

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

PP3 – BWCON

Author: Luc Schmerber, PP3 - BWCON

Version: 1.0

Month, YEAR: June, 2022

Table of contents

Purpose of the document.....3
Methodology to achieve the output.....3
Description of the local pilot action implemented by PP3 – BWCON7
Lessons learned and recommendations for the follow-up.....10
Durability and follow-up11
Annex11

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 PP3 BWCON
- Lessons learned by PP3 BWCON
- Durability and follow-up

Methodology to achieve the output

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

Step 1:	<p>Planning digitalised CE processes in Alpine Space area addressed to SMEs</p> <p>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.</p> <p>Each feasibility plan includes plans for local actions defined by the relevant partners, according to the following distribution across the partnership:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">CE design</td> <td style="text-align: center;">CE optimal use</td> <td style="text-align: center;">CE value recovery</td> </tr> </table>	CE design	CE optimal use	CE value recovery
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:	Experimenting transnational actions to foster CE approaches through digitalisation 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 PP3 – BWCON

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

1. Selection/identification of SMEs
2. Circular CE capability/potentiality and Digital Maturity Assessment of SMEs
3. Identification of innovation needs and investment plan
4. Follow up on innovation needs and investment plan

SELECTION/IDENTIFICATION OF SMES

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

1	Selection/identification of SMEs	Start date	10.2021
		End date	11.2021 (1 st bench) 05.2022 (2 nd bench)
<p>The selection and identification of companies (in priority SMEs) to take part in the pilot in Bade-Wurttemberg took place by means of an open call published by BWCON through its website and its newsletter. Partners in BWCON's network (business development organisations, digital hubs) were activated through personal contacts to extend the reach of the call.</p> <p>The activities to identify by the end of November 2021 - 23 businesses, of which 20 SMEs willing to take part in the local pilot.</p> <p>The selected businesses some from the following sectors in activity:</p> <ul style="list-style-type: none"> ▪ Manufacturing/I4.0: 14 (61%) ▪ Plastics/chemicals: 2 ▪ Food: 1 ▪ Energy: 2 ▪ Construction: 1 ▪ Waste recycling: 1 ▪ Finance: 1 ▪ Logistics: 1 <p>Overall, the focus on the manufacturing/I4.0 sector could be maintained, while a number of other sectors were represented with one or two businesses.</p> <p>The SMEs selected were mid-sized companies, with a number of employees from 20 to approximately 250. Three businesses were slightly larger with a number of employees between 270 and 400.</p> <p><u>Additional activities:</u></p>			

Considering the extension of the project Circular 4.0 until October 2022, a second bench of 17 businesses was identified in May 2022 to take part in a second round of support activities.

Result

Planned: Reach at least 16 interested SMEs to participate in the pilot action.

Achieved: 40 business, of which 37 SMEs willing to take part in the pilot action were identified.

CIRCULAR CE CAPABILITY/POTENTIALITY AND DIGITAL MATURITY ASSESSMENT OF SMES

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

2	Circular CE capability/potentiality and Digital Maturity Assessment of SMEs	Start date	11.2021
		End date	12.2021 (1st bench) 05.2022 (2nd bench)

Each selected company went through a CE and digital maturity assessment.

The assessments were performed in the form of interviews in the framework of online meetings with a representative of each company. The CE maturity assessment and DMA were performed in one go in the same meeting (1 distinct meeting per company).

The assessments were performed by students at the University of Applied Sciences Pforzheim, under the supervision of Prof. Dr Bernhard Kölmel, who attended himself a significant part of the interviews.

The assessments and further inputs from the interviews provided the basis for additional 1:1 meetings, which took place a few days later in a similar manner.

The results of both meetings were combined in the elaboration of recommendations / suggestions for improvements under the supervision of Prof. Dr Bernhard Kölmel and Luc Schmerber, Project Manager at BWCON.

The results were documented in a common template for all businesses.

Result

40 documented CE and digital maturity assessments

IDENTIFICATION OF INNOVATION NEEDS AND INVESTMENT PLAN

The third activity was dedicated to the formulation of recommendations and suggestions for improvements in the form of an action plan (investment plan). It was performed for the 23 companies from the first bench.

The 15 companies from the second bench did only take part to the previous activity: Circular CE capability/potentiality and Digital Maturity Assessment of SMEs. The closure of the pilot by June 2022 and the resources available did not allow for a full round of support for the second bench of businesses.

3	Identification of innovation needs and investment plan	Start date	11.2021
		End date	01.2022 (1 st bench)
<p>Each of the 23 companies from the first bench received, in addition to the results of its CE and digital maturity assessment result, a document established in collaboration with the SME (on the basis of the 1:1 meetings) and encompassing at least one specific recommendation covering one or several of the following aspects of the transformation of the company towards higher circularity (= increase of maturity level)</p> <ul style="list-style-type: none"> ▪ Technology adoption ▪ New or improved process ▪ New or improved or transformed business model ▪ New or improved products ▪ New or improved services <p>And with the following characteristics:</p> <ul style="list-style-type: none"> ▪ Digitally supported (as far as possible) ▪ With a time horizon from 6 months up to 1 year <p>All 23 businesses from the first bench received their recommendations between 30.11.2021 and 15.12.2021.</p> <p>Additionally, the participating companies were invited to self-study CAT2.0 on the online learning platform Talent LMS.</p>			

FOLLOW UP ON INNOVATION NEEDS AND INVESTMENT PLAN

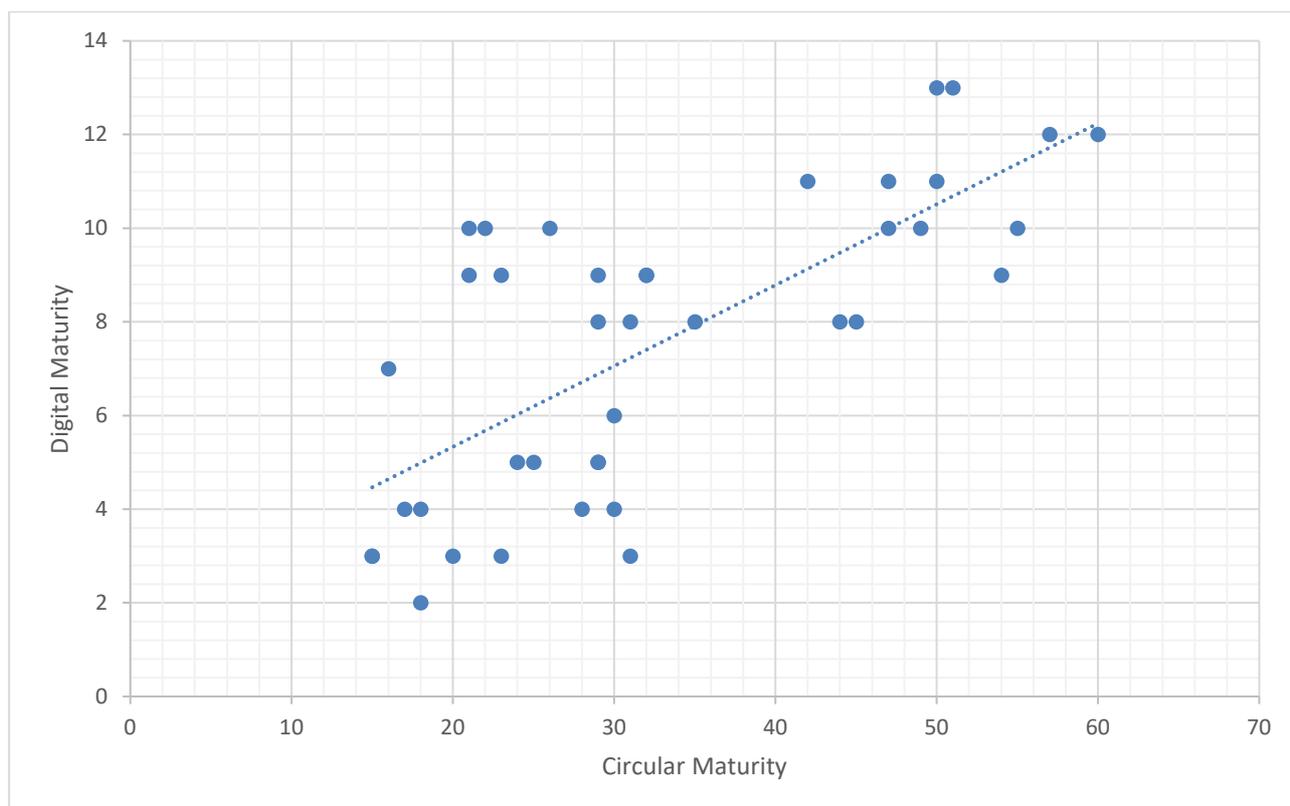
The last activity consisted in a follow-up on the support delivered. It was performed for the 23 companies from the first bench. The 15 companies from the second bench were specifically questioned about the lessons learned from the first bench, in order to validate and confirm them.

4	Follow up on innovation needs and investment plan	Start date	03.2022
		End date	03.2022
<p>Considering the reluctance of participating companies to answer a follow-up questionnaire, Prof. Dr. Kölmel had follow-up interviews with businesses from the first bench willing to do so, in order to</p> <ul style="list-style-type: none"> ▪ Measure satisfaction with the support delivered. ▪ Identify improvements in CE maturity as a result of the pilot action. ▪ Collect input for further recommendations 			

All those interviews took place in March 2022 and provided the basis for the evaluation of the local pilot action from the perspective of the participating SMEs.

Lessons learned and recommendations for the follow-up

From the assessments of the initial 23 companies we found a correlation between digital maturity and circular maturity; probably based on the ability to implement strategic intentions, which was confirmed with the assessments performed with the second bench of companies (correlation coefficient of 0,71)



From the direct interaction with the companies' representatives we could extract the following qualitative learnings:

- Overall, there is:
 - A large and growing interest in going green.
 - But a great deal of uncertainty, particularly in the smaller companies, as to how best to proceed
- The topic has arrived in the strategic environment of the companies, but the strategic goals have not yet been fully broken down into operational activities. Very often, however, the economic pressure is stronger than the "green" intentions.
- Greenwashing is practiced by virtually every company because all external stakeholders attach importance to it → the motto here is: fake it till you make it.
- So far, bottom-up activities dominate, as these serve well as showcases to the outside world.

