	38 (estimated) digital maturity checks implemented	Date	31/03/2022
2	38 (estimated) CE capability assessment checks implemented		31/03/2022
3	38 (estimated) report as results from the 1:1 assistance provided		31/03/2022

### Indicators (KPIs) and monitoring

The objective of the pilot action is to assist at least 40 SMEs in the assessment and elaboration of the roadmap.

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, TUAS Rosenheim</b>
Dissemination level:	<b>CO = confidential</b>
Revision:	<b>DRAFT 02</b>
Due Date:	<b>November 2021</b>
Date of submission:	<b>December 2021</b>

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2. Planned activities.....	17
3. Indicators (KPIs) and monitoring.....	18

## Overview of the local pilot action – Germany (TUAS Rosenheim)

This is the place where to describe in 2-3 pages the pilot action in its entirety, without entering 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.

**Sectors:**

- *Timber Industry*
- *Plastic Industry*
- *Dairy Industry*

**geographical area:**

- *Berchtesgadener Land - BGL (Southern Bavaria)*

type of businesses targeted:

- *Furniture Industry*

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.

- *Furniture Industry*  
➔ *Cooperation with the Business Service Berchtesgadener Land (BGL) has resulted in other companies and sectors.*

- **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.

The use of graphic elements is recommended.



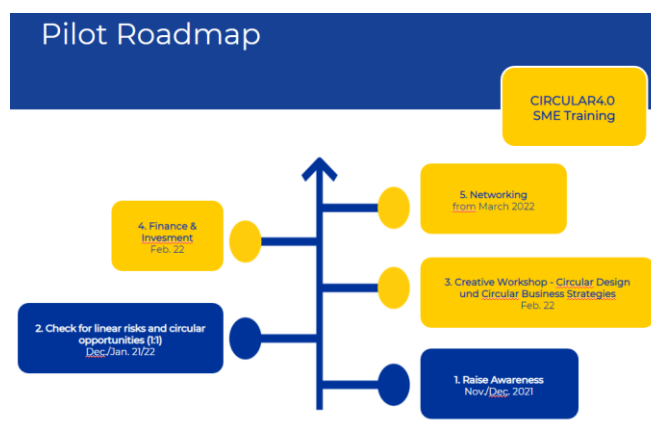
- *TUAS methodology*

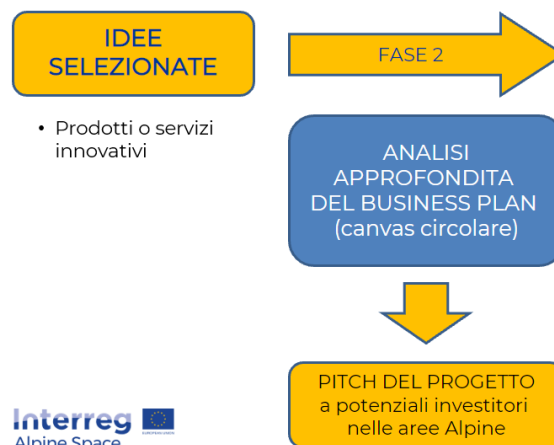
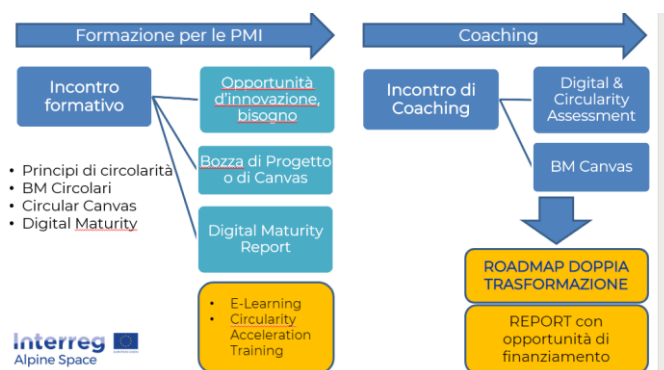
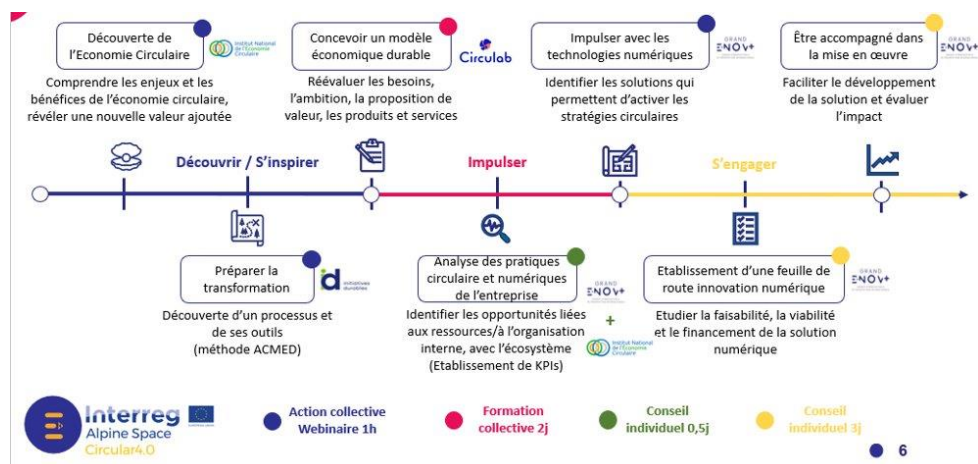
T3.2	
Duration	Oktober 2021 – February 2022
How	<div> <div> 1. Raise Awareness for CE  2. Understanding the Business Case of CE </div> <div> <b>Module 1 &amp; 2</b>  Online event (12 – 15 companies)  10.November 2021 </div> </div> <div> 3. Circular business strategies: sector specific training </div> <div> <b>Module 3</b>  1:1 consulting  December 2021 </div> <div> <div> 4. Finance &amp; investment  5. Networking </div> <div> <b>Module 4 &amp; 5</b>  Individual for each company January / February 2022 </div> </div>
Which tools	<ul style="list-style-type: none"> <li>Katch-e</li> <li>Canva Business Model</li> <li>Talent LMS</li> </ul>
Collaboration	Together with Wirtschaftsförderung Berchtesgadener Land, Mrs Dr. Susanne Steinhauer

*Which tools will be used:*

- *Katch-e: optimal use of training methods and knowledge platform; for free*
- *Canva Business Model: simplest business model but with great result*
- *Talent LMS: CE Community, provide materials*

Examples:





### • Expected results

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

- analyse the needs of the companies (where are you now, what do you need to implement the CE)
- provide an expert who can support
- contacts and documents for financing
- community building and knowledge sharing with other companies

## 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

### 1. Selection/identification of SMEs

This activity regroupes the actions undertaken by each partner to approach and select SMEs involved in the pilot action.

*SMEs were selected by the BGL business development agency. BGL already had a pool of companies interested in CE, or active in CE. These approx. 40 companies were contacted and invited to participate in the first kick-off event.*

### 2. Thematic workshops/seminars

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

- *Anticipated Katch-e and Canva Businessmodel*

*Kick-off on November 10 were general presentations on CE*

- *Presentation of the project*
- *Presentation of the EU action plan on the circular economy*  
*Basics of the circular economy & and how digitalization can support the transformation*
- *Case study on CE - Kiefel company*

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

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

- *Questionnaire (before/after with rating system)*

*(Questionnaire is currently under construction)*

### 4. 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 ...	Date	
2	Example: 1 call for applications	Date	
3	Example: 25 CE+digital maturity assessments of SMEs	Date	
n		Date	

- *In progress (registrations for 1:1 consultation will run until 15<sup>th</sup> December 2021)*
- *I use the suggested table*

## 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).

- *Questionnaire before / after Questionnaire (is asked before the 1:1 consultation and after)*
- *The questionnaire contains a point system e.g. "How much do you already integrate CE in your company?" (Rating system: 1 low 10 high)*
- *After the two surveys (before/after), the successes or failures can be visually presented in a diagram*

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, UCB**

Dissemination level: **CO = confidential**

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Date of submission: **22.12.2021**

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2. Planned activities.....	23
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# Overview of the local pilot action - Bavaria/Swabia (Umweltcluster Bayern)

## Local context and CE approach

The pilot focuses manufacturing SMEs in Bavaria including especially manufacturer in environmental technologies due to the membership structure of UCB. This is a focus, not a limitation. All other companies are invited to express their interest. The selection was made based on the analysis in WPT1 but also on the characteristics of existing and developed tools. The tool “Check for linear risks and circular opportunities” that will mostly be used is targeted towards manufacturing companies.

The CE approach originally foreseen for UCB is value recovery. The selection was made based on our membership structure, including many waste-management and recycling companies. We do not see any added value in the focus on an approach. The idea of the circular economy is to turn away from linear and silo thinking. We also do not want to impose a specific approach on companies on the first hand. They should be free to decide which approach they deem the most important in their individual situation. Due to the low level of maturity of the topic with most Bavarian SMEs we need companies to start off from the basics and therefore a holistic approach to understanding CE is necessary, including all CE approaches.

## Methodology

SMEs based in Bavaria, preferably from the manufacturing sector, are invited to apply. The pilot is aimed at managing directors and executives of SMEs. The limited number of participants (22 as per AF) is admitted by the principle “first come, first served”, documented via an online application form.

### 1. Initial needs assessment

Applicants are contacted and invited to a 30 mins online initial conversation, understanding their individual needs and expectations.

### 2. Kick off workshop: Raise awareness

Next step is an online kick off event and workshop to raise awareness on Circular Economy and digitalization as an enabler, to which all participants who have applied until the day before are invited. We decided to do two rounds of application phases and kick off workshops in order to reach the relevant number of SMEs.

### 3. Phase of self-learning & 1:1 assistance (check for linear risks and circular opportunities)

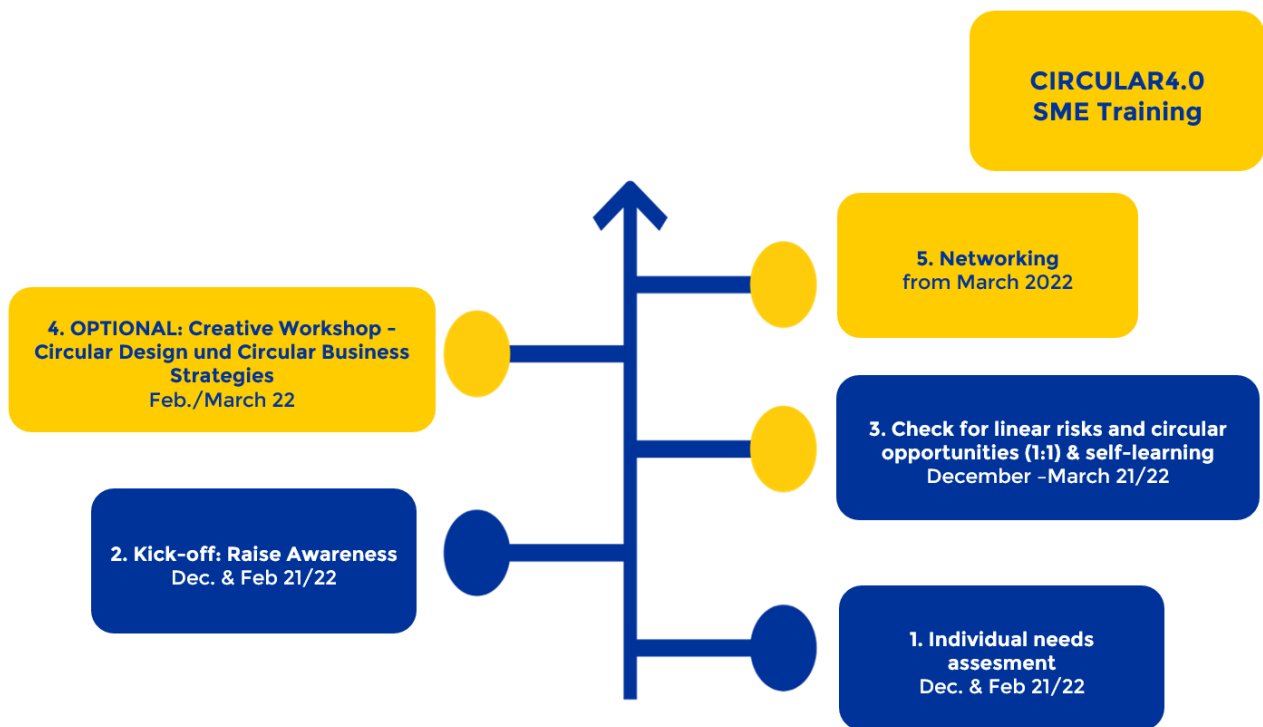
As a follow up of the kick-off workshop, appointments for 1:1 assistance are organized with each participating company and our external experts Dr. Sonja Eser as well as/or Andreas Jenne. Additionally, SMEs are invited to self-study CAT2.0 on the online learning platform Talent LMS. The 1:1 assistance appointment can be held online or in person at the individual company. The tool “Check for linear risks and circular opportunities” will identify circularity as well as digital maturity and potential during the 1:1 assistance. This tool is selected due to its low-level entry barrier and no need for specific company data. It best suits the needs of SMEs in Bavaria who are at an early stage of adopting Circular Economy principles. In case the tool does not fit the individual company's needs, another tool from the CIRCULAR4.0 toolbox will be chosen.

### 4. *Optional: Creative workshop with teams of each company - Circular Design und Circular Business Strategies*

Depending on budget availability and individual company's needs and maturity we plan to offer selected companies the possibility for a Circular Design und Circular Business Strategies workshop with several employees/executives and even partners along the supply chain.

## 5. Kick off regular SME Networking

At the end of the pilot phase, we want to initiate a network meeting with all assisted SMEs, discussing lessons learned, next individual steps planned and a platform for networking with peers.



## Expected results

There are at least three very clear benefits for participating SMEs:

1. individual circular opportunity and risk analysis including circular & digital maturity assessment with concrete recommendations for action
2. access to Talent LMS learning platform with numerous examples of best practice
3. exchange with CE experts and other participants

We expect an increase in CE awareness and an increase in understanding of CE as an innovation opportunity. Additionally, SMEs can expect an understanding of individual linear risks and circular opportunities as well as a specific recommendation for next action (identifying low hanging fruits or gaps in their overall CE strategy, depending on the CE or digital maturity of the SME). Additionally, we expect to create a group of peer companies, willing to take action transforming their business model, business processes or their product towards circularity.



## Planned activities

1	Selection/identification of SMEs	Start date	11.2021
		End date	03.2022
SMEs based in Bavaria, preferably from the manufacturing sector, are invited to apply. The pilot is announced on UCB as well as our observer’s website. Communication is supported by several partnering business support organizations (e.g., Bavarian Chambers of industry and commerce, local business support organization, Bayern Innovativ, Cluster of Manufacturing & Automation etc). Companies headquartered or with a branch in Bavaria are admitted by the principle “first come, first served”, documented via an online application form. In an initial conversation, individual needs and expectations are assessed and a recommendation to participate is made in collaboration with the expert who decides about the applicability of the available tools for the individual company.			
Result			
Reach 22 interested companies to participate in the pilot action. Meeting each company individually for an initial introduction and needs assessment.			
1	Introducing the pilot actions to SMEs at a webinar on Circular Economy, hosted by Umweltcluster Bayern and all Bavarian Chambers of Commerce and Industry	Date	9.11.2021
	Introducing the pilot actions to SMEs at a webinar on Circular Economy, hosted by Umweltcluster Bayern and all Bavarian Chambers of Commerce and Industry	Date	7.12.2021
2	Meeting 22 companies: Getting to know and needs assessment	Date	11.2021 - 03.2022

2	Thematic workshops/seminars	Start date	12.2021
		End date	03.2022
<p>The online kickoff event and workshop is used to raise awareness on Circular Economy and digitalization as an enabler. All companies who have applied until the day before are invited. We decided to do two rounds of application phases and kick off workshops in order to reach the relevant number of SMEs. Kick off no.1 takes place on December 9<sup>th</sup> 2021. Kick off no.2 is scheduled for February 3<sup>rd</sup> 2022 (duration of 3 hours). Three experts are addressing CE and digitalization from different angles. 1) Why CE? 2) How does CE work and how can digitalization support it? 3) Which digital technologies enable which CE processes/business model incl. specific examples. In the workshop part, experts use <b>trend cards from CIRCit Norden</b> to activate a discussion between participating companies, reflecting the relevance of CE and digital technologies for their own companies.</p> <p>Additionally, SMEs are invited to self-study CAT2.0 on the online learning platform Talent LMS.</p>			

<b>Result</b>  22 companies attend the seminars and take-home new insights on Circular Economy and the meaning for their own business. Their awareness on the opportunities within circular business models increases and they are aware of the regulative EU instruments EU Green Deal and Circular Economy Action Plan.			
1	1 <sup>st</sup> Kick-off: Online event by experts for participants - Awareness Raising	<b>Date</b>	9.12.2021
2	2 <sup>nd</sup> Kick-off: Online event by experts for participants - Awareness Raising	<b>Date</b>	3.02.2022
3	Closing/networking workshop	<b>Date</b>	End of March 2022

3	Circular CE capability/potentiality and Digital Maturity Assessment of SMEs	Start date	01.2022
		End date	03.2022
As a follow up of the kick- off workshop, appointments for 1:1 assistance are organized with each participating company and our external experts Dr. Sonja Eser as well as/or Andreas Jenne. The 1:1 assistance appointment can be held online or in person at the individual company. The tool <b>“Check for linear risks and circular opportunities”</b> will identify circularity as well as digital maturity and potential during the 1:1 assistance. This tool is selected due to its low-level entry barrier and no need for specific company data. It best suits the needs of SMEs in Bavaria who are at an early stage of adopting Circular Economy principles. In case the tool does not fit the individual company’s needs, another tool from the CIRCULAR4.0 toolbox will be chosen.			
Result			
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	1 <sup>st</sup> Kick-off: Online event by experts for participants - Awareness Raising	Date	9.12.2021
2	2 <sup>nd</sup> Kick-off: Online event by experts for participants - Awareness Raising	Date	3.02.2022
3	Closing/networking workshop	Date	End of March 2022
4	Identification of innovation needs and investment plan	Start date	01.2022
		End date	03.2022

Each company supported receives 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

After the 1:1 assistance to the company during which the expert assessed the maturity as well as linear risks and circular opportunities for the company, the expert drafts at least one specific recommendation for a next step/specific pilot project and identifies potential partners/support organization for the realization of these steps/projects.

## Result

Companies assessed receive an individual evaluation with at least one individual recommendation.

1	1:1 assistance of 22 companies	Date	01.2022-03.2022
2	22 evaluation reports with innovation needs and investment plans handed out	Date	03.2022

## Indicators (KPIs) and monitoring

Progress of KPIs will be monitored during the 1:1 assistance as well as after individual company's pilot actions by a standardized questionnaire, asking for their self-assessed increase in Commitment level to CE implementation, Digital technologies awareness, Specific pilot project identified and their overall level of satisfaction with pilot activities.

KPI	Number of SMEs assisted	Identification of linear risks	Identification of circular opportunities	Commitment level to CE implementation	Digital technologies awareness	Level of satisfaction
Goal	22	100% of assisted companies identified a potential circular opportunity for their business	100% of assisted companies identified a potential circular opportunity for their business	On average Increase in level of commitment	On average Increase in level of digital technology awareness	Level of satisfaction of at least 8 (out of 10)
Evaluation method	1:1 assistance received	Result of check for linear risks and circular opportunities	Result of check for linear risks and circular opportunities	questionnaire	questionnaire	questionnaire

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
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Dissemination level:	<b>CO = confidential</b>
Revision:	<b>DRAFT 02</b>
Due Date:	<b>November 2021</b>
Date of submission:	<b>December 2021</b>

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## Overview of the local pilot action – UPPER AUSTRIA (Biz up)

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**

We are going to give extra points to the SMEs which are focusing on the textile and electronics sector. However, since we have to work with 20 SMEs, we will leave it sector open, which means that even SMEs that do not work in those specific sectors can be part of the pilot if there is space for them.

The CE approach we are focusing on is value recovery, however we will also include the circular design approach slightly within the pilot, as it is essential for an optimal value recovery. Often the argument comes up that a proper value recovery is only possible when the product itself had a circular design in the first place.

- **Methodology**

3 Modules shall serve the proper training for our SMEs. The modules are structured as following:

### **MODULE 1 - Raise Awareness for CE supported by digitalization (community building)**

**Format:**

Networking event/(online) workshop

2 – 3 h

**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)

Q&A + discussion

Forecast: what does Circular4.0 offer the participating companies?

Tools:

Regional best practice cases

### **MODULE 2 - Understanding the Business Case of CE and Finance & Investment**

**Format:**

- (Online) coaching for one company - 1:1 assistance
- 2-4 hours
- Handout and possibly reference to external experts (establish contact)
- Consultation

**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
- Specific funding options (Finance)
- Typical challenges with circular business models, product service systems and pre-

- financing (e.g. via expert lecture) (Finance)
- Presentation of the EU taxonomy and its implications for SMEs (Finance)

#### **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

#### **Tools (Finance)**

- 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

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

#### **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

- **Expected results**

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

The main benefit for the SMEs is to raise awareness of the opportunities of circular economy through information events at the beginning. With that we introduce the SMEs into the whole world of circular economy and with best practices we state how business have been introduced before and successfully implemented circular strategies already. Within the 1:1 consulting we provide explicit business model canvas and digital maturity assessments for the SMEs in order to state their current challenges but also possible opportunities. Within the last workshop together with all participants we will use design thinking techniques to elaborate possible next steps and measures in order to become more circular and support the transition with means of digitalization.

## 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

### **5. Selection/identification of SMEs**

We send out a call for interest to attract SMEs that want to apply for the Circular4.0 pilot. Together with that the interested companies get application templates from us in order to give all the relevant information so that we can guarantee a transparent selection process. Afterwards we let them sign a letter of commitment so that they will be part of the whole pilot.

### **6. Thematic workshops/seminars**

See the Modules 1-3

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

See Modules 1-3

### **8. 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

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 ...	Date	
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3	Example: 25 CE+digital maturity assessments of SMEs	Date	
n		Date	

## 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).

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		

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.T3.2.3 Local actions to implement CE Value recovery approaches with digitalisation processes

Reporting on local pilot actions – Umweltcluster Bayern (UCB)

Author: Dr. Eva Schichl, PP14 – Umweltcluster Bayern

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# 1. Introduction

The purpose of the project and goal of the pilots was the awareness creation and innovation creation of circular economy topics in combination with digitalization. Within the frame of the pilots the aim was to find SMEs and other organisations, that can be taught into the transition to a more circular and sustainable business. Many companies feel the urge to change their current business models into more circular and sustainable ones because of upcoming pressure from regulations but also from the current resource market crisis. Still, companies struggle to transform due to a lack of guidance. Therefore, within CIRCULAR4.0 we focused on finding these companies that are ready to change and guide and assist them in the first steps towards a more sustainable, digital and circular business model. To do so, we have provided circular assessment tools and digital maturity tools for the companies to find out their current state of the art and performance in both regards. We provided a 1:1 assistance to find and develop solutions and innovations that could support the companies in their process of becoming more digital and circular.

The local actions have been taken place online, due to the COVID-19 restriction. Originally it was planned to create higher value with physical meetings and get together, especially for the 1:1 assistance, however, from autumn on a national lockdown was restricted again and hence we had to change our plans into online formats. Therefore, the assistance was held online via Zoom or MS Teams.