- It is expected that new legal requirements will be issued in the foreseeable future and that on this basis either economic advantages can be achieved or at least no disadvantages will result from green commitment.
- New technologically based topics, such as the digital product passport, are seen as sensible and promising approaches.

Key message for implementation in companies: Generating best practices, especially when breaking down strategic green goals into operational opportunities for action.

Recommendations for the policy level: provide a legal framework as fast as possible. Many companies do not get (sufficiently) involved because they fear they will be at an economic disadvantage compared to environmental offenders.

Durability and follow-up

Considering the overall interest for approaches to CE with the support of digital technologies such as

- Digital product passports
- Servitisation of products / product-service systems

BWCON will develop a series of studies on those topics, which will be provided to the participating / interested companies to help them with their CE transformation activities, as well as being used as a basis for developing a support offer to businesses for circular economy with the use of digitalisation processes.

Those studies shall also help to improve the support toolkit of Circular 4.0 in the framework of follow-up activities beyond the lifetime of the project.

Annex

- D.T3.1.2 - AS feasibility plan to foster CE optimal use approach with digitalisation processes, including the feasibility plan drafted by BWCON
- D.T3.2.2 - Local actions to implement CE Optimal Use approaches with digitalisation processes – implementation report drafted by BWCON, including overview of businesses supported.

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.T3.1.2 AS feasibility plan to foster CE optimal use approach with digitalisation processes

Author: TPLJ

Version: final

Month, YEAR: December 2021

Table of contents

I. Introduction	3
II. Content: AS feasibility plan to foster CE optimal use approach with digitalisation processes.....	Napaka! Zaznamek ni definiran.
III. Conclusion.....	Napaka! Zaznamek ni definiran.
Appendix (Inputs by PPs: Local detailed feasibility plans by PPs for the implementation of pilots – TPLJ/JSI, TOWL, VENINN/CCIAA DL VERO, BWCON, GRAND E-NOV)	4

I. Introduction

The task A.T3.1 Planning digitalised CE processes in Alpine Space area addressed to SMEs is implemented under WP T3 - Fostering CE processes in Alpine Space with digitalisation processes. This deliverable relates particularly to the development of the deliverable D.T3.1.2 AS feasibility plan to foster CE optimal use 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.T3.1.2) is focusing on the development of AS feasibility plan to foster CE optimal use approach with digitalisation processes. BWCON collected inputs of each project partner from the optimal use model (in the case of Slovenia two project partners collaborated –TPLJ & JSI). Each PP from the group optimal use model (TPLJ & JSI, TOWL, VENINN, BWCON, GRAND E-NOV) developed its feasibility plan for setting-up local service providers addressed to SMEs to establish services to increase attractiveness by investors and propose new financial schemes by Public Actors, roadmaps to achieve these results. The plan defines organization, actions, resources, and equipment needed to set-up Alpine regional centres able to promote digitalised CE activities addressed to SMEs on the design model and eco-innovation in general. Local detailed plans by PPs for pilots (Slovenia: TPLJ & JSI, TOWL, VENINN, BWCON, GRAND E-NOV) are available in the appendix.

Appendix (Inputs by PPs: Local detailed feasibility plans by PPs for the implementation of pilots – TPLJ/JSI, TOWL, VENINN, BWCON, GRAND E-NOV)

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, JSI & TPLJ**

Dissemination level: **CO = confidential**

Revision: **DRAFT 02**

Due Date: **26.11.2021, v1**

Date of submission: **2.12.2021 (v3)**

1. Overview of the local pilot action - Slovenia (TPLJ & JSI).....	7
2. Planned activities.....	11
3. Indicators (KPIs) and monitoring.....	13

Overview of the local pilot action - Slovenia (TPLJ & JSI)

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

The description should encompass at least the following elements:

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

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

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

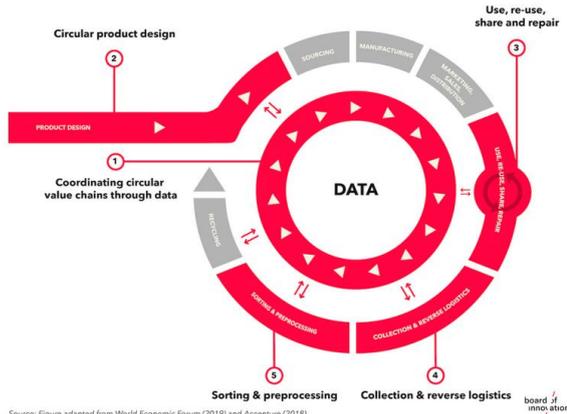
These selected sectors of interest are in accordance with the National Circular Economy Roadmap and other national strategic development plans:

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

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

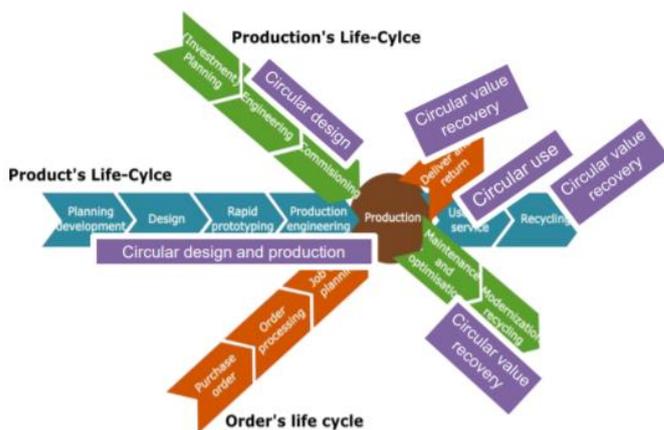
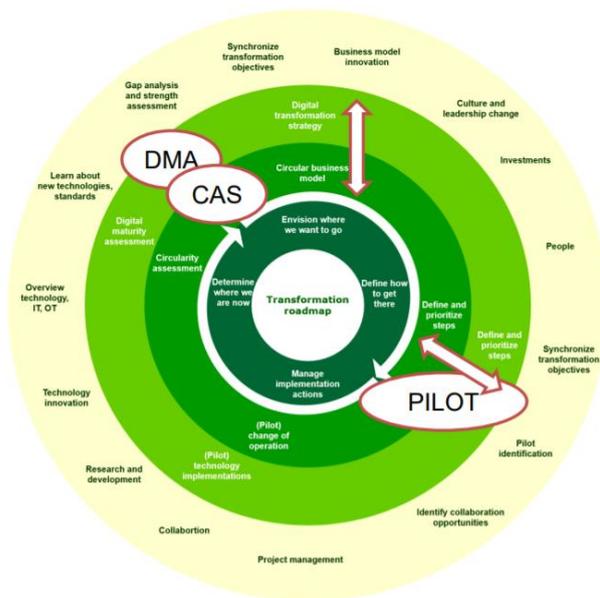
Circular economy approach we plan to undertake for pilots is the circular design model (approach) and optimal use model (approach) as defined in the scope of the Circular 4.0 project. If applicable for Slovenian SMEs also value recovery model (approach) will be used.

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



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

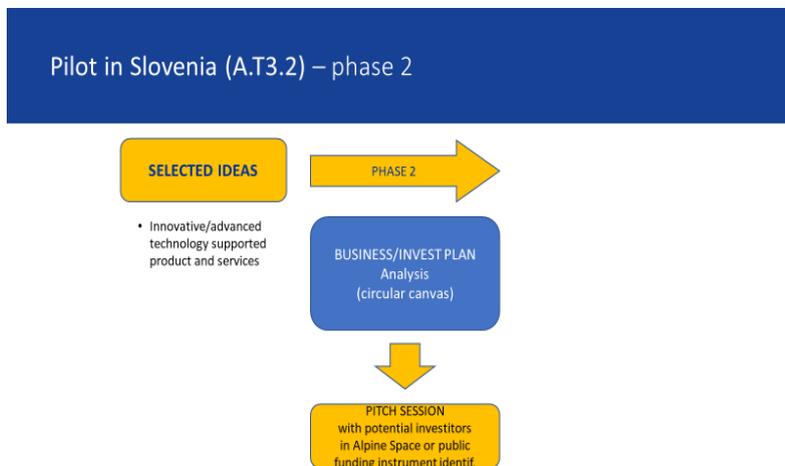
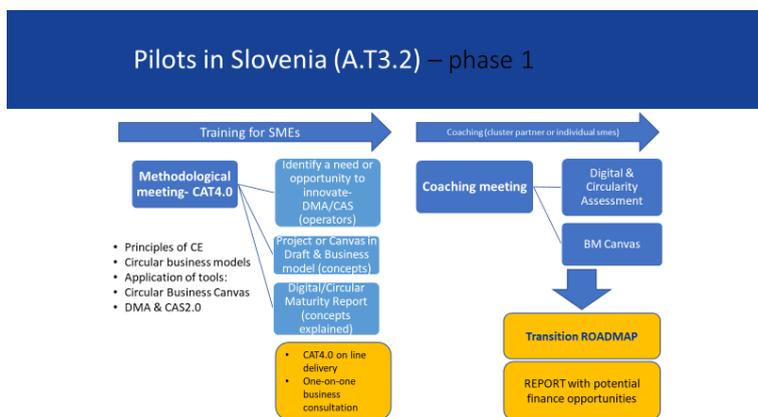
Underlying principles of pilots used in Slovenia are explained in the Module 1 (Part 2) of the CAT4.0 training course Enabling the potential for circular transformation – tech readiness–digitalization and I4.0 (available over <https://circular40.eu/>). The process encompasses systemic changes as well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



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

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

- **Methodology**



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

Tools to be used:

Digital maturity assessment tools:

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

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

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

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

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

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

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

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

Circularity assessment scoring tool:

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

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

- **Expected results**

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

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

Planned activities

Planned activities in Slovenia (JSI & TPLJ) are:

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

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

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

Deadline: 10.12.2021 (draft), 15.12.2021 (final)

2. Selection/identification of SMEs

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

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

Deadline: 10.12.2021 (draft), 15.12.2021 (final)

Clear message for SMEs!

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

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

3. Thematic workshops/seminars

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

Thematic workshops per sectors: 15.2.2022 – 15.3.2022

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

Tools mainly used will be:

- INNOCAPE tool

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

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

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

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

Other tools for less digitally advanced SMEs & business or CE model specific tool (to be selected by experts from the tools approved in the scope of the Circular4.0 project and introduced through the training actions in T.2.) including tools assessed in the scope of **D.T.2.3.1 Setting up the toolkit to support digitalization processes to foster the CE in the Alpine space**. Such as: <https://digital-transformation-tool.eu/project/>

5. Identification of innovation needs and investment plan

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

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

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

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

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

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

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

Title		Start date	MM.YYYY
		End date	MM.YYYY
Description			
Describe here the activity			

Add sub-activities if necessary			
Results			
Note: the results (or deliverables) will need to be documented and reported upon in Activity T3.2 in the report for each local pilot action. They should therefore be formulated in a way that enables monitoring and documentation of the implementation.			
1	Example: 3 online workshops ...	Date	
2	Example: 1 call for applications	Date	
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 (35 in Slovenia - 17 (JSI) within Circular Design Model and 18 (TPLJ) within Optimal Use Model).

Measurable objectives:

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

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

Project Acronym: Circular 4.0

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

A.T3.1

Planning digitalised CE processes in Alpine Space area addressed to SMEs

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

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

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

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

Contributors: Roberto Sandrini, TPLJ

Type: **T -Template/R – Report, TOWL**

Dissemination level: **CO = confidential**

Revision: **DRAFT 02**

Due Date: **December 2021**

Date of submission: **06/12/2021**

- 1. Overview of the local pilot action – Piedmont (Fondazione Torino Wireless - TOWL)16
- 2. Planned activities.....19
- 3. Indicators (KPIs) and monitoring.....21

Overview of the local pilot action – Piedmont (Fondazione Torino Wireless - TOWL)

- **Local context and CE approach**

Local actions will be promoted through the Unioncamere and chamber of commerce channels that arrives potentially to companies on all the regional territory and also through the Cluster of SMEs that are also at regional level.

The main sectors selected during the previous WP in the project are in order of priority (related with the economic relevance and specializations of the territory plus the circular potential): Manufacturing Industry, Food sector and Textile sector. Specific actions with regional clusters in these areas will be done. We also nominated the Construction sector as another potential sector because is a priority of other partners in the project, without forgetting other priority sectors for the topic in Europe with high environmental impact (WEEE, mobility).

It is important to notice as a context that companies in Italy (and in Piedmont also) there are a high number of small companies and micro companies that are difficult to involve in activities, because non so structured, or mature enough or with the potential to invest even the time for the pilot in a very difficult moment by the pandemic crisis. Medium companies and medium-big companies are more mature so a limited in time and reduced effort available in our pilot can probably reduce our ability to attract them. So, we need to be flexible, offering a shorter path for less mature companies and more intensive effort for more mature companies. We still cannot predict specific profile of companies that can be interested in our path to the circularity, for sure will be a mix of companies for different sectors and dimensions.

The C.E. approach originally foreseen focus in our territory for our pilot were Optimal Use and Value recovery as a second priority. But during the discussions with the other partners of the project that share their experiences with SMEs, it was explained that we cannot use only one approach excluding the others because companies in every sector can be different priorities and maturity level, so it is impossible to decide or exclude companies interested on other models. For that reason, we trained ourselves to support all the 3 approaches with our e-learning platform Circular4.0. In our first session with companies, it will be discovered that many of them are interested in “Circular Design Model”. We will verify with companies if this is the model with higher potential for them.

- **Methodology**

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

Involvement phases: with a call for action, we will offer the possibility to all companies in the territory to be supported during the path for the circularity of circular4.0 (pilot). If a higher number of the target number of companies will be presented, we will choose the companies with the higher circular potential evaluated with our CAS2.0 tool. If a lower number of companies participate to the pilot, we will propose again the call-in other period, or using other channels or unpackaging the Pilot separating the training phase (offered as a shorter workshop for SMEs) and then involving them to the 1:1 coaching assistance.

- **Specific tools from the Toolkit Circular4.0**

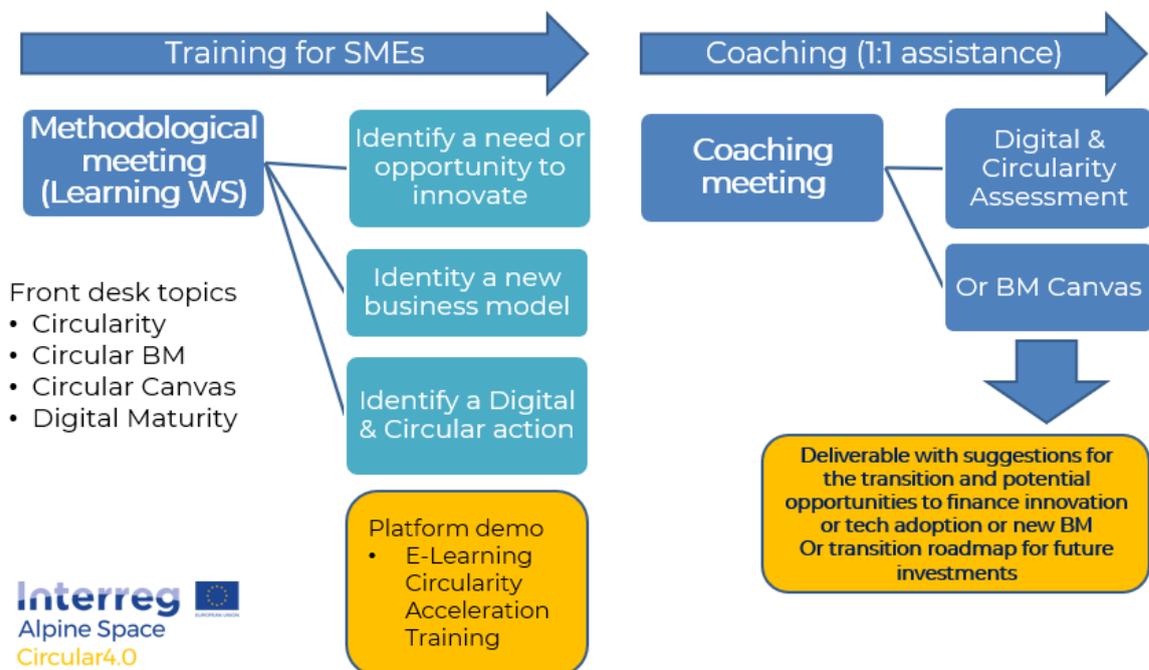
We will test and use the original approach of the project, the tool developed by the project (CAS2.0 – Circularity Assessment Score) that is also in Italian and helps to assess SMEs on the potential of the circular model and the commitment. During the Circularity Assessment Score session, the maturity of the circular BM of the PMI can be inferred. Our interpretation of the level of maturity of the companies that we can reach is shown in the following figure:



For Digital Maturity Assessment we decide to use SELF4.0 (or the evolved version ZOOM4.0), the tool of the Chamber of Commerce of Italy because it is commonly used, is in Italian and can be done in a shorter time (120 questions).

The Circular4.0 Path:

The path is shown in the following figure:



The path includes:

A training meeting on the opportunities of the circular and digital transition. You will learn the fundamental concepts from an expert operator on the topic: the principles of the Circular Economy, the main generic circular business models, and the useful tools to build such models, as well as the methods and recommendations to implement more circular and sustainable processes, products or services.

A coaching meeting with one or more experts to evaluate the potential of the circular model that the company wishes to implement, and the opportunities related to the double transition. The company will receive the result of the analysis and its Roadmap for double transformation, which consists of a final report with the concrete actions identified, the priorities, the next steps and the financing opportunities for the identified improvement / innovation / technological adoption.

In-depth analysis of the business model: overall analysis of the company's business plan (circular canvas) for the proposals of the most innovative products and services (if available at this level of maturity).

The initiative will be open to any SME that need to identify or has identified a need or an initial idea of raw material reduction, waste recovery, better use of the products or services provided to make their company more sustainable or to improve their efficiency in processes, productive or service and consumption.

- **Expected results**

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

Aligned with the minimum requirements indicated during the WPT3 meeting (02-11-2021) we will provide at least one recommendation covering any of the different aspects of the transformation of the company towards higher circularity: technology adoption/innovation, new process, new business model.

We as a partner belong to the CE Optimal Use approaches with digitalization process (5 partner, 90 SMEs, so 18 SMEs for partner).

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

Title	1. Selection/identification of SMEs - workshops	Start date	09.2021
		End date	04.2022
Description			
A local call for action will be promoted through intermediaries and regional Cluster of SMEs. If the call for action is not enough, workshops and individual invitations to 1:1 assessment service will be done.			
Results			
Note:			
1	1 Call for action published and promoted	Date	
2	Number of intermediaries that collaborate promoting the pilot	Date	
3	Number of participants interested to the path	Date	
n		Date	

Title	2.Thematic workshops/seminars	Start date	12.2021
		End date	05.2022
Description			
Single workshop events to motivate companies to start the path. If the number of companies interested on the call for actions and in the first workshop guarantee the target number of companies, the workshop will not be repeated. If the number of companies is higher that the target number, all companies can participate to the workshop and only the ones with the higher circular potential from the CAS assessment will receive the 1:1 support.			
Results			
1	Number of online workshops	Date	
2	Number of online participants (SMEs in Piedmont) to the workshops.	Date	
3	Number of online participants (others) to the workshops	Date	
4	Number of subscriptions in the TalentLMS platform	Date	

Title	3.Circular CE capability/potentiality and Digital Maturity Assessment of SMEs	Start date	12.2021
		End date	06.2022
Description			
<p>CAS2.0 assessment will be done online individually or in groups of companies of the same sector and/or interested in the same generic circular business model. It can be done in a single session or in multiple session, being flexible with the availability of the SMEs.</p> <p>DMA (SELF4.0 or ZOOM4.0) will be done individually.</p>			
Results			
1	Number of SMEs with CE assessment done and reports	Date	
2	Number of companies with DMA report	Date	
3	Number of companies with Canvas elaborated	Date	
n		Date	

Title	4.Identification of innovation needs and investment plan	Start date	12.2021
		End date	07.2022
Description			
<p>During the different assessments (DMA or CAS2.0) at least one recommendation covering any of the aspects of the transformation of the company towards higher circularity will be provided through a deliverable document. The document (final deliverable) can include potential finance opportunities if active and identified during the period of the assessment.</p> <p>Experts will be invited to participate to the sessions but will no leader or organize the activities. They can contribute with suggestions for SMEs and if they belong to intermediary institutions can test the methodology of the project participating to the sessions. Additional sessions can be co-organized with intermediaries to enhance the impact of the project in the territory.</p>			
Results			
1	Number of final deliverables with suggestions for SMEs (target 18+ 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).