The present deliverable displays for the local pilot action in Bavaria

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

## 2. Local pilot actions in Bavaria (UCB) - Overview

### Local context and CE approach

The pilot focuses manufacturing SMEs in Bavaria including especially manufacturer in environmental technologies due to the membership structure of UCB. This is a focus, not a limitation. All other companies were invited to express their interest. The selection was made based on the analysis in WPTI but also on the characteristics of existing and developed tools. The tool “Check for linear risks and circular opportunities” that will mostly be used is targeted towards manufacturing companies.

The CE approach originally foreseen for UCB is value recovery. The selection was made based on our membership structure, including many waste-management and recycling companies. We do not see any added value in the focus on an approach. The idea of the circular economy is to turn away from linear and silo thinking. We also do not want to impose a specific approach on companies on the first hand. They should be free to decide which approach they deem the most important in their individual situation. Due to the low level of maturity of the topic with most Bavarian SMEs we need companies to start off from the basics and therefore a holistic approach to understanding CE is necessary, including all CE approaches.

### Methodology

SMEs based in Bavaria, preferably from the manufacturing sector, are invited to apply. The pilot is aimed at managing directors and executives of SMEs. The limited number of participants (22

as per AF) is admitted by the principle “first come, first served”, documented via an online application form.

**1. Initial needs assessment**

Applicants are contacted and invited to a 30 mins online initial conversation, understanding their individual needs and expectations.

**2. Kick off workshop: Raise awareness**

Next step is an online kick-off event and workshop to raise awareness on Circular Economy and digitalization as an enabler, to which all participants who have applied until the day before are invited. We decided to do two rounds of application phases and kick off workshops in order to reach the relevant number of SMEs. Application was then open three more months for the 1:1 assessment without organizing another kick-off workshop. Participants were invited to watch the kick-off recording and have a look at the material at TalentLMS.

**3. Phase of self-learning & 1:1 assistance (check for linear risks and circular opportunities)**

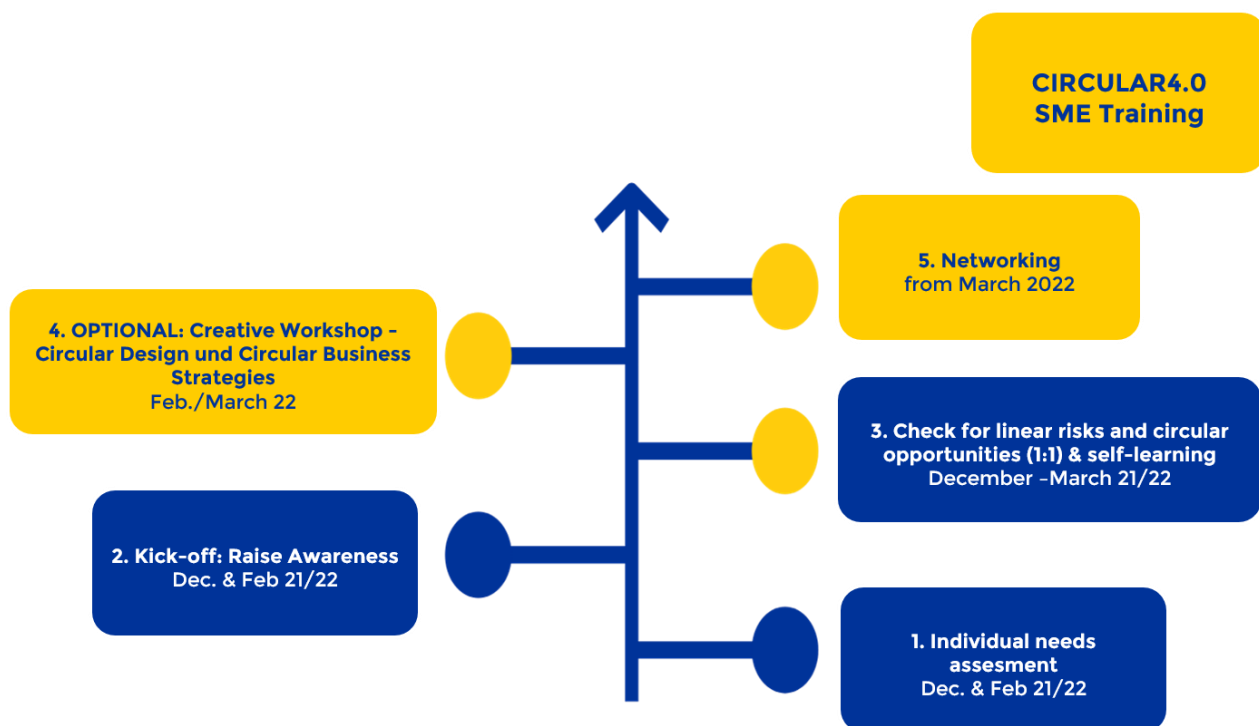
As a follow up of the kick-off workshop, appointments for 1:1 assistance are organized with each participating company and our external experts Dr. Sonja Eser as well as/or Andreas Jenne. Additionally, SMEs are invited to self-study CAT2.0 on the online learning platform Talent LMS. The 1:1 assistance appointment can be held online or in person at the individual company. The tool “Check for linear risks and circular opportunities” will identify circularity as well as digital maturity and potential during the 1:1 assistance. This tool is selected due to its low-level entry barrier and no need for specific company data. It best suits the needs of SMEs in Bavaria who are at an early stage of adopting Circular Economy principles. In case the tool does not fit the individual company's needs, another tool from the CIRCULAR4.0 toolbox would have been chosen. This was not the case.

**4. *Optional: Creative workshop with teams of each company - Circular Design und Circular Business Strategies***

Depending on budget availability and individual company's needs and maturity we plan to offer selected companies the possibility for a Circular Design und Circular Business Strategies workshop with several employees/executives and even partners along the supply chain. This option was not realized due to a lack of interest of companies but also due to COVID restrictions in early 2022 as most interested companies would have wanted to do an inhouse workshop, which was not possible to realize, then.

**5. Kick off regular SME Networking**

At the end of the pilot phase, we wanted to initiate a network meeting with all assisted SMEs, discussing lessons learned, next individual steps planned and a platform for networking with peers. So far we have not found a common interest in companies to do so. There seems to be a “caution” to exchange with others about their experience.



## Expected results

There are at least three very clear benefits for participating SMEs:

1. individual circular opportunity and risk analysis including circular & digital maturity assessment with concrete recommendations for action
2. access to Talent LMS learning platform with numerous examples of best practice
3. exchange with CE experts and other participants

We expected an increase in CE awareness and an increase in understanding of CE as an innovation opportunity. Additionally, SMEs can expect an understanding of individual linear risks and circular opportunities as well as a specific recommendation for next action (identifying low hanging fruits or gaps in their overall CE strategy, depending on the CE or digital maturity of the SME). Additionally, we expected to create a group of peer companies, willing to take action transforming their business model, business processes or their product towards circularity.

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

The following activities were implemented to raise interest in SMEs and to involve them in the pilot action:

### Webinar series on Circular Economy

Already in October 2020, we started a monthly webinar series on “Circular Economy” together with all Bavarian Chambers of Commerce gathering interested stakeholders and SMEs from all over Bavaria and informing them on multiple principles of Circular Economy with an expert talk and at least one best practice example presenting their case and their experience.



## Public call for Expression of Interest

### Circular Economy & Digitalisierung

## Wie zukunftsfähig ist Ihr Unternehmen?

Machen Sie mit bei unserer Pilotaktion und erhalten Sie kostenlose Unterstützung auf Ihrem Weg zum zirkulären & digitalen Unternehmen.

Bewerben Sie sich bis zum **8. Dezember 2021** und profitieren Sie:

- 1.** Individuelle Chancen- und Risikoanalyse mit konkreten Handlungsempfehlungen
- 2.** Zugang zu Lernplattform mit zahlreichen Best-Practice-Beispielen
- 3.** Austausch mit Expert\*innen und anderen Teilnehmer\*innen

Bewerben können sich KMU mit Sitz in Bayern, bevorzugt aus dem produzierenden Gewerbe. Unsere Pilotaktion richtet sich an Geschäftsführer\*innen und Führungskräfte. Die Anzahl an Plätzen ist begrenzt, es gilt „First Come – First Served“.

**Deshalb jetzt bewerben:**

[www.umweltcluster.net/circular4.0](http://www.umweltcluster.net/circular4.0)

Interreg  
Alpine Space  
Circular4.0

UmweltCluster  
Bayern



CIRCULAR4.0 is cofinanced by the  
European Regional Development Fund  
via Interreg Alpine Space



## Zirkulär & Digital

### Einstieg in die Circular Economy für KMU in Bayern

Der Übergang zu einer nachhaltigen Circular Economy ist aus Gründen des Klima- und Ressourcenschutzes alternativlos. Die lineare Wirtschaft führt über kurz oder lang in eine Sackgasse.

Zirkuläre Strategien, Produkte und Geschäftsmodelle lassen sich aber oft nur mit digitalen Prozessen und Technologien realisieren. Daten über die genaue Spezifikation und den Verbleib von Produkten müssen verfügbar und nachverfolgbar sein. Ist Ihr Unternehmen darauf vorbereitet?

Im Rahmen des Interreg Projekts CIRCULAR4.0 werden kleine und mittelständische Unternehmen in Bayern dabei unterstützt, die Einführung zirkulärer Wertschöpfung mit Hilfe digitaler Technologien voranzutreiben. Der erste Schritt dabei ist, die eigenen linearen Risiken und zirkulären Chancen zu ermitteln.

Profitieren Sie von unserem kostenlosen Unterstützungsangebot und lassen Sie sich von uns und unseren Expert\*innen bei diesem ersten Schritt hin zur Circular Economy begleiten.



Ansprechpartnerin bei  
Fragen zum Programm:

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Gestaltung: IDF Kreativagentur



We have invited companies to participate in an open call on our website (design above), which was shared in several newsletters, special mailings and direct mailings to members. The call was shared on social media (Linkedin, Facebook, Instagram) and the reach of the call was extended



by UCB's network (business support organisations, observer, regional innovation hubs) on their respective websites and newsletters (e.g., newsletter of the Bavarian Chamber of Commerce in Upper Bavaria). The open call was repeated several times (in November, December and February) as capacity of assisted SMEs had not been reached. Find a detailed documentation of communication efforts in Annex 1.

#### Direct contact with businesses & business support organizations (as multipliers)

In addition to the above, considering the insufficient number of companies registered through the public call, direct contacts towards individual member companies of UCB were initiated.

## 4. Implementation report

According to the overall methodology defined for the pilot actions, the following activities were implemented:

- Selection/identification of SMEs
- Raise awareness: Thematic workshops/seminars
- Circular CE capability/potentiality and Digital Maturity Assessment of SMEs
- Identification of innovation needs and investment plan

### Selection/identification of SMEs

This first activity was aimed at identifying a sufficient number of manufacturing (environmental technologies) SMEs to take part in the pilot.

1	Selection/identification of SMEs	Start date	11.2021
		End date	05.2022
<p>SMEs based in Bavaria, preferably from the manufacturing sector, are invited to apply. The pilot is announced on UCB as well as our observer's website. Communication is supported by several partnering business support organizations (e.g., Bavarian Chambers of industry and commerce, local business support organization, Bayern Innovativ, etc). Companies headquartered or with a branch in Bavaria are admitted by the principle "first come, first served", documented via an online application form. In an initial conversation, individual needs and expectations are assessed and a recommendation to participate is made in collaboration with the expert who decides about the applicability of the available tools for the individual company.</p>			
<p><b>Result</b></p> <p>Reached 11 interested companies to participate in the pilot action. Meeting only those individually that have not previously been members of the cluster due to a lack of time towards the end of the pilot phase.</p>			
1	Introducing the pilot actions to SMEs at a webinar on Circular Economy, hosted by Umweltcluster Bayern and all Bavarian Chambers of Commerce and Industry	Date	9.11.2021

	Introducing the pilot actions to SMEs at a webinar on Circular Economy, hosted by Umweltcluster Bayern and all Bavarian Chambers of Commerce and Industry	<b>Date</b>	7.12.2021
2	Meeting 6 companies: Getting to know and needs assessment	<b>Date</b>	11.2021 - 03.2022
<b>Deviations and corrective measures, including additional activities</b>			
1	The number of potential beneficiaries reacting to the open call for pilots did not allow for a limitation of the participants to pre-defined sectors. UCB supported all candidate SMEs upon validation of their relevance to the overall objective of the project, i.e. an activity potentially suitable for the value recovery business model.		
2	Individual Meetings pre-kick-off/pre-assessment only for 6 out of 11 companies as it was not deemed necessary for member companies and due to lack of time between application and assessment meeting with Dr. Sonja Eser.		
3	Due to the extension of the project and the lack of interest from SMEs in Bavaria, the open call was repeatedly extended up until May (was intended to close in January, then February, then March), to enable a continuous intake of interested businesses, trying to reach KPIs.		