The used tools and considering a time horizon from 6 months up to 1 year will not produce a higher circularity (= increase of maturity level).

CAS Tool is a strategic tool and is not designed to measure, rather to assess. So, the increase in maturity and commitment can probably be an opinion of the operator comparing the initial state and the final state of the companies after the support or a comparison between scenarios considered at the beginning and at the end of the assessment. The score of the assessment potential is a general objective not a measure.

During the time of the project, we will not be able to also measure an increase in digital maturity because most of the suggestions for digitalization's will probably not be implemented in 6-1 year, only in a few cases. A change of business model requires long periods. Some improvements suggestions could be implemented faster, but it is not guaranteed, to have a plan for it, so the increase of commitment can be better as a reference for the increase of maturity in the short time we have to interact with companies.

So, our metrics will be:

Digital Technology Readiness level assessment (initial level and plan for the SMEs)

CE Commitment level assessment (from CAS2.0)

Satisfaction level on tools and trainings provided

Maturity improvement that can be described as qualitative concepts (not a level, it can be measure in 2-5 years after the assessment, out of the scope of the project)

See also the KPI table on the last page of this report.

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:	T -Template/ R- Report, CCIAA DL VERO & Veneto Innovazione
Dissemination level:	CO = confidential
Revision:	DRAFT 02
Due Date/Submission:	December 2021

1. Overview of the local pilot action - Veneto (CCIAA VE RO and VENETO INNOVAZIONE).....	3
2. Planned activities	5
3. Indicators (KPIs) and monitoring	8

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.

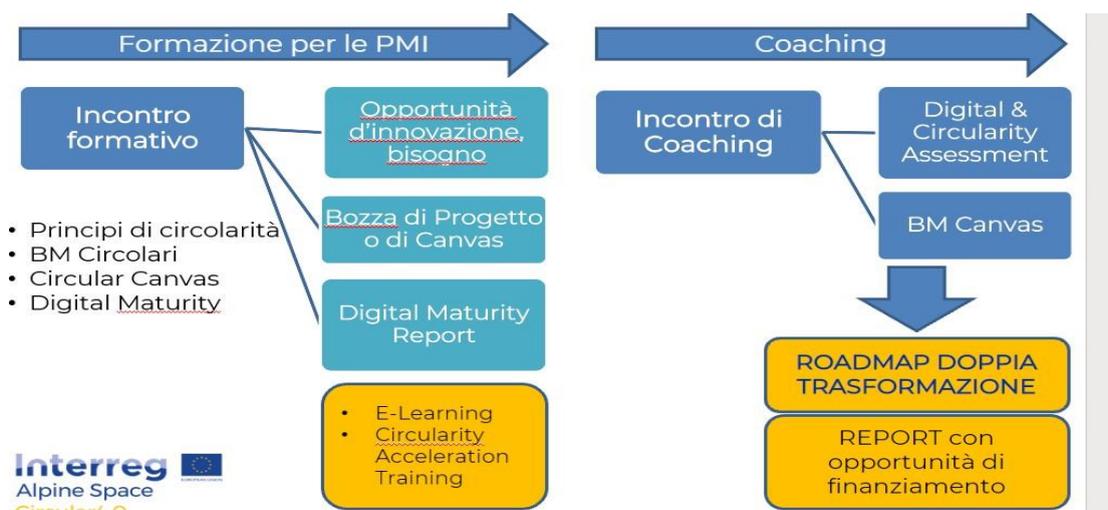
The call will give the opportunity to a maximum of 50 SMEs (selected according to the order of subscription to the call) to join the pilot action and be assisted by experts.

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

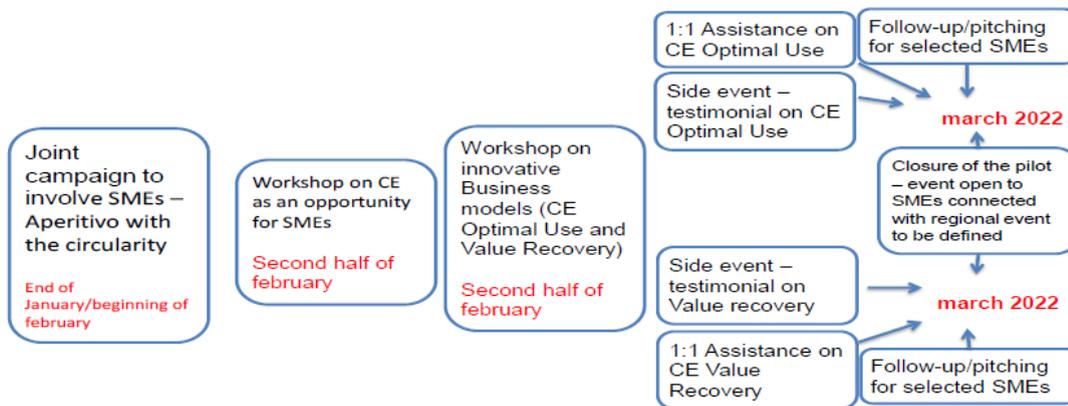
According to the combined results of the assessments carried out a customized plan of action will be elaborated and proposed to the SMEs. In this plan experts will suggest instruments and changes that could be adopted to improve the circularity and digitalization of the SMEs, also with regard of financial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

- a) 1 local event “Aperitivo” to launch the Call
- b) 2 local workshops/awareness action will be addressed to SMEs
- c) 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
Description			
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:			
<ul style="list-style-type: none"> a) Scouting and analysis of the entrepreneurial environment b) Analysis of the tools (SELFI4.0 and CAS2.0) to be adopted and their adaptation for the local use c) Organization and launch of the communication campaign 			
Add sub-activities if necessary			
No sub-activities are planned			
Results			
		Date	

Title	Involvement of the SMEs	Start date	12.2021
		End date	03.2022
Description			
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.			
Add sub-activities if necessary, no sub-activities are planned			
Results:			
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			

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

Title	Raising knowledge by SMEs for CE-innovation oriented processes	Start date	02.2022
		End date	02.2022
Description 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.			
Add sub-activities if necessary Sub-act1: thematic seminar on Value recovery organized by CCIAAVERO Sub-act2: thematic seminar on Optimal use organized by VENINN			
Results:			
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
Description 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			
Add sub-activities if necessary Sub-act1: 1:1 assistance provided by CCIAAVERO for (estimated) 23 SMEs Sub-act2: 1:1 assistance provided by VENINN for (estimated) 15 SMEs			
Results:			
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: **T -Template/ R- Report, BWCON**

Dissemination level: **CO = confidential**

Revision: **DRAFT 02**

Due Date: **26.11.2021**

Date of submission: **22.12.2021**

1. Overview of the local pilot action - Baden-Württemberg (BWCON)	10
2. Planned activities.....	10
3. Indicators (KPIs) and monitoring.....	12

Overview of the local pilot action – Baden-Württemberg (BWCON)

Local context and CE approach

The pilot addresses primarily on manufacturing SMEs in Baden-Wurttemberg focussing on the optimal use or resources (Germany). However, all other companies are invited to express their interest as, according to the experience made in previous project activities, the separation between circular design, optimal use and value recovery models is not clear to businesses and not always adapted to their practice. It is also not realistic to foresee the outcomes of the 1:1 assessment in terms of circular models. Due to the estimated rather low level of awareness of most SMEs, all CE approaches need to be considered.

Planned activities

According to the overall methodology defined for the pilot actions, the following activities are planned for the local pilot action in Baden-Wurttemberg, piloted by BWCON.

1	Selection/identification of SMEs	Start date	10.2021
		End date	11.2021
<p>The selection and identification of companies (in priority SMEs) to take part in the pilot in Baden-Wurttemberg shall place by means of an open call published by BWCON through its website and its newsletter. Partners in BWCON’s network (business development organisations, digital hubs) were activated through personal contacts to extend the reach of the call.</p> <p>Companies headquartered or with a branch in Baden-Wurttemberg are selected on the basis of the “first come, first served” principle.</p>			
<p>Result</p> <p>Reach at least 16 interested SMEs to participate in the pilot action.</p>			
1	Collecting at least 16 interested SMEs to participate in the pilot action and make appointments to perform the initial assessment in online or onsite meetings.	Date	11.2021

2	Circular CE capability/potentiality and Digital Maturity Assessment of SMEs	Start date	11.2021
		End date	12.2021
<p>Each selected company will go through a CE maturity assessment using the CAS questionnaire (also accessible online in German).</p> <p>The assessment provides the basis for the 1:1 assistance and will be performed by students at the University of Applied Sciences Pforzheim, under the supervision of Prof. Dr Bernhard Kölmel. The assessments will be performed in the framework of a 1:1 online or onsite meeting with a representative of each company.</p>			

The results will be documented in a common template for all businesses.			
Result			
Documented CE and digital maturity assessments			
1	Documented CE maturity and digital maturity assessments according to a generic template for at least 16 eligible SMEs	Date	31.12.2021

3	Identification of innovation needs and investment plan	Start date	12.2021
		End date	01.2022
<p>Each company supported will receive, in addition to the results of its CE and digital maturity assessment result, a document established in collaboration with the SME (on the basis of the 1:1 meeting) and encompassing at least one specific 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"> - 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 <p>Additionally, the participating companies are invited to self-study CAT2.0 on the online learning platform Talent LMS.</p>			
Result			
Companies assessed receive an individual evaluation with at least one individual recommendation.			
1	At least 16 evaluation reports with innovation needs and investment plans handed out	Date	31.01.2022

4	Follow up on innovation needs and investment plan	Start date	03.2022
		End date	04.2022
<p>Each supported company will be asked to answer a follow-up questionnaire about 3 months after the initial meeting and the delivery of the results of the assessments and specific recommendations.</p> <p>The aim of the follow-up will be to measure satisfaction with the support delivered and identify improvements in CE maturity as a result of the pilot action.</p>			

Result			
Companies assessed receive an individual evaluation with at least one individual recommendation.			
1	At least 16 evaluation reports with innovation needs and investment plans handed out	Date	31.01.2022

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 circular opportunities	Commitment level to CE implementation	Level of satisfaction
Goal	At least 16	100% of assisted companies identified a potential circular opportunity for their business	On average Increase in level of commitment, ideally in connection with a digital solution	Level of satisfaction of at least 8 (out of 10)
Evaluation method	1:1 assistance received	Documented results of assessment and recommendations	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 the 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, Grand E nov**

Dissemination level: **CO = confidential**

Revision: **DRAFT 02**

Due Date: **November 2021**

Date of submission: **December 2021**

1. Overview of the local pilot action – Grand Est Region (PP08 Grand E Nov)	7
2. Planned activities.....	11
3. Indicators (KPIs) and monitoring.....	13

Overview of the local pilot action – Grand Est Region (Grand E Nov)

Industry is living through a pivotal moment in its history with digital and ecological transformations that will profoundly change the way we produce. In this context, more and more industries have begun their transition. Well upstream of recycling, their approach consists of pivoting towards 6 circular economic models, from the sustainability of resources to the extension of the use of products and their regeneration. The benefits are numerous and meet economic, environmental and social objectives.

Digital tools and practices can facilitate and accelerate the transition to more sustainable production and organisation models and longer product life cycles.

They can be applied in various economic sectors. However, the relevance and maturity of the available digital technologies, the possible synergies and their environmental impact remain little known and underused.

The CIRCULAR 4.0 programme, based on tools and methodologies observed on the scale of the Alpine region, aims to facilitate this transition for industrial SMEs, to define, strengthen or implement their Industry of the Future and Circular approach.

The support in Grand Est region includes 4 collective workshops and 3 days of individual support by an expert financed by the INTERREG Alpine Arc programme.

- **Local context and CE approach**

The regional innovation agency Grand E Nov has launched a call for expressions of interest (AMI) in order to experiment and support digital innovation for the Circular Industry. To complete the regional service offer, we focused on the pillars of the circular economy related to optimal use and value recovery.

Targets:

Manager/executive of an industrial SME or serve the industry in the Grand Est

Reaching the limits of their business model and see the Circular Economy as an opportunity

Want to stand out from the competition as an Industry of the Future and Circular

Having an industrial and circular project that requires digital technology

Want to build, validate their business model and roadmap

Companies from the textile, bioeconomy, plastics, wood and manufacturing sectors that have been prioritised and targeted by the regional strategies.

- **Methodology**

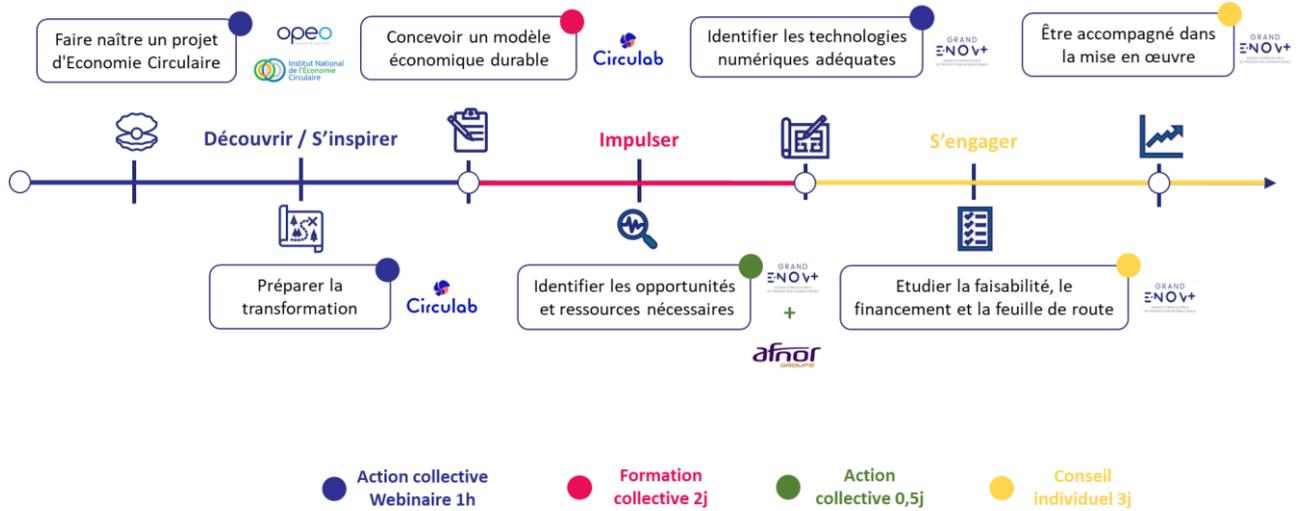
The Circular 4.0 programme consists of collective workshops, 2 days of training and 3 days of individual coaching by an expert financed by the INTERREG Alpine Arc programme. Applicant companies can be supported from September 2021 to March 2022. Registration has been opened publicly to allow any company to benefit from the programme. A communication campaign on various social networks and during various physical or digital events sought to reach the maximum number of companies.

To apply, SMEs have to complete the form by following this link:

<https://forms.office.com/Pages/ResponsePage.aspx?id=5UQqvyTdf0WEAFuarHI2qvQwtN1zlotNm-wWYQaTIHxUOVINRlcySFdVOTIQUIZPSEtNSVU0SEFNMS4u>

For further information, they can contact b.lallemand@grandenov.plus

Deadline for support indicated: March 2022 inclusive



Tools used



PARCOURS INDUSTRIE CIRCULAIRE Bilan & feuille de route

ENTREPRISE : ENVIE Alsace

ACTIVITE : collecte / réparation / revente de matériel électroménager ou paramédical

CONTACT (Nom & fonction) :

Date du bilan : 7/12/2021

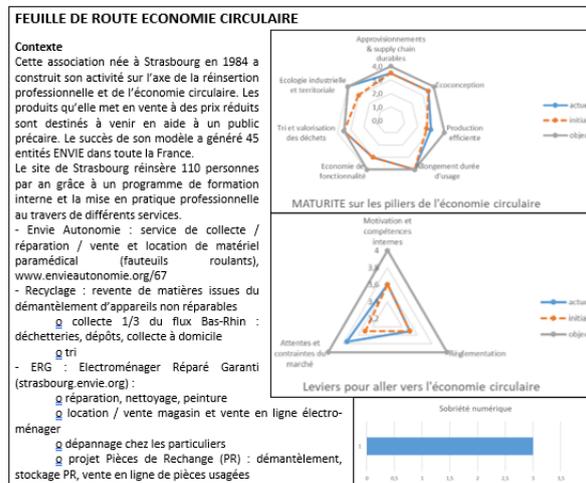
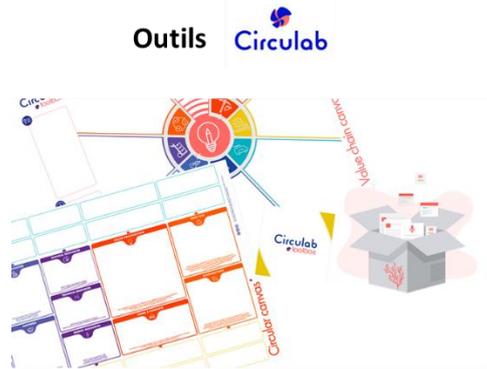
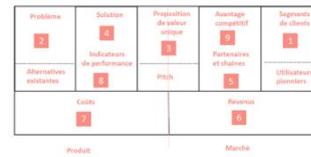


Figure 1: Circular and digital maturity assessment derived from DMA tool



Autres outils

- Lean Canvas



- Méthodologie TOGAF

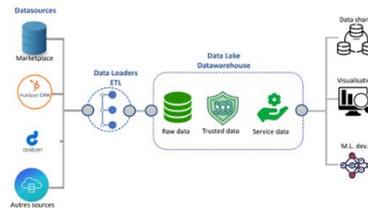


Figure 2: Circulab toolbox and specific tools used to support digital transitions

Modalities of the support programme

Depending on SME's maturity, we adapted the objectives of the support:



Figure 3: The 3 stages of maturity encountered

Stage 1 support

- Discover the principles of the circular economy; Webinars and discussions will help you understand the challenges and opportunities of the circular economy in your sector.
- Prepare your transformation; A collective workshop will allow you to discover a transformation process and its tools.
- Design a new sustainable business model: During a 2-day training session, reassess your company's needs, ambition, value proposition, products and services.

Stage 2 and 3 support

- Leveraging digital technologies to activate circular strategies: Various webinars will help you discover new possibilities and how to implement them.
- Establishing a digital roadmap and implementing it: 4 days of individual advice to study the feasibility, viability and financing of your digital innovation project and then facilitate the development of the solution.

- **Expected results**

Depending on their maturity and the support provided, companies will have benefited from:

- Discovering the key concepts of the circular economy and handling a methodology.
- Discovering the cases of companies that have implemented it and designing a first draft for the case of their company.
- Diagnosis of the business model hypothesis, identification of appropriate solutions and digital experts
- Construction of a roadmap to implement the solution and achieve the desired objectives.
- Implementation of the digital solution and evaluation of the effectiveness.

Planned activities

7. Selection/identification of SMEs

To identify companies to support through the Circular 4.0 programme, we have implemented different approaches:

- Getting companies interested in their own transition through awareness-raising workshops showing them examples from their own or other sectors, by presenting methods for building an ambition and roadmap
- Recruiting companies through other local intermediaries capable of detecting targets for the programme and having synergistic missions with our own.
- Directly approaching companies previously referenced according to their sector of activity and indices obtained by various media.

8. Thematic workshops/seminars

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

Various thematic sessions were organised dealing with circular industry equipped with digital technology or with exemplary circular transformations observed in specific sectors.