2	Thematic workshops/seminars	Start date	12.2021
		End date	02.2022
<p>The online kick-off event and workshop is used to raise awareness on Circular Economy and digitalization as an enabler. All companies who have applied until the day before are invited. We decided to do two rounds of application phases and kick off workshops in order to reach the relevant number of SMEs. Kick off no.1 took place on December 9<sup>th</sup> 2021. Kick off no.2 took place on February 3<sup>rd</sup> 2022 (duration of 3 hours). Three experts were addressing CE and digitalization from different angles. 1) Why CE? (TWG expert Andreas Jenne) 2) How does CE work and how can digitalization support it? (Dr. Sonja Eser) 3) Which digital technologies enable which CE processes/business model incl. specific examples (Lydia Bühler, Mittelstand4.0 – publicly funded institution). In the workshop part, experts used <b>trend cards from CIRCit Norden workbook (part of the toolbox)</b> to activate a discussion between participating companies, reflecting the relevance of CE and digital technologies for their own companies.</p> <p>Additionally, SMEs were invited to self-study CAT2.0 on the online learning platform Talent LMS.</p>			
<b>Result</b> <p>7 companies attended the seminars and took home new insights on Circular Economy and the meaning for their own business. Their awareness on the opportunities within circular business models increased and they are aware of the</p>			

regulative EU instruments EU Green Deal and Circular Economy Action Plan.			
1	1 <sup>st</sup> Kick-off: Online event by experts for participants - Awareness Raising	Date	9.12.2021
2	2 <sup>nd</sup> Kick-off: Online event by experts for participants - Awareness Raising	Date	3.02.2022
<b>Deviations and corrective measures, including additional activities</b>			
1	Only 7 companies participated in the kick-off events out of which 2 decided not to proceed with the 1:1 assistance as it was not suitable for their form of business (consulting companies).		
2	A closing event/networking workshop was not deemed viable due to the focus on gaining further companies to participate in the pilot actions. It was therefore postponed and will be target after the closure of the project.		

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

The third activity was dedicated to the assessment of the beneficiaries' situation. It was performed for all selected SMEs.

3	Circular CE capability/potentiality and Digital Maturity Assessment of SMEs	Start date	01.2022
		End date	06.2022
<p>As a follow up of the kick- off workshop, appointments for 1:1 assistance are organized with each participating company and our external experts Dr. Sonja Eser as well as/or Andreas Jenne. The 1:1 assistance appointment were all held online due to the increase in COVID19 cases in early 2022. The tool <b>“Check for linear risks and circular opportunities”</b> was used to identify circularity as well as digital maturity and potential during the 1:1 assistance. This tool was selected due to its low-level entry barrier and no need for specific company data. It best suits the needs of SMEs in Bavaria who are at an early stage of adopting Circular Economy principles. The tool was a good fit for all 11 companies and there was no need to use a different tool from the toolbox.</p>			
<b>Result</b>			
11 documented CE and digital maturity assessments.			
1	Ongoing 1:1 meetings with companies for the assessment	Date	01.2022 – 06.2022
Deviations and corrective measures, including additional activities			

1	Only 11 companies (10 SMEs, 1 enterprise) were able to be assessed due to a lack of interest in the activity by Bavarian companies in our network.
2	The extension of the project led to an extension of the assistance period, which lead to further 1:1 assistances than if the pilot period would have been closed by March 2022.

## Identification of innovation needs and investment plan

4	Identification of innovation needs and investment plan	Start date	01.2022
		End date	06.2022
<p>Each company supported receives 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)</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><li>- With a time horizon from 6 months up to 1 year</li></ul> <p>After the 1:1 assistance to the company during which the expert assessed the maturity as well as linear risks and circular opportunities for the company, the expert drafts at least one specific recommendation for a next step/specific pilot project and identifies potential partners/support organization for the realization of these steps/projects.</p>			
<b>Result</b> <p>11 companies assessed received an individual evaluation report in a standardised template drafted by Dr. Sonja Eser. It included at least one individual and specific recommendation for action.</p>			
1	1:1 assistance of 11 companies	Date	01.2022-06.2022
2	22 evaluation reports with innovation needs and investment plans handed out	Date	03.2022
Deviations and corrective measures, including additional activities			

1	Only 11 companies (10 SMEs, 1 enterprise) were able to be assessed and received an individual report with recommendations due to a lack of interest in the activity by Bavarian companies in our network.
2	The extension of the project led to an extension of the assistance period, which lead to further 1:1 assistance than if the pilot period would have been closed by March 2022.

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

The following deviations from the plan did occur:

- Extension of the selected SMEs to businesses identified through direct contacts.
- Extension of the sectors to some non-planned ones.

All other deviations can be found directly in the description of the implementation above (Chapter 4):

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

The communication activities were the ones performed for the identification of SMEs (see chapter 3 and Annex 1).

## 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
<b>Goal</b>	<i>Reach at least 22SMEs 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>	10 SMEs in 1:1 consultancy + 1 enterprise; 2 additional SMEs in raise awareness/kick off events (Step 2 of	All 11 companies received specific 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

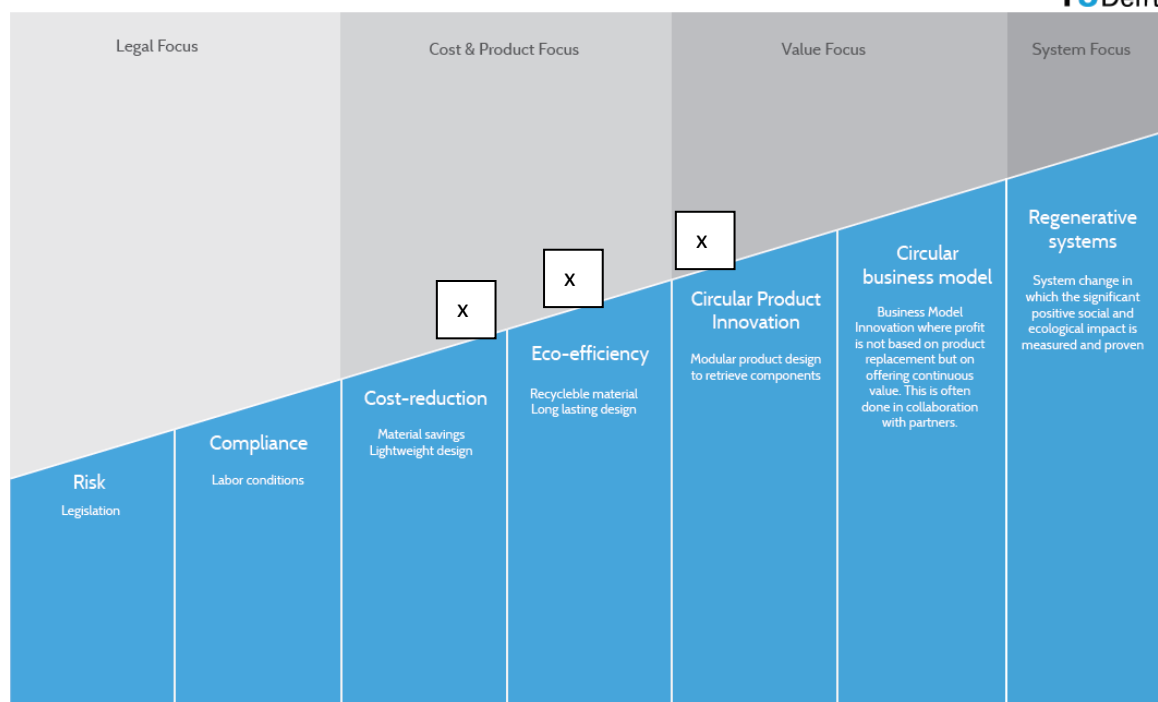
	Implementati on)	Participants in the kick-off event received detail information on CE in general + best practice examples.	estimated in the short timeframe of the pilot.
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CE maturity assessment over all SMEs consulted through Dr. Sonja Eser via UCB, AWS and Innovation Salzburg:

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

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

**innoboost**  
TU Delft



## Lessons learnt

As all 11 assessments were performed by our external expert, Dr. Sonja Eser, she summarized the experiences and lessons learnt during consulting the SMEs. Her experiences include working with SMEs from Umweltcluster Bayern but also Salzburg Innovation and AWS:

### Actual problems SMEs are currently facing:

- 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:**

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

### **Status Quo**

#### **Circular Economy**

- Concept of Circular Economy is quite unknown: This can be confirmed by the Project partner as this also seems to be a reason for the limited number of participants. Communicating a support program for SMEs on becoming more circular and digital was difficult and generated very little interest. Participation numbers and characteristics in our webinar series also confirmed that the topic is relevant for many stakeholder groups but those businesses attending were usually larger enterprises and not SMEs.
- 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**

- long-life 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 long-life 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

- 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:

- 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!

### Own first evaluation

- Companies need very specific guidance for their products/equipment/processes/material selection/product design.
- Got from all companies best feedback that the check was valuable, helped to rethink, think about more sustainability, think about issues they have not developed yet etc.
- The check 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.
- Forgot to include topics for biomass and biological cycle



## 8. Annex

### Annex 1 – Communication efforts on Local Pilot Actions

1<sup>st</sup> Application Round – November 2021

#### UCB Website – Open Call

The image shows two screenshots of the UmweltCluster Bayern website. The top screenshot is the homepage, featuring a navigation bar with links like 'UMWELTCLUSTER BAYERN', 'PROJEKTE', 'LEISTUNGEN', 'ERFOLGE', 'LÖSUNGEN', and 'MITGLIEDER'. A large banner at the top right says 'LEUCHTTURMPROJEKTGEWINNER 2021 - DER UMWELTCLUSTER BAYERN GRATULIERT BAUER RESOURCES'. Below this, there's a section titled 'Netzwerk der bayerischen Umweltwirtschaft' and a search bar. The bottom section shows 'Aktuelle Themen' with various news items.

The bottom screenshot is a specific page titled 'Aktuelles - Umweltcluster Bayern' with the main heading 'KMU für EU-Pilotprogramm gesucht!'. It discusses the 'Circular Economy' and the 'Interreg Alpine Space Circular4.0' project. The page includes a search bar, a section for 'IMMER AKTUELL INFORMIERT!' with a newsletter sign-up, and a section for 'WERDEN SIE MITGLIED IM UMWELTCLUSTER BAYERN' with a membership sign-up. The footer features the 'Interreg Alpine Space Circular4.0' logo.



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 Bewerben Sie sich bis 31.01.2022

Startseite - Umweltcluster Bayern

## Netzwerk der bayerischen Umweltwirtschaft

Der Umweltcluster Bayern ist das Netzwerk der bayerischen Umweltwirtschaft. In enger Zusammenarbeit mit Politik, Forschung, Wissenschaft und Wirtschaft konzentriert sich seine Arbeit auf Transfer, Bildung und Verdichtung von Kooperation. Seine zentrale Aufgabe ist die Vernetzung von Unternehmen und Forschungseinrichtungen. Ziele der Vernetzung sind die Stärkung und der Ausbau der bayerischen Wirtschaft und des Mittelstandes.

Der Umweltcluster bündelt die Kompetenzen aus den Bereichen

- Abfall & Recycling
- Ressourceneffizienz & Stoffstrommanagement
- Wasser & Abwasser
- Luftreinhaltung
- Alternative Energieerzeugung
- Boden- & Altlastensanierung

Suchen ...

**Ansprechpartnerin**  
  
 Babine Carbone  
 Teamassistentin  
 Tel.: +49 821 456789-0  
 E-Mail:

Aktuelle Themen



**Spitzenprojekte gesucht: Bewerben Sie sich bis Leuchtturmprojekt 2022!**

Der Umweltcluster Bayern sucht wieder Projekte mit Visionen, innovativen neuen Ideen und Produkten mit Potential, die einen vorbildlichen Beitrag zur...



**Zirkulär & Digital – Einstieg in die Circular Economy für...**

Machen Sie mit bei unserer Pilotaktion und erhalten Sie kostenlose Unterstützung auf Ihrem Weg zum zirkulären & digitalen Unternehmen.



**Zirkulär & Digital im Bau**

Fortführung des Online-Wissensaustausch für Kommunen im Rahmen des BU Interreg Projekts: CIRCULAR4.0 organisiert der Umweltcluster Bayern gemeinsam mit den zwei weiteren...



**Die Sieben Prinzipien der Circular Economy in Bayern**

Die Online-Seminarreihe „Die Sieben Prinzipien der Circular Economy“ – eine Kooperation der bayerischen Industrie- und Handelskammern (IHKs) mit dem Umweltcluster...

## Registration on UCB Website



[DE](#) | [EN](#)

[Veranstaltungen](#) | [Kontakt](#) | [Mitglieder-Login](#)

UMWELTCLUSTER BAYERN   PROJEKTE   LEISTUNGEN   ERFOLGE   LÖSUNGEN   MITGLIEDER

Aktuelles - Umweltcluster Bayern

## Zirkulär & Digital – Einstieg in die Circular Economy für KMU in Bayern

Machen Sie mit bei unserer Pilotaktion und erhalten Sie kostenlose Unterstützung auf Ihrem Weg zum zirkulären & digitalen Unternehmen.

**Bewerben Sie sich bis zum 8. Dezember 2021 und profitieren Sie:**

1. Individuelle Chancen- und Risikoanalyse mit konkreten Handlungsempfehlungen
2. Zugang zu Lernplattform mit zahlreichen Best-Practice-Beispielen
3. Austausch mit Expert\*innen und anderen Teilnehmer\*innen

Bewerben können sich KMU mit Sitz in Bayern, bevorzugt aus dem produzierenden Gewerbe. Unsere Pilotaktion richtet sich an Geschäftsführer\*innen und Führungskräfte. Die Anzahl an Plätzen ist begrenzt, es gilt „First Come – First Served“.

**Ablauf**

- **Bewerbungsphase: bis 8. Dezember 2021**
  1. Kick-off am 9. Dezember 2021, 10-13 Uhr, Online via Zoom „Chancen der Circular Economy durch Digitalisierung“ (ggf. weitere Bewerbungsrunden mit weiterem Kick-off, Unterstützungsphase läuft bis Ende März 2022)
- **1:1 Unterstützungsphase: 10. Dezember - 31. März**

„Check auf lineare Risiken und zirkuläre Chancen“ - Individuelle Risiken- und Potenzialanalyse für Ihr Unternehmen im persönlichen Gespräch, Umfang: ½ Tag, Online oder vor Ort in Ihrem Unternehmen

Ausführliche Informationen finden Sie [hier](#)

**Teilnahme und Teilnahmegebühren**

Teilnehmen können KMU mit Sitz in Bayern, bevorzugt aus dem produzierenden Gewerbe. Das Programm richtet sich an Geschäftsführer\*innen und Führungskräfte. Die Teilnahme ist kostenfrei.

Suchen ...

**IMMER AKTUELL INFORMIERT!**  
 Unser Umweltcluster-Newsletter informiert Sie über aktuelle Themen aus der Umweltwirtschaft.  
 >>>

**WERDEN SIE MITGLIED IM UMWELTCLUSTER BAYERN**  
 Werden Sie Mitglied und profitieren Sie von der Stärke des Netzwerks und den exklusiven Kontakten...  
 >>>

## Veranstalter

Umweltcluster Bayern im Rahmen des EU Interreg Alpenraum Projekts "CIRCULAR4.0"

## Bewerbung

Bewerben Sie sich bis zum 8. Dezember 2021 für eine Teilnahme an der ersten Runde. Der Kick-off findet am 9. Dezember von 10-13 Uhr online statt (ggf. weitere Bewerbungsrunden, Unterstützungsphase läuft bis Ende März 2022).

Richten Sie bitte Ihr Interesse an der Teilnahme oder Fragen zum Programm per **E-Mail** an Dr. Eva Schichl oder füllen Sie das folgende Formular aus:

## EU-Pilotprogramm im Rahmen des Projektes CIRCULAR4.0

**Pflichtfeld \***

Unternehmen *	<input type="text"/>
Name *	<input type="text"/>
Position	<input type="text"/>
E-Mail-Adresse *	<input type="text"/>
Telefonnummer	<input type="text"/>
Adresse	<input type="text"/>
PLZ / Ort *	<input type="text"/>
KMU (unter 250 Mitarbeitende UND ≤ €50m Umsatz ODER ≤ €43m Bilanzsumme) *	<input type="text" value="Wählen Sie einen Wert"/>
Bitte senden Sie mir weitere Informationen zu	<input type="text" value="Wählen Sie einen Wert"/>
Ich möchte gerne am Pilotprogramm teilnehmen	<input type="text" value="Wählen Sie einen Wert"/>
Fragen / Anmerkungen	<input type="text"/>
<input type="button" value="Abschicken"/>	

Mit Absenden der eingegebenen Daten akzeptieren Sie die Datenschutzerklärung des Trägervereins Umwelttechnologie Cluster Bayern e.V. Mit Absenden des Formulars geben Sie Ihre Einwilligung zur Speicherung und Verarbeitung Ihrer personenbezogenen Daten und zum Erhalt von Informationen des Umweltcluster Bayern. Die Einwilligungserklärung erfolgt freiwillig und kann jederzeit schriftlich per E-Mail, Fax oder telefonisch widerrufen werden. Ihre Daten werden nicht an Dritte weitergegeben.

Die Datenschutzerklärung können Sie [hier](#) einsehen.

Die Allgemeinen Geschäftsbedingungen können Sie [hier](#) einsehen.

## 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), die häufig mit Sharing und Leasing in Verbindung stehen, aber auch Themen wie Wiederverwendung und Wiederaufarbeitung fokussieren. Das Projekt verspricht Unternehmen aus der Region Information und Unterstützung in Anbetracht verschiedener Konzepte der Kreislaufwirtschaft (zirkuläres Produktdesign, optimierte Produktnutzung und Rückgewinnung von Wertstoffen am Ende der Produktlebensdauer).

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

**Interreg**  
Alpine Space  
Circular4.0



Trägerverein Umwelttechnologie-Cluster Bayern e.V.		Service	Partner	 
Am Mittleren Moos 48 86167 Augsburg Tel.: +49 821 455 798 - 0 Fax: +49 821 455 798 - 10 info@umweltcluster.net	Impressum Datenschutzerklärung AGB Bildnachweis Datenschutzrechtliche Einwilligungserklärung	Aktuelles Download Mitglied werden Newsletter-Anmeldung Mediencenter	Strategische Partner Service Partner	

## LinkedIn

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Start Ihr Netzwerk Jobs Nachrichten

**Sichere Veranstaltungen - Mobiles PCR-Labor buchen und ohne Wartezeiten fei**

**Umweltcluster Bayern**  
388 Follower:innen  
Vollständiges Profil

**Umweltcluster Bayern**  
388 Follower:innen  
1 Tag

KMU für EU-Pilotprogramm gesucht!

Was bedeutet Circular Economy für mein Unternehmen? Welche Risiken und welche Chancen bestehen? Wie und wo fange ich an?

Im Rahmen des Interreg Projekts CIRCULAR4.0 werden kleine und mittelständische Unternehmen in Schwaben gesucht, die mit Hilfe digitaler Technologien die Einführung zirkulärer Wertschöpfung in ihrem Unternehmen vorantreiben wollen.

Ausgewählte KMU nehmen an einem maßgeschneiderten Trainingsprogramm mit internationalen Expert\*innen teil.

Bewerben Sie sich bis zum 8. Dezember 2021 unter [www.umweltcluster.net](http://www.umweltcluster.net)

#unternehmerinnen #schwaben #mittelstand #kmus #unternehmertum #circulareconomy

4

Reaktionen

Gefällt mir Kommentar Teilen Senden

Suche

Start Ihr Netzwerk Jobs Nachrichten Mitteilungen Sie Mehr Premium neu aktivieren

**Umweltcluster Bayern** Ansicht für Super-Admins [Mitgliederansicht](#)

Start Inhalte Analysen Aktivitäten

0 0 %  
Klicks auf den eigenen Button

Veröffentlicht von Annette Dobesch • 18.11.2021 Gepinnt

**Umweltcluster Bayern**  
427 Follower:innen  
3 Wochen

Circular Economy & Digitalisierung  
Wie zukunftsfähig ist Ihr Unternehmen?

Machen Sie mit bei unserer Pilotaktion und erhalten Sie kostenlose Unterstützung auf Ihrem Weg zum zirkulären & digitalen Unternehmen.

Bewerben Sie sich bis zum 8. Dezember 2021 und profitieren Sie:

1. Individuelle Chancen- und Risikoanalyse mit konkreten Handlungsempfehlungen
2. Zugang zu Lernplattform mit zahlreichen Best-Practice-Beispielen
3. Austausch mit Expert\*innen und anderen Teilnehmer\*innen

Deshalb jetzt bewerben:  
[www.umweltcluster.net](http://www.umweltcluster.net)

#digitalisierung #circulareconomy

Dr. Viktor Klein und 7 weitere Personen

Gefällt mir Kommentar

Admin-Tools

**Circular Economy**  
Advisor at...

**Jan Patzer**  
Co-Founder Crafting Future | Nachhaltige...

[Einladen](#)

Weitere Kontakte einladen

Verwalten

Events

Circular Bioeconomy-Reihe  
Do, 21. Okt., 09:30 MESZ  
Mit digitalen Prozessen Kreisläufe...  
Di, 5. Okt., 14:00 MESZ  
Zirkuläre Geschäftsmodelle...  
Do, 15. Juli, 14:00 MESZ  
[Alle Events anzeigen](#)