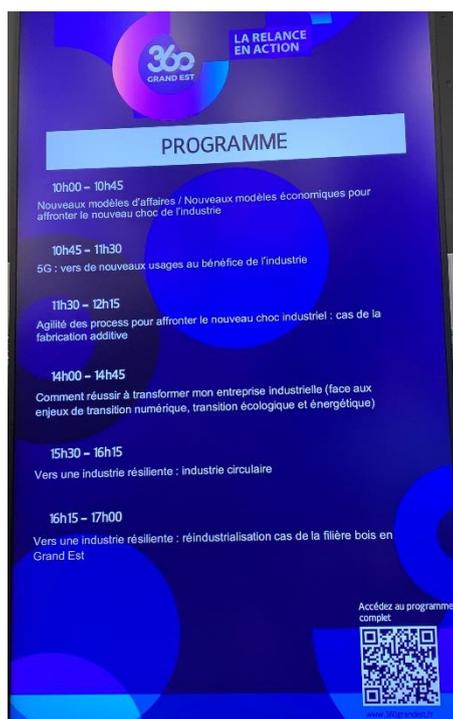


Figure 4: Track Circular 4.0 (7th of Dec 2021)

Visits to transfer centres were also organised to show the field of possibilities.

Mulhouse, le 6 octobre 2021

Le Pôle Textile Alsace en collaboration avec l'Agence d'Innovation et de Prospection Internationale Grand E-Nov+ est heureux de vous inviter à participer à une nouvelle rencontre du **Club Innovation Textile Alsace – CITA** pour 2021.

Le Pôle Textile Alsace veut poursuivre les échanges inter-entreprises et ainsi faciliter les synergies potentielles au sein des membres du Pôle Textile Alsace. Une des réponses est la poursuite de ce Club qui se retrouve 4 fois par an, chez un partenaire du réseau. Il sera accueilli pour cette nouvelle édition de l'année 2021 par l'Institut Carnot MICA et l'IS2M (Institut de Science des Matériaux de Mulhouse).

Réservez dans vos agendas la matinée du mercredi 8 décembre 2021 ! Nous serons accueillis par **Lionel LIMOUSY, Directeur de l'Institut Carnot MICA** pour démarrer le programme suivant :

UNE OFFRE MULTI-SECTEURS

**POUR VOS PROJETS D'INNOVATION, RECHERCHE
ET DÉVELOPPEMENT**



**AUTOMOBILE, SPATIAL ET
AÉRONAUTIQUE**

Allègement, durabilité, performance, confort, environnements extrêmes



MODE ET LUXE

Ennoblement, anti-contrefaçon, personnalisation, matériaux intelligents et connectés, micro et nano-fabrication



ÉNERGIE

Production, stockage, récupération, chaleur fatale, biomasse, Power to X, énergie verte



ENVIRONNEMENT

Éco-conception, développement durable, chimie verte, matériaux biosourcés, valorisation ressources, dépollution



SPORT ET BIEN-ÊTRE

Allègement, performance, aérodynamisme, durabilité, capteurs, matériaux actifs, textiles



INDUSTRIE DU FUTUR

Réalité virtuelle, fabrication additive, instrumentation, contrôle non-destructif en ligne



**BÂTIMENT ÉCONOME ET
DURABLE**

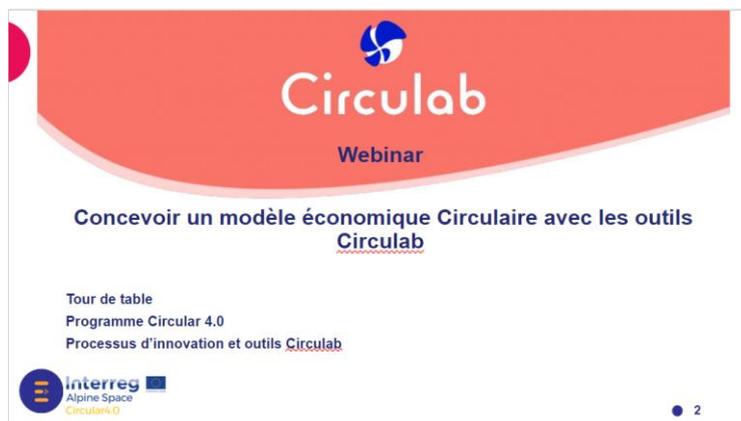
Matériaux intelligents, qualité de l'air, optique, performance énergétique



SANTÉ ET COSMÉTIQUE

Anti-bactérien, traitement de surfaces, théranostique, DMI, relargage contrôlé, biocompatibilité, performance, durabilité

Finally, the presentation of circular transition management methods was carried out.



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

At the start of each support, a digital maturity audit was carried out. The self-assessments were always confirmed by an initial interview with the company so as not to miss out on elements that could later have an impact on the action plan developed with the company. The diagnostic tool is derived from the DMA tool built for the 4.0 programme. It has been translated into French and modified to take into account certain national specificities.

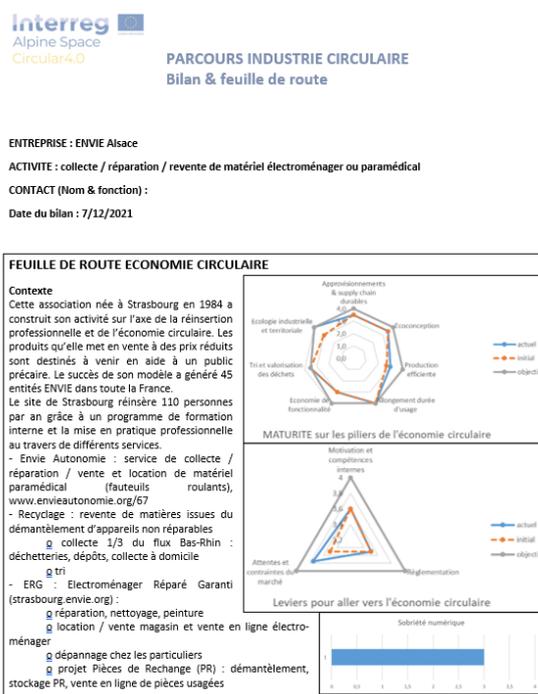


Figure 5: Example of assessment

The tool was also used to set maturation targets and allow for follow-up at the end of the programme. Thus three curves are presented in the reports submitted to the company.

The audit ends with the formalisation of the issues and needs identified and thus prepares the construction of an action plan.

<p>Enjeux et besoins</p> <p>Pour faire face à la croissance des volumes et du public en réinsertion (+20% d'ici 2023) et la mise en place du nouveau service de PR, l'entreprise déménage dans de nouveaux locaux à Geispolsheim. Equipée de différents logiciels métiers, l'activité souffre d'un manque d'efficacité (ressaisies et manques d'informations) et les outils sont mal adaptés à des travailleurs fragiles de faible maturité numérique. La société a notamment besoin d'outils efficaces pour :</p> <ul style="list-style-type: none"> - piloter le parcours des travailleurs en réinsertion - assurer la traçabilité des appareils et pièces depuis la collecte (lieu, heure, localisation, organisme), le tri et jusqu'à la vente - assurer le suivi des collectes et livraisons (géolocalisation et temps) - optimiser les tournées - gestion des locations - suivi et historique du parc d'appareil pour le SAV avec 8000 interventions par an - structuration de la démarche RSE - suivi d'indicateurs spécifiques à l'activité Social, Performance Opérationnelle et Economie Circulaire - vente en ligne <p>Le Client sollicite GRAND E-NOV pour l'accompagner dans le design de ces innovations organisationnelles et de process, et dans l'étude de la mise en œuvre des briques technologiques nécessaires.</p> <p>Maturité construction du modèle circulaire : Business <u>modèle</u> en place avec plusieurs marchés et intégration de l'ESS. Pas d'action / développement.</p> <p>Apport des outils numériques : Définition et implantation de nouveaux outils numériques pour améliorer les performances des équipes et des différentes activités.</p>

Figure 6: Example of an audit conclusions

10. Identification of innovation needs and investment plan

Title	Support to new / improved or transformed business model and technology adoption	Start date	04.2021
		End date	03.2022
Description			
<p>Supported by the Interreg Circular 4.0 project, Grand E-nov support manufacturers in their transformation towards the Circular Economy by considering innovative business models and relying on digital technologies. In this sense, the regional agency is organising several round tables to</p> <ul style="list-style-type: none"> - Bring out new circular and digital transition projects. - Discover inspiring initiatives to facilitate Technology adoption <p>Add sub-activities if necessary</p> <p><u>Support emergence of new business models</u></p> <p>The raw materials extracted from our soils are running out and some of them will no longer be available within 10 years. Faced with this major challenge, the Circular Economy proposes other ways of designing products, reducing and recovering waste to make new raw materials while reducing the carbon impact. Digital technologies play a central role in the design of products, the optimisation of processes and the construction of collaborative supply chains. Grand E nov organised some workshops to help SME's discover new business models and methodologies to develop those.</p> <p><u>Support technology adoption</u></p>			

<p>Extending the life span of products, pooling the use of products, aggregating pools of recycled materials, adjusting production to demand, optimising logistics circuits or eco-design using dedicated software: some levers that reduce the impact on the environment. Digital tools and practices facilitate and accelerate the transition to more sustainable production and organisation models. Grand E Nov organised some workshop to help SMEs discover those new technologies.</p>			
Results			
1	3 online / physical workshops	Date	2021-2022
2	30 participating SME's	Date	2021-2022

Title	Training to generate new / improved or transformed business model	Start date	MM.YYYY
		End date	MM.YYYY
Description			
<p>Training session organised for specific target group:</p> <ul style="list-style-type: none"> • Manager/executive of an industrial SME or supplier to the industry in the Grand Est • SME that reaches the limits of your business model and consider the Circular Economy as an opportunity • SME that wants to stand out from the competition as a Circular Industry • SME that has a circular economy project that needs to be formalised with experts • SME that wants to build, validate its business model and roadmap 			
Sub-activities			
<p>Through 2 days of support provided by the Circular 4.0 programme, we propose to start from their problems, to inspire them with the best initiatives to generate new hypotheses of circular business models models.</p> <p>1 day to use the Circulab tools with the presence of an expert to come up with a first hypothesis of a circular economic model and a set of points to check with potential partners to make this model real.</p> <p>Personal work on the part of the companies for one month to validate or resolve the questions</p> <p>Meeting of the companies through two thematic half-days to develop the roadmap and implement the economic model (necessary resources, financing tools, etc.)</p>			
Results			
1	6 New circular business models generated / validated	Date	Jan 2022
2	2 days of collective support	Date	Jan 2022