Hashtags

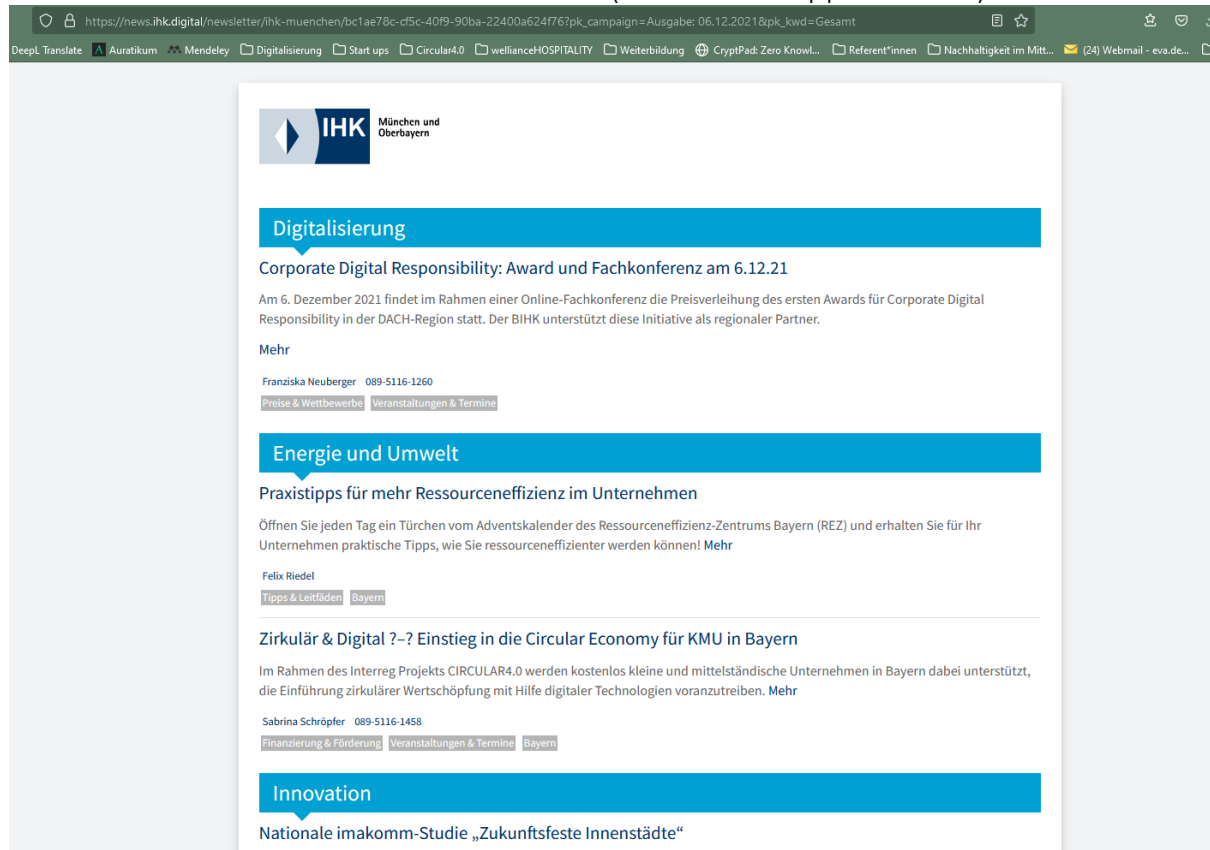
#abwassertechnik  
14 Follower:innen

#recycling  
47.518 Follower:innen

#kreislaufwirtschaft  
669 Follower:innen

[Beiträge zu Umweltcluster Bayern anzeigen](#)

## Newsletter Bavarian Chamber of Commerce (Munich and Upper Bavaria)



**Digitalisierung**

**Corporate Digital Responsibility: Award und Fachkonferenz am 6.12.21**

Am 6. Dezember 2021 findet im Rahmen einer Online-Fachkonferenz die Preisverleihung des ersten Awards für Corporate Digital Responsibility in der DACH-Region statt. Der BIHK unterstützt diese Initiative als regionaler Partner.

**Mehr**

Franziska Neuberger 089-5116-1260  
[Preise & Wettbewerbe](#) [Veranstaltungen & Termine](#)

**Energie und Umwelt**

**Praxistipps für mehr Ressourceneffizienz im Unternehmen**

Öffnen Sie jeden Tag ein Türchen vom Adventskalender des Ressourceneffizienz-Zentrums Bayern (REZ) und erhalten Sie für Ihr Unternehmen praktische Tipps, wie Sie ressourceneffizienter werden können! **Mehr**

Felix Riedel  
[Tipps & Leitfäden](#) [Bayern](#)

**Zirkulär & Digital ?-? Einstieg in die Circular Economy für KMU in Bayern**


Im Rahmen des Interreg Projekts CIRCULAR4.0 werden kostenlos kleine und mittelständische Unternehmen in Bayern dabei unterstützt, die Einführung zirkulärer Wertschöpfung mit Hilfe digitaler Technologien voranzutreiben. **Mehr**

Sabrina Schröpfer 089-5116-1458  
[Finanzierung & Förderung](#) [Veranstaltungen & Termine](#) [Bayern](#)

**Innovation**

**Nationale imakomm-Studie „Zukunftsfeste Innenstädte“**

## Website Regional Business Support Organisation Ahoch3 (Augsburg and surroundings)



**WIRTSCHAFTS RAUM AUGSBURG**

info@region-a3.com +49 821 450 10-0

STANDORT IMMOBILIEN NACHHALTIGES WIRTSCHAFTEN INNOVATION FACHKRÄFTE ARBEITGEBER SERVICE

**Zirkulär & Digital - Einstieg in die Circular Economy für KMU**

Ein kostenloses, individuelles Unterstützungsprogramm für Unternehmen, die mit Hilfe digitaler Technologien die Einführung zirkulärer Wertschöpfung in ihrem Unternehmen vorantreiben wollen, bietet aktuell der Umweltcluster Bayern im Projekt Circular 4.0 an. In zwei Runden im Dezember und Januar können sich interessierte KMU für das individuelle Coaching bewerben.

Circular Economy heißt für Unternehmen, dass sie ihre Produkte und Dienstleistungen weiterdenken als nur bis zum Verkauf des Produkts. Die Idee: Qualitativ hochwertige Produkte werden durch gezieltes Produktdesign, aber auch durch geteilte Nutzung, durch Reparatur oder Wiederaufbereitung länger im Kreislauf geführt, bevor sie dem Recycling zugeführt werden. Dieses zirkuläre Denken eines Produkts ermöglicht ganz neue innovative Geschäftsmodelle abseits des reinen Verkaufs.

**Neues zirkuläres Geschäftsmodell: Der Wasserzähler als Service**

Der Wasserzählerhersteller Lorenz GmbH & Co. KG hat sich so auf ein ganz neues, zirkuläres Product-as-a-Service Geschäftsmodell umgestellt: Seine Wasserzähler gehen nach Ablauf des ersten Geschäftszyklus wieder an ihn zurück. Die Optimierung des Produktdesigns für die Wiederaufbereitung hat nicht nur zu einer massiven Reduzierung von Material- und Energieaufwand sowie Produktionskosten geführt, sondern gleichzeitig 10% mehr Arbeitsplätze im Unternehmen geschaffen. Dies ließ sich durch die Digitalisierung der Produktion und des Wasserzählers selbst realisieren.

Best-Practice-Beispiele wie diese zeigen, dass die Idee einer "Circular Economy" nicht nur für Konzerne, sondern auch für Mittelständler spannend und realisierbar ist. Analysen zeigen außerdem, dass zirkuläre Geschäftsmodelle wie „Equipment as a Service“ ein CO2-Einsparungspotenzial von bis zu 65% haben können!

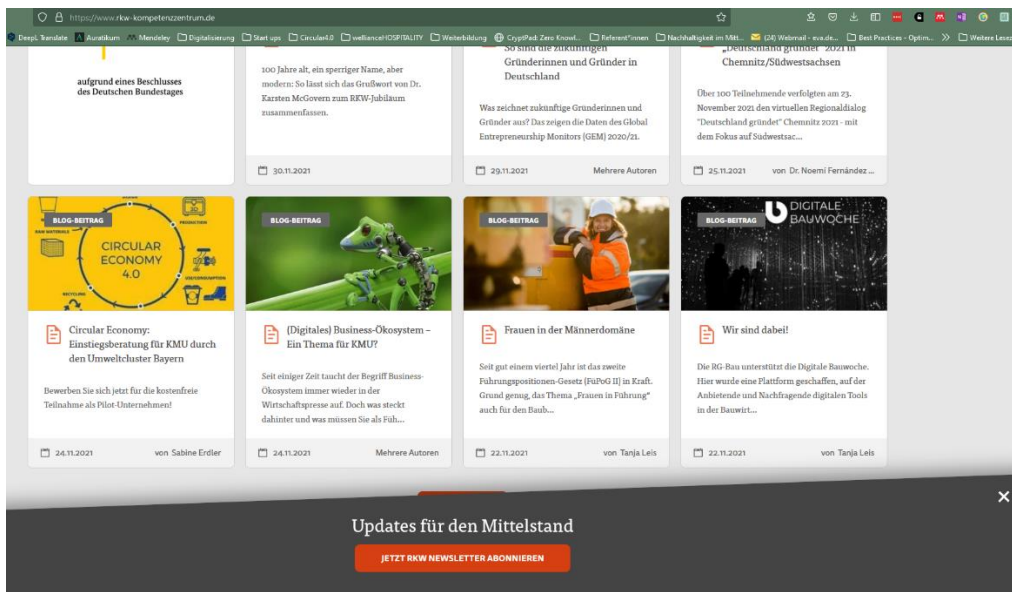
**Kostenloses Unterstützungsprogramm für KMU**

Interessierte KMU aus Bayern, die Ideen suchen, wie sie mit Hilfe digitaler Technologien die Einführung zirkulärer Wertschöpfung in ihrem Unternehmen vorantreiben wollen, haben aktuell dazu eine günstige Gelegenheit.

Unter dem Titel „Zirkulär & Digital - Das Unterstützungsprogramm für KMU in Bayern“ bietet der Umweltcluster konkrete, individuelle und kostenlose Unterstützung auf ihrem Weg zum zirkulären & digitalen Unternehmen an.



Open Call on RKW (Observer) website



## Informationen

Veröffentlicht: 24.11.2021  
Projekt: Smart!  
Verfasst von: Sabine Erdler

## Zusammenfassung

Bewerben Sie sich jetzt für die kostenfreie Teilnahme als Pilot-Unternehmen!

Sie sind hier: [Home](#) > [Aus der Praxis](#) > [Innovations-Blog](#) > 2021 > [Circular Economy: Einstiegsberatung für KMU durch den Umweltcluster Bayern](#)

Vom 9. Dezember 2021 bis 31. März 2022 unterstützt unser **Kooperationspartner Umweltcluster Bayern** im Rahmen des **Interreg Projekts CIRCULAR4.0** kleine und mittelständische Unternehmen (KMU) dabei, erste Schritte in Richtung zirkulärer Wertschöpfung zu gehen. Bayerische Unternehmen können sich ausführlich und individuell zu verschiedenen Konzepten der Kreislaufwirtschaft beraten lassen:

- zirkuläres Produktdesign
- optimierte Produktnutzung (innovative, zirkuläre Geschäftsmodelle)
- Rückgewinnung von Wertstoffen am Ende der Produktlebensdauer

### Inhalte und Umfang des EU-Programms für Pilot-Unternehmen

Expertinnen und Experten analysieren ausführlich die individuellen zirkulären Chancen und linearen Risiken der teilnehmenden Unternehmen und geben Empfehlungen zu ersten Umsetzungsschritten. Darüber hinaus erhalten teilnehmende Unternehmen Zugang zur Lernplattform mit zahlreichen Best-Practice-Beispielen und können sich mit anderen Betrieben austauschen.

### Teilnahme und Bewerbung

Das Projekt richtet sich an Geschäftsführende und Führungskräfte kleiner und mittlerer Unternehmen mit Sitz in Bayern, bevorzugt aus dem produzierenden Gewerbe. Die Teilnahme ist kostenfrei.

### Interessiert?

**Dann bewerben Sie sich bis zum 8. Dezember 2021 für eine Teilnahme an der ersten Runde!**

### Kontakt:

Dr. Eva Schichl  
Referentin Projekte/Manager Projects

Trägerverein Umwelttechnologie-Cluster Bayern e.V.

Am Mittleren Moos 48

86167 Augsburg

Telefon + 49 821 455 798-13

Telefax +49 821 455 798-10

Mobil +49 151 17515547

eva.schichl[at]umweltcluster.net

[www.umweltcluster.net](http://www.umweltcluster.net)

mittelständische Unternehmen

- ① Gesund digital arbeiten
- ② Die erste BAU ONLINE mit Beteiligung der RG-Bau im RIKW Kompetenzzentrum
- ③ Arbeits- und prozessorientiert digitalisieren
- ④ Die gewerbefreundliche Verwaltung
- ⑤ Von wegen Risikogruppe?!

# Interreg Alpine Space Circular4.0



Über das Projekt CIRCULAR4.0 - Digitale Technologien zur Unterstützung des Übergangs zur Kreislaufwirtschaft durch KMU im Alpenraum

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), die häufig mit Sharing und Leasing in Verbindung stehen, aber auch Themen wie Wiederverwendung und Wiederaufarbeitung fokussieren. Das Projekt verspricht Unternehmen aus der Region Information und Unterstützung in Anbetracht verschiedener Konzepte der Kreislaufwirtschaft (zirkuläres Produktdesign, optimierte Produktnutzung und Rückgewinnung von Wertstoffen am Ende der Produktlebensdauer).

### Förderprogramm und Projektlauzeit

CIRCULAR4.0 ist ein Projekt des EU-Programms Interreg Alpine Space. Das übergeordnete Ziel des Alpenraumprogramms ist es die Attraktivität und Wettbewerbsfähigkeit der gesamten Alpenregion durch gemeinsame, interregionale Aktivitäten zu steigern. Es wird durch den europäischen Fond für regionale Entwicklung (European Regional Development Fund) kofinanziert. Das Projekt hat eine Laufzeit von 01.10.2019 bis 30.06.2022.

### Konsortium und Partnerländer

Der Umweltcluster Bayern ist einer von 15 Projektpartnern aus 5 Ländern. Lead Partner: Tehnološki park Ljubljana d.o.o., Slowenien

#### Weitere Projektpartner:

- Technische Hochschule Rosenheim, Deutschland
- Austria Wirtschaftsservice Gesellschaft GmbH, Österreich
- Innovations- und Technologietransfer Salzburg GmbH, Österreich
- Business Upper Austria - OÖ Wirtschaftsagentur GmbH, Österreich
- Veneto Innovazione S.p.A., Italien

2<sup>nd</sup> Application Round – from December 2021 (after 1<sup>st</sup> Kick-off event)

UCB Website

<https://www.umweltcluster.net/de/aktuelles/1141-kmu-fuer-eu-pilotprogramm-gesucht.html>

The screenshot shows the website of UmweltCluster Bayern. The header includes the logo and navigation links: Veranstaltungen, Kontakt, MI. The main navigation bar lists: UMWELTCLUSTER BAYERN, PROJEKTE, LEISTUNGEN, ERFOLGE, LÖSUNGEN, MI. The main content area is titled 'Aktuelles - Umweltcluster Bayern' and features the headline 'Zirkulär & Digital – Einstieg in die Circular Economy für KMU in Bayern'. Below this, it states: 'Machen Sie mit bei unserer Pilotaktion und erhalten Sie kostenlose Unterstützung auf Ihrem Weg zum zirkulären & digitalen Unternehmen.' The application round details are as follows:

- 2. Bewerbungsrunde: Bewerben Sie sich bis zum 02. Februar 2022 und profitieren Sie:**
  - Individuelle Chancen- und Risikoanalyse mit konkreten Handlungsempfehlungen
  - Zugang zu Lernplattform mit zahlreichen Best-Practice-Beispielen
  - Austausch mit Expert\*innen und anderen Teilnehmer\*innen

Below the list, it says: 'Bewerben können sich KMU mit Sitz in Bayern, bevorzugt aus dem produzierenden Gewerbe. Unsere Pilotaktion richtet sich an Geschäftsführer\*innen und Führungskräfte. Die Anzahl an Plätzen ist begrenzt, es gilt „First Come – First Served“.'

**Ablauf**

- 2. Bewerbungsphase: bis 2. Februar 2022**
  - Kick-off am 3. Februar 2022, 10-13 Uhr, Online via Zoom  
„Chancen der Circular Economy durch Digitalisierung“  
(ggf. späterer Einstieg möglich, Unterstützungsphase läuft bis Ende März 2022)
- 1:1 Unterstützungsphase: 10. Dezember - 31. März**  
„Check auf lineare Risiken und zirkuläre Chancen“ - Individuelle Risiken- und Potenzialanalyse für Ihr Unternehmen im persönlichen Gespräch, Umfang: ½ Tag, Online oder vor Ort in Ihrem Unternehmen

Ausführliche Informationen finden Sie [hier](#).

On the right side of the screenshot, there are two promotional boxes. The top one is green and says 'IMMER AKTUELL INFORM' and 'Unser Umweltcluster-Newsletter informiert über aktuelle Themen aus der Umweltwirtschaft'. The bottom one is red and says 'WERDEN SIE MITGLIED IN UMWELTCLUSTER BAYERN' and 'Werden Sie Mitglied und profitieren Sie von den Vorteilen des Netzwerks und den exklusiven H...'. Both boxes have a search bar at the top and a '>>>' button at the bottom.

Newsletter UCB  
January 2022

The graphic for the newsletter features a hand holding a glowing circular arrow, symbolizing the circular economy. The text on the graphic includes: 'interreg Alpine Space Circular4.0', 'Circular Economy & Digitalisierung', and 'Wie zukunftsfähig ist Ihr Unternehmen?'. To the right of the graphic, the text reads: 'Zirkulär & Digital – Einstieg in die Circular Economy für KMU in Bayern. Machen Sie mit bei unserer Pilotaktion und erhalten Sie kostenlose Unterstützung auf Ihrem Weg zum zirkulären & digitalen Unternehmen.'

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Web-Ansicht | webseiten | Aperçu web | Vista Web | Visualizzazioni web



**interreg**  
Alpine Space  
Circular4.0

Ökolog. Economy & Digitalisierung  
**Wie zukunftsfähig ist  
Ihr Unternehmen?**

Machen Sie mit bei unserer Pilotaktion und erhalten Sie kostenlose Unterstützung auf Ihrem Weg zum zirkulären & digitalen Unternehmen.

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**Sie profitieren von:**

1. Individueller Chancen- und Risikoanalyse mit konkreten Handlungsempfehlungen
2. Zugang zur Lernplattform mit zahlreichen Best-Practice-Beispielen
3. Austausch mit Expert:innen und anderen Teilnehmer:innen

**Ablauf**

- 2. Bewerbungsphase: bis 2. Februar 2022
- Kick-off am 3. Februar 2022, 10 - 13 Uhr, Online via Zoom  
„Chancen der Circular Economy durch Digitalisierung“
- 1:1 Unterstützungsphase: 10. Dezember - 31. März  
„Check auf lineare Risiken und zirkuläre Chancen“ - Individuelle Risiken- und Potenzialanalyse für Ihr Unternehmen im persönlichen Gespräch

**>>> Weitere Informationen und Anmeldung**





Redaktion: Daniela Ratzinger  
Tel.: +49 821 455 798-12, [daniela.ratzinger@umweltcluster.net](mailto:daniela.ratzinger@umweltcluster.net)  
[www.umweltcluster.net](http://www.umweltcluster.net)

Bildnachweis: © iStockphoto.com/propa, IDF Kreativagentur, Umweltcluster Bayern

**Klicken Sie hier um sich aus dem Verteiler abzumelden.**

**Impressum:**  
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Am Mittlaren Moos 48, 85167 Augsburg

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[info@umweltcluster.net](mailto:info@umweltcluster.net), [www.umweltcluster.net](http://www.umweltcluster.net)

Amtsgericht Augsburg, Vereinsregister-Nr. 200174  
USt-IdNr. DE264246558

Business Support Organization – City of Munich  
<https://stadt.muenchen.de/infos/circular-digital-programm-umweltcluster.html>



State Office for the Environment - Environmental Pact of Bavaria  
<https://www.umweltpakt.bayern.de/abfall/aktuelles/3587/circular-40-kostenfreie-unterstuetzung-auf-weg-zur-kreislaufwirtschaft>



Business support organisation City of Augsburg


<https://www.augsburg.de/aktuelles-aus-der-stadt/detail/zirkulaer-digital-einstieg-in-die-circular-economy-fuer-kmu>

The screenshot shows the homepage of the City of Augsburg website. The navigation bar includes links for Startseite, Freizeit, Kultur, Umwelt & Soziales, Bildung & Wirtschaft, Bürgerservice & Rathaus, and Karriere. The main content area features the title 'Zirkulär & Digital - Einstieg in die Circular Economy für KMU' with a sub-header '17.12.2021 10:10 | Wirtschaftsförderung'. The text describes a free support program for companies looking to introduce circular economy through digital technologies. It mentions that the program is part of the 'Umweltcluster Bayern' and 'Projekt Circular 4.0'. A link 'Mehr dazu...' is provided. At the bottom, there are social media icons for Facebook, Twitter, Instagram, LinkedIn, YouTube, and TikTok.

2<sup>nd</sup> Call on Website Regional Business Support Organisation Ahoch3 (Augsburg and surroundings)

[https://www.region-a3.com/news/circular\\_economy\\_fuer\\_kmu/](https://www.region-a3.com/news/circular_economy_fuer_kmu/)

The screenshot shows the website of the Regional Business Support Organisation Ahoch3. The page features a header with navigation links: STANDORT, IMMOBILIEN, NACHHALTIGES WIRTSCHAFTEN, INNOVATION, FACHKRÄFTE, ARBEITGEBER, SERVICE. The main content area is titled 'Zirkulär & Digital - Einstieg in die Circular Economy für KMU'. It includes a sub-header 'NEWS NACHHALTIGES WIRTSCHAFTEN' and a description of the program. A large graphic on the right side of the page shows a hand holding a glowing circular arrow, with the text 'Circular Economy & Digitalisierung Wie zukunftsfähig ist Ihr Unternehmen?'. The footer includes the logo for Interreg Alpine Space Circular4.0 and a small text 'Circular Economy für KMU © Umweltcluster Bayern'.




Start

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
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Klicks auf den eigenen Button

Veröffentlicht von Dr. Eva Schichtl

1.2.2022

...


**Umweltcluster Bayern**

455 Follower:innen


1 Std. •


Zirkulär ... wie bitte?

Der **Umweltcluster Bayern** bietet KMU in Bayern im Rahmen des EU-Projekts **CIRCULAR4.0** kostenlose Unterstützung auf ihrem Weg zum zirkulären & digitalen Unternehmen an. Lernen Sie die konkreten Chancen der Transformation zur zirkulären Wirtschaft/ Circular Economy/ Kreislaufwirtschaft für Ihr Unternehmen kennen von der jeder spricht! Nutzen Sie das kostenlose Angebot und melden Sie sich noch bis morgen an für den nächsten Kick-off am Donnerstag, den 3. Februar, 10-12.30 Uhr mit unseren Expert:innen **Andreas Jenne**, **Dr. Sonja Esser** und **Lydia Bühler** (**Mittelstand-Digital** - Mittelstand 4.0 Kompetenzzentrum Augsburg).

Direkt zur Anmeldung --> <https://lnkd.in/d-veyBuB>

#circulareconomy #digital #transformation





Circular Economy & Digitalisierung

**Wie zukunftsfähig ist Ihr Unternehmen?**


Veranstaltungen - Umweltcluster Bayern


umweltcluster.net


• Lesedauer: 2 Min.