Title	Digital assessment and Roadmap	Start date	Mar 2021
		End date	Mar 2022
Description			
<p>Industrial SME's who wish to be accompanied to :</p> <p>At the strategic level</p> <ul style="list-style-type: none"> - Enlighten the Director on the possibilities of digital technologies. - Challenge the business issues that arise in all transparency/benevolence in order to formalise the product/process/service/marketing innovation axes according to a dynamic framework that will make it possible to drive/prioritise the opportunities that will be proposed. <p>At the operational level</p> <ul style="list-style-type: none"> - Prioritise/sequence innovation projects, in the medium/short/long term, on the basis of a strategy/innovation axes and according to the company's capacities (skills, equipment, software, IP, etc.). - Co-construct a business transformation roadmap to make innovative use of the data/assets held and create new economic value by responding to new analytical needs and new uses. This includes technical, HR and overall business organisation aspects. - Structure the innovation projects selected in the short term as well as the internal innovation process (innovation process where the roles of the different stakeholders are clearly defined). <p>Objectives:</p> <ul style="list-style-type: none"> • Establish an inventory of the company's digital and circular maturity. • Identify the areas of uncertainty, the hypotheses to be verified, the key points to be consolidated. • Help you structure your project in terms of activities, distribution of roles, planning of resources, deadlines, identification of risks. <p>Precision concerning the one-to-one support: Formalisation of your digital and circular innovation strategy</p> <ul style="list-style-type: none"> - Assistance in formalising and compiling the elements of analysis of the external environment, the value chain, competitive positioning, evolution of needs and user/customer paths and definition of opportunities - Framing of the company's digital ambition: Clarification of the technological possibilities and processes capable of responding to these opportunities through interviews with various experts in the candidate technologies, the targeted sectors or with experience close to the targeted services - Identification of the resulting challenges and strategic objectives 			
Results			
1	15 CE+digital maturity assessments of SMEs (Feedback from individual interviews)	Date	Mar 2021

2	15 Synthesis of digital innovation strategy	Date	Mar 2022
---	---	-------------	----------

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		CE Commitment level assessment		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	SELFIE ZOOM Maturity level	Describe what SME plan to do	Describe the inputs needed	Describe what has been done	CAS 2.0 comittment level	Describe what SME plan to do		Describe the Improvement		Describe the Improvement	

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**

D.T3.2.2

Local actions to implement CE Optimal Use approaches with digitalisation processes

Reporting on local pilot actions – BWCON

WP n°: T.3.	Fostering CE processes in Alpine Space with digitalisation processes
Task n°: T.3.2	Experimenting transnational actions to foster CE approaches through digitalisation
Author(s):	Luc Schmerber (bwcon)
Contributors:	Lara Trikha, Yasmin Abu Dorrah (bwcon)
Type:	T -Template
Dissemination level:	CO = confidential
Revision:	1st version
Due Date:	03.2022
Date of submission:	06.2022

1. Introduction.....	3
2. Local pilot action (<i>Bade-Wurtemberg</i>) (<i>bwcon</i>) - Overview.....	3
3. Identification and involvement of the SMEs for the Pilot Action	5
4. Implementation report	8
4.1. Selection/identification of SMEs	8
4.2. Circular CE capability/potentiality and Digital Maturity Assessment of SMEs.....	9
4.3. Identification of innovation needs and investment plan	10
4.4. Follow up on innovation needs and investment plan.....	11
5. Deviations from the pilot action plan (D.T3.1)	11
6. Communication activities implemented to support the pilot action	11
7. Summary of the achievements - lessons learnt	12
7.1. Achievements.....	12
7.2. Lessons learnt.....	12
8. Annexes.....	14

1. Introduction

The present deliverable displays for the local pilot action in Baden-Württemberg the:

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

2. Local pilot action (Bade-Wurttemberg) (bwcon) - Overview

The pilot addresses proprietarily manufacturing SMEs in Baden-Wurttemberg (Germany) focussing on the optimal use or resources. However, all other companies were invited to express their interest as, according to the experience made in previous project activities, the separation between circular design, optimal use and value recovery models is not clear to businesses and not always adapted to their practice. It is also not realistic to foresee the outcomes of the 1:1 assessment in terms of circular models. Due to the estimated rather low level of awareness of most SMEs, all CE approaches need to be considered.

According to the overall methodology defined for the pilot actions, the following activities were planned.

1	Selection/identification of SMEs	Start date	10.2021
		End date	11.2021
<p>The selection and identification of companies (in priority SMEs) to take part in the pilot in Baden-Wurttemberg shall place by means of an open call published by BWCON through its website and its newsletter. Partners in BWCON's network (business development organisations, digital hubs) were activated through personal contacts to extend the reach of the call. Companies headquartered or with a branch in Baden-Wurttemberg are selected on the basis of the "first come, first served" principle.</p>			
<p>Result Reach at least 16 interested SMEs to participate in the pilot action.</p>			
1	Collecting at least 16 interested SMEs to participate in the pilot action and make appointments to perform the initial assessment in online or onsite meetings.	Date	11.2021

2	Circular CE capability/potentiality and Digital Maturity Assessment of SMEs	Start date	11.2021
		End date	12.2021
<p>Each selected company will go through a CE maturity assessment using the CAS questionnaire (also accessible online in German). The assessment provides the basis for the 1:1 assistance and will be performed by students at the University of Applied Sciences Pforzheim, under the supervision of Prof. Dr Bernhard Kölmel. The assessments will be performed in the framework of a 1:1 online or onsite meeting with a representative of each company. The results will be documented in a common template for all businesses.</p>			
<p>Result Documented CE and digital maturity assessments</p>			

1	Documented CE maturity and digital maturity assessments according to a generic template for at least 16 eligible SMEs	Date	31.12.2021
---	---	-------------	------------

3	Identification of innovation needs and investment plan	Start date	12.2021
		End date	01.2022

Each company supported will receive, in addition to the results of its CE and digital maturity assessment result, a document established in collaboration with the SME (on the basis of the 1:1 meeting) and encompassing at least one specific 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

Additionally, the participating companies are invited to self-study CAT2.0 on the online learning platform Talent LMS.

Result

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

1	At least 16 evaluation reports with innovation needs and investment plans handed out	Date	31.01.2022
---	--	-------------	------------

4	Follow up on innovation needs and investment plan	Start date	03.2022
		End date	04.2022

Each supported company will be asked to answer a follow-up questionnaire about 3 months after the initial meeting and the delivery of the results of the assessments and specific recommendations. The aim of the follow-up will be to measure satisfaction with the support delivered and identify improvements in CE maturity as a result of the pilot action.

Result

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

1	At least 16 evaluation reports with innovation needs and investment plans handed out	Date	31.01.2022
---	--	-------------	------------

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

The following activities were implemented to identify participating SMEs:

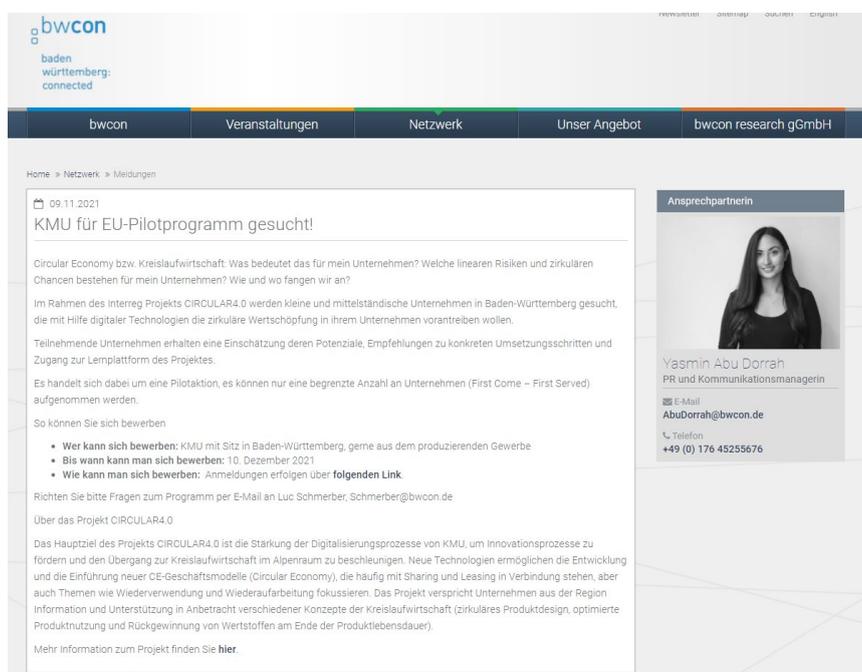
Information event *(Further information: see Annex 1)*

An event to raise Awareness for Circular Economy supported by digitalization and inform about the opportunities offered by Circular 4.0 through the local pilot action in Baden-Württemberg was delivered in the framework of the High Tech Summit (<https://hightech-summit.de/der-hts-2021/>), a major innovation and technology related event organised yearly by BWCON. The event was organised as a hybrid event.

The Circular 4.0 project and more specifically the local pilot action was presented on 19. October 2021 during a session called TechBreakfast.

Public call for Expression of Interest

A public call for Expression of Interest was published on BWCON's website on 09. November 2021 to invite interested companies to join the pilot:



<https://www.bwcon.de/aus-dem-netzwerk/meldungen/detail/kmu-fuer-eu-pilotprogramm-gesucht>
(retrieved on 10.11.2021)

Social media

The publication on BWCON's web site was followed by a social media campaign on 19-22 November 2021, using the existing LinkedIn, Twitter and Facebook channels of BWCON

- LinkedIn
<https://www.linkedin.com/feed/update/urn:li:activity:6868663542732656640>

bwcon 2,073 followers
5mo •

Circular Economy bzw. Kreislaufwirtschaft: Was bedeutet das für mein Unternehmen? Welche linearen Risiken und zirkulären Chancen bestehen für mein Unternehmen? Wie und wo fangen wir an?

Jetzt hier für das **CIRCULAR4.0** Projekt bewerben <https://lnkd.in/efYmpyxb>

Im Rahmen des Interreg Projekts CIRCULAR4.0 werden kleine und mittelständische Unternehmen in Baden-Württemberg gesucht, die mit Hilfe digitaler Technologien die zirkuläre Wertschöpfung in ihrem Unternehmen vorantreiben wollen.