LinkedIn Project manager


[https://www.linkedin.com/posts/eva-schichl-circular-economy\\_veranstaltungen-umweltcluster-bayern-activity-6894284963727163392-lzn0](https://www.linkedin.com/posts/eva-schichl-circular-economy_veranstaltungen-umweltcluster-bayern-activity-6894284963727163392-lzn0)

















StartIhr NetzwerkJobsNachrichtenMittel




**Dr. Eva Schichl**  
Project manager CIRCULAR4.0 -  
building bridges between Circular  
Economy and Industry 4.0 @  
Umweltcluster Bayern


Vollständiges Profil



**Dr. Eva Schichl** (her/she)  
Project manager CIRCULAR4.0 - building bridges between Circular Econo...  
49 Min. • 

Liebe #circulareconomy-Bubble,  
wer kennt wen der KMU aus Bayern kennt die gerne den Einstieg in das Thema  
Circular Economy finden möchten?  
Ein kostenloses Unterstützungsangebot des [Umweltcluster Bayern](#) im Rahmen  
von [CIRCULAR4.0](#) das den scheinbar großen Schritt in dieses Thema ganz klein  
macht, da es individuell ist, vollgepackt mit jahrelanger Expertise unserer  
Expert:innen und angereichert mit unserer Netzwerkkompetenz.  
Kling gut? Dann noch schnell hier anmelden für den Kick-off am Donnerstag,  
3.2., 10-12.30 Uhr via Zoom: --> <https://lnkd.in/d/PrehlyR>  
[#digital](#) [#transformation](#) [#kreislaufwirtschaft](#)





**Umweltcluster Bayern**  
455 Follower:innen  
1 Std. • 

Zirkulär ... wie bitte?  
Der [Umweltcluster Bayern](#) bietet KMU in Bayern im Rahmen des EU-Projekts  
[CIRCULAR4.0](#) kostenlose Unterstützung auf ihrem Weg zum zirkulären &  
digitalen Unternehmen an. Lernen Sie die konkreten Chancen der  
Transformation zur zirkulären Wirtschaft/ Circular Economy/  
Kreislaufwirtschaft für Ihr Unternehmen kennen von der jeder spricht!  
Nutzen Sie das kostenlose Angebot und melden Sie sich noch bis morgen  
an für den nächsten Kick-off am Donnerstag, den 3. Februar, 10-12.30 Uhr  
mit unseren Expert:innen [Andreas Jenne](#), Dr. [Sonja Eser](#) und [Lydia Bühler](#)  
([Mittelstand-Digital](#) - Mittelstand 4.0 Kompetenzzentrum Augsburg).

Direkt zur Anmeldung --> <https://lnkd.in/d-veyBuB>


[#circulareconomy](#) [#digital](#) [#transformation](#)




**Circular Economy & Digitalisierung**  
**Wie zukunftsfähig ist  
Ihr Unternehmen?**

Veranstaltungen - Umweltcluster Bayern

umweltcluster.net • Lesedauer: 2 Min.

 Philipp Wesselburg und 2 weitere Personen

**Interreg**  
Alpine Space  
Circular4.0



Page 27 of 34



3rd Application Round „Last chance“ until March 2022

UCB Newsletter February 2022



### Letzte Chance: Zirkulär & Digital – Einstieg in die Circular Economy für KMU in Bayern

Machen Sie mit bei unserer Pilotaktion und erhalten Sie kostenlose Unterstützung auf Ihrem Weg zum zirkulären & digitalen Unternehmen.

[Bewerbungsphase noch bis zum 15. März 2022.](#)

Bewerben können sich KMU mit Sitz in Bayern. Unsere Pilotaktion richtet sich an Geschäftsführer:innen und Führungskräfte. Die Anzahl an Plätzen ist begrenzt, es gilt „First Come – First Served“.

UCB Special Mailing February 2022

Web-Ansicht | website | App on web | Video Web | Virtualization web



**Machen Sie mit bei unserer Pilotaktion und erhalten Sie kostenlose Unterstützung auf Ihrem Weg zum zirkulären & digitalen Unternehmen.**

**Bewerbungsphase verlängert:** Bewerben Sie sich noch bis zum **15. März 2022**.  
Bewerben können sich KMU mit Sitz in Bayern. Unsere Pilotaktion richtet sich an Geschäftsführer:innen und Führungskräfte. Die Anzahl an Plätzen ist begrenzt, es gilt „First Come – First Served“. Die Teilnahme ist kostenfrei.

**Sie profitieren von**

1. Individueller Chancen- und Risikoanalyse mit konkreten Handlungsempfehlungen
2. Zugang zur Lernplattform mit zahlreichen Best-Practice-Beispielen
3. Austausch mit Expert:innen und anderen Teilnehmer:innen

**Ablauf**

- **Bewerbungsphase: noch bis 15. März 2022**  
Zugang zu Impulsen und Materialien der Veranstaltung "Chancen der Circular Economy durch Digitalisierung"
- **1:1 Unterstützungsphase: noch bis zum 31. März 2022**  
„Check auf lineare Risiken und zirkuläre Chancen“ - Individuelle Risiken- und Potenzialanalyse für Ihr Unternehmen im persönlichen Gespräch, Umfang: ½ Tag, Online

**>>> Weitere Informationen und Anmeldung**

Redaktion: Daniela Ratzinger  
Tel.: +49 821 455 798-12, [daniela.ratzinger@umweltcluster.net](mailto:daniela.ratzinger@umweltcluster.net)  
[www.umweltcluster.net](http://www.umweltcluster.net)

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Amtsgericht Augsburg, Vereinsregister-Nr. 200174  
UID-Nr.: DE264346556

## Annex 2 – Events

**Free Access to Kick-off recordings and material via Learning Platform TalentLMS:**  
<https://circular40.talentlms.com/shared/start/key:LSBIDNHR>

### Kick-off Event Agenda



#### **Zirkulär & Digital Einstieg in die Circular Economy für KMU in Bayern Kick-off**

**09.12.2021 von 10 – 12.30 Uhr**  
Online – Zoom-Meeting

**Moderation:** Dr. Eva Schichl, Umweltcluster Bayern

- |       |  |
|-------|--|
| 10:00 | <b>Begrüßung, Vorstellungsrunde &amp; kurze Einführung in das Projekt CIRCULAR4.0</b><br>Dr. Eva Schichl, Umweltcluster Bayern                   |
| 10:20 | <b>Impuls: Die Zeit ist jetzt – Chancen und Herausforderungen zirkulären Denkens für Unternehmen</b><br>Andreas Jenne, Circular Consultant       |
| 10:45 | <b>Wie geht zirkuläres Wirtschaften? – Relevante Hebel für KMU</b><br>Dr. Sonja Eser, SinnenWandel, Circular Design Consultant                   |
| 11:10 | <b>Smarte Circular Economy durch Digitale Technologien und neue Servicekonzepte</b><br>Lydia Bühler, Mittelstand 4.0 - Kompetenzzentrum Augsburg |
| 11:30 | <b>Fragen an die Referent:innen</b>  |
| 11:45 | <b>Vertiefte Diskussion über Treiber der Circular Economy und Relevanz für das eigene Unternehmen</b>  |
| 12:15 | <b>Roadmap für teilnehmende Unternehmen - Nächste Schritte &amp; ihr Mehrwert</b>  |
| 12:30 | <b>Ende der Veranstaltung</b>  |

**Interreg**  
Alpine Space  
Circular4.0



**UmweltCluster**  
Bayern



CIRCULAR4.0 is co-financed by the European Regional Development Fund via Interreg Alpine Space



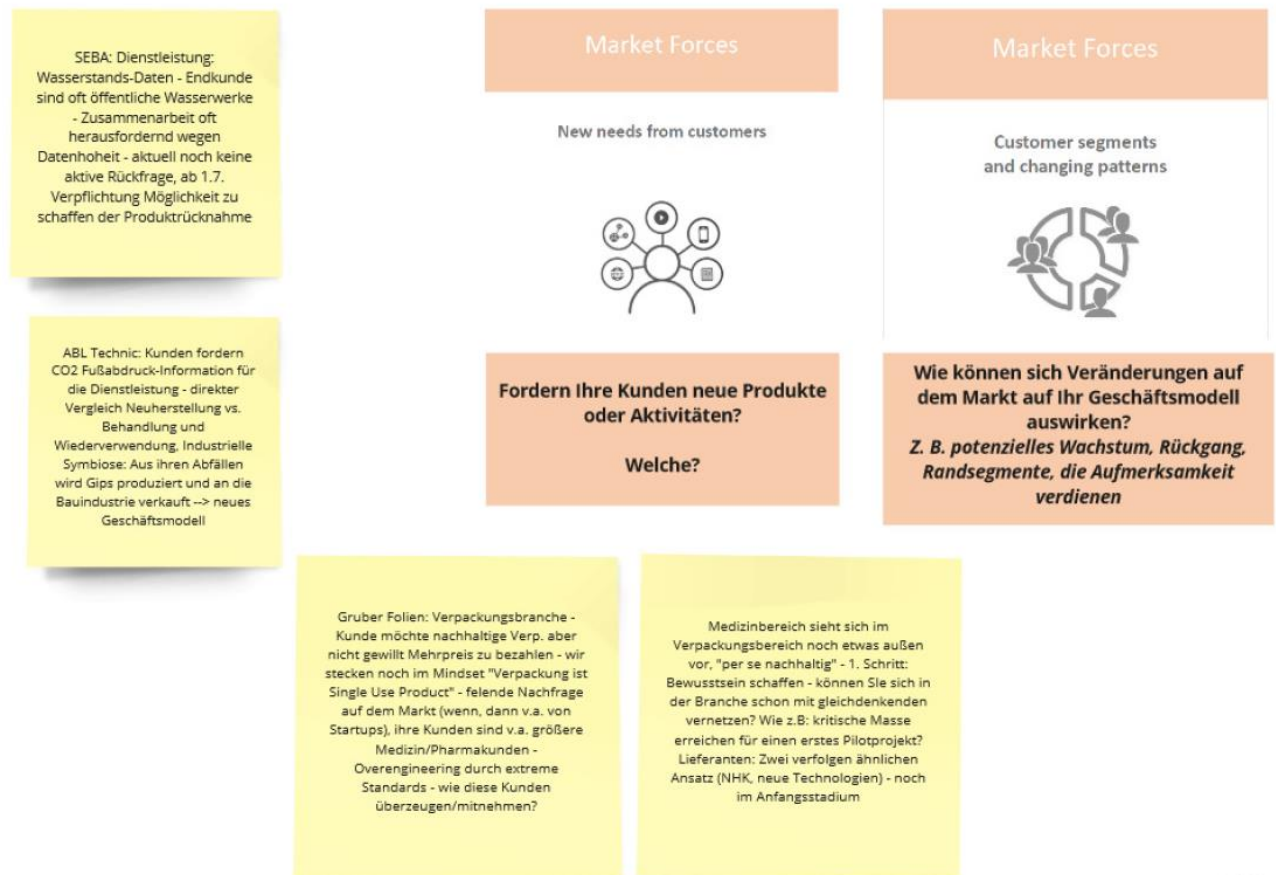
## Screenshot 1<sup>st</sup> Kick off

## Miro Documentation 1<sup>st</sup> Kick-off





## Miro Documentation 2<sup>nd</sup> Kick-off



miro

### Annex 3 – 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
UCB01	Enterprise	Bavaria	Packaging	25.02.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	25.02.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	25.02.2022	04.03.2022
UCB02	SME	Bavaria	Industrial services	13.01.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	13.01.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	13.01.2022	24.01.2022
UCB03	SME	Bavaria	Environmental technologies (water)	28.04.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	28.04.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	28.04.2022	28.04.2022
UCB04	SME	Bavaria	Bioeconomy/Agri-Food	16.03.2022	Check for linear risks and circular opportunities	16.03.2022	Check for linear risks and circular opportunities (based on the	16.03.2022	09.05.2022

					(based on the example of the CAS) + digi check (evaluation of contexts)		example of the CAS) + digi check (evaluation of contexts)		
UCB05	SME	Bavaria	Environmental technologies (water)	22.03.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	22.03.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	22.03.2022	25.03.2022
UCB06	SME	Bavaria	Packaging	07.03.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	07.03.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	07.03.2022	14.03.2022
UCB07	SME	Bavaria	Manufacturing (Carbon)	03.06.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	03.06.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	03.06.2022	03.06.2022
UCB08	SME	Bavaria	Environmental technologies (water)	30.03.2022	Check for linear risks and circular	30.03.2022	Check for linear risks and circular opportunities	30.03.2022	04.04.2022

					opportunities (based on the example of the CAS) + digi check (evaluation of contexts)		(based on the example of the CAS) + digi check (evaluation of contexts)		
UCB09		Berlin	Construction	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	18.05.2022
UCB10		Bavaria	Environmental technologies (water)	27.04.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	27.04.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	27.04.2022	01.06.2022
UCB11		Thuringia	Environmental technologies (water)	28.04.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	28.04.2022	Check for linear risks and circular opportunities (based on the example of the CAS) + digi check (evaluation of contexts)	28.04.2022	01.06.2022