Teilnehmende Unternehmen erhalten eine Einschätzung deren Potenziale, Empfehlungen zu konkreten Umsetzungsschritten und Zugang zur Lernplattform des Projektes.

Es handelt sich dabei um eine Pilotaktion, es können nur eine begrenzte Anzahl an Unternehmen (First Come – First Served) aufgenommen werden.

[See translation](#)



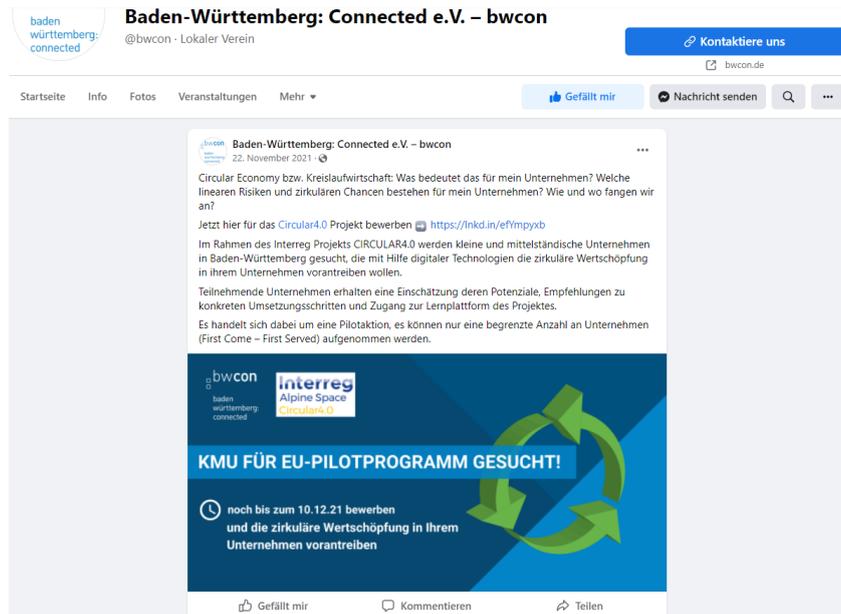
Twitter

https://twitter.com/bwcon_info/status/1462898851896078343

Twitter interface showing a tweet from @bwcon_info. The tweet content is identical to the one above, including the promotional banner image. The interface includes a left sidebar with 'Entdecken' and 'Einstellungen', a top navigation bar with 'Tweet', and a bottom interaction bar with icons for replies, retweets, likes, and shares. The tweet is dated '10:40 nachm. · 22. Nov. 2021 · Twitter Web App' and shows '1 „Gefällt mir“-Angabe'.

- Facebook

<https://www.facebook.com/bwcon/posts/5224946564186297>



Direct contact with businesses

In addition to the above, considering the insufficient number of companies registered through the public call, direct contacts towards potentially interested companies were initiated. Partners in BWCON's network (business development organisations, digital hubs) were activated through personal contacts to extend the reach of the call.

4. Implementation report

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

1. Selection/identification of SMEs
2. Circular CE capability/potentiality and Digital Maturity Assessment of SMEs
3. Identification of innovation needs and investment plan
4. Follow up on innovation needs and investment plan

In addition, taking advantage of the extension of the project, an initially not planned activity was implemented:

5. Characterising CE business models for optimal use building on digital technologies

4.1. Selection/identification of SMEs

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

1	Selection/identification of SMEs	Start date	10.2021
		End date	11.2021 (1 st bench) 05.2022 (2 nd bench)
<p>The selection and identification of companies (in priority SMEs) to take part in the pilot in Baden-Württemberg took place by means of an open call published by BWCON through its website and its newsletter. Partners in BWCON's network (business development organisations, digital hubs) were activated through personal contacts to extend the reach of the call.</p> <p>The activities (as described above in chapter 3 enabled to identify – by the end of November 2021 - 23 businesses, of which 20 SMEs willing to take part in the local pilot.</p> <p>The selected businesses come from the following sectors in activity:</p> <ul style="list-style-type: none"> ▪ Manufacturing/I4.0: 14 (61%) ▪ Plastics/chemicals: 2 ▪ Food: 1 ▪ Energy: 2 ▪ Construction: 1 ▪ Waste recycling: 1 ▪ Finance: 1 ▪ Logistics: 1 <p>Overall, the focus on the manufacturing/I4.0 sector could be maintained, while a number of other sectors were represented with one or two businesses.</p> <p>The SMEs selected were mid-sized companies, with a number of employees from 20 to approximately 250. Three businesses were slightly larger with a number of employees between 270 and 400.</p> <p>Additional activities: Considering the extension of the project, a second bench of 17 businesses was identified in May 2022 to take part in a second round of support activities as described below.</p>			
Result			

<i>Planned: Reach at least 16 interested SMEs to participate in the pilot action.</i>			
Achieved: 38 business, of which 30 SMEs willing to take part in the pilot action were identified.			
1	23 businesses, of which 20 SMEs were identified and appointments made to perform the initial assessment in online or onsite meetings.	Date	11.-12. 2021
2	17 additional businesses, of which 17 SMEs were identified for a second round of support activities and appointments made to perform the initial assessment in online or onsite meetings.	Date	05.-16. 2022
Deviations and corrective measures, including additional activities			
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. BWCON supported therefore all candidate SMEs upon validation of their relevance to the overall objective of the project, i.e. an activity potentially suitable for the optimal use of resources model.		
2	Considering the extension of the project, a second bench of businesses was identified in May 2022 to take part in a second round of support activities.		

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

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

2	Circular CE capability/potentiality and Digital Maturity Assessment of SMEs	Start date	11.2021
		End date	12.2021 (1 st bench) 05.2022 (2 nd bench)
<p>Each selected company went through a CE and digital maturity assessment using:</p> <ul style="list-style-type: none"> ▪ the CAS questionnaire (also accessible online in German). ▪ A DMA tool developed by the University of Pforzheim <p>The assessments were performed in the form of interviews in the framework of online meetings with a representative of each company. The CE maturity assessment and DMA were performed in one go in the same meeting (1 distinct meeting per company).</p> <p>The assessments were performed by students at the University of Applied Sciences Pforzheim, under the supervision of Prof. Dr Bernhard Kölmel, who attended himself a significant part of the interviews. The assessments and further inputs from the interviews provided the basis for additional 1:1 meetings, which took place a few days later in a similar manner.</p> <p>The results of both meetings were combined in the elaboration of recommendations / suggestions for improvements by the students under the supervision of Prof. Dr Bernhard Kölmel and Luc Schmerber, Project Manager at BWCON.</p> <p>The results were documented in a common template for all businesses.</p>			
Result			
40 documented CE and digital maturity assessments			

1	Documented CE maturity and digital maturity assessments according to a generic template for 23 businesses, of which 20 SMEs	Date	10.12.2021
2	Documented CE maturity and digital maturity assessments according to a generic template for additional 17 businesses, of which 17 SMEs	Date	30.06.2022
Deviations and corrective measures, including additional activities			
1	No significant deviation from the plan, except for the extension of the pilot to a second bench of businesses (see activity 1)		

Further information: see Annex 2:

- Overview of the results of the CE and DMA assessments

4.3. Identification of innovation needs and investment plan

3	Identification of innovation needs and investment plan	Start date	11.2021
		End date	01.2022 (1 st bench)
<p>The third activity was dedicated to the formulation of recommendations and suggestions for improvements in the form of an action plan (investment plan). Each company supported received, in addition to the results of its CE and digital maturity assessment result, a document established in collaboration with the SME (on the basis of the 1:1 meetings) and encompassing at least one specific recommendation covering one or several of the following aspects of the transformation of the company towards higher circularity (= increase of maturity level)</p> <ul style="list-style-type: none"> ▪ Technology adoption ▪ New or improved process ▪ New or improved or transformed business model ▪ New or improved products ▪ New or improved services <p>And with the following characteristics:</p> <ul style="list-style-type: none"> ▪ Digitally supported (as far as possible) ▪ With a time horizon from 6 months up to 1 year <p>All 23 businesses from the first bench received their recommendations between 30.11.2021 and 15.12.2021.</p> <p>The 17 companies from the second bench did only take part to the previous activity: Circular CE capability/potentiality and Digital Maturity Assessment of SMEs. The closure of the pilot by June 2022 and the resources available did not allow for a full round of support for the second bench of businesses.</p> <p>Additionally, the participating companies are invited to self-study CAT2.0 on the online learning platform Talent LMS.</p>			
Result			
Companies assessed receive an individual evaluation with at least one individual recommendation.			
1	22 evaluation reports with innovation needs and investment plans handed out	Date	31.01.2022
Deviations and corrective measures, including additional activities			
1	No significant deviation from the plan.		

Further information: see Annex 3 - Reporting template

4.4. Follow up on innovation needs and investment plan

4	Follow up on innovation needs and investment plan	Start date	03.2022
		End date	03.2022
<p>Considering the reluctance of participating companies to answer a follow-up questionnaire, Prof. Dr. Kölmel had follow-up interviews with 11 (out of 23) businesses from the first bench willing to do so, in order to</p> <ul style="list-style-type: none"> ▪ Measure satisfaction with the support delivered. ▪ Identify improvements in CE maturity as a result of the pilot action. ▪ Collect input for further recommendations <p>All those interviews took place in March 2022 and provided the basis for the evaluation of the local pilot action from the perspective of the participating SMEs.</p>			
<p>Result Companies assessed receive an individual evaluation with at least one individual recommendation.</p>			
1	23 evaluation reports with innovation needs and recommendations for action (investment plan) were handed out to businesses.	Date	03.2022 (1 st bench)
Deviations and corrective measures, including additional activities			
1	No significant deviation from the plan		

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

The following deviations from the plan did occur (see also description of the activities above):

- Extension of the selected SMEs to businesses identified through direct contacts.
- Extension of the sectors to some non-planned ones.
- Extension to the activities to a second bench of businesses in the period May-June 2022.
- Additional activity on the characterization of specific CE business models for optimal use building on digital technologies, with a focus on digital product passports and product-service systems.

6. Communication activities implemented to support the pilot action

The communication activities were the ones performed for the identification of SMEs (see chapter 3). Further communication activities will build on the results of the local action plan: regional infoday and regional capitalisation workshop. Those activities will take place after the closure of the local action plan.

7. Summary of the achievements - lessons learnt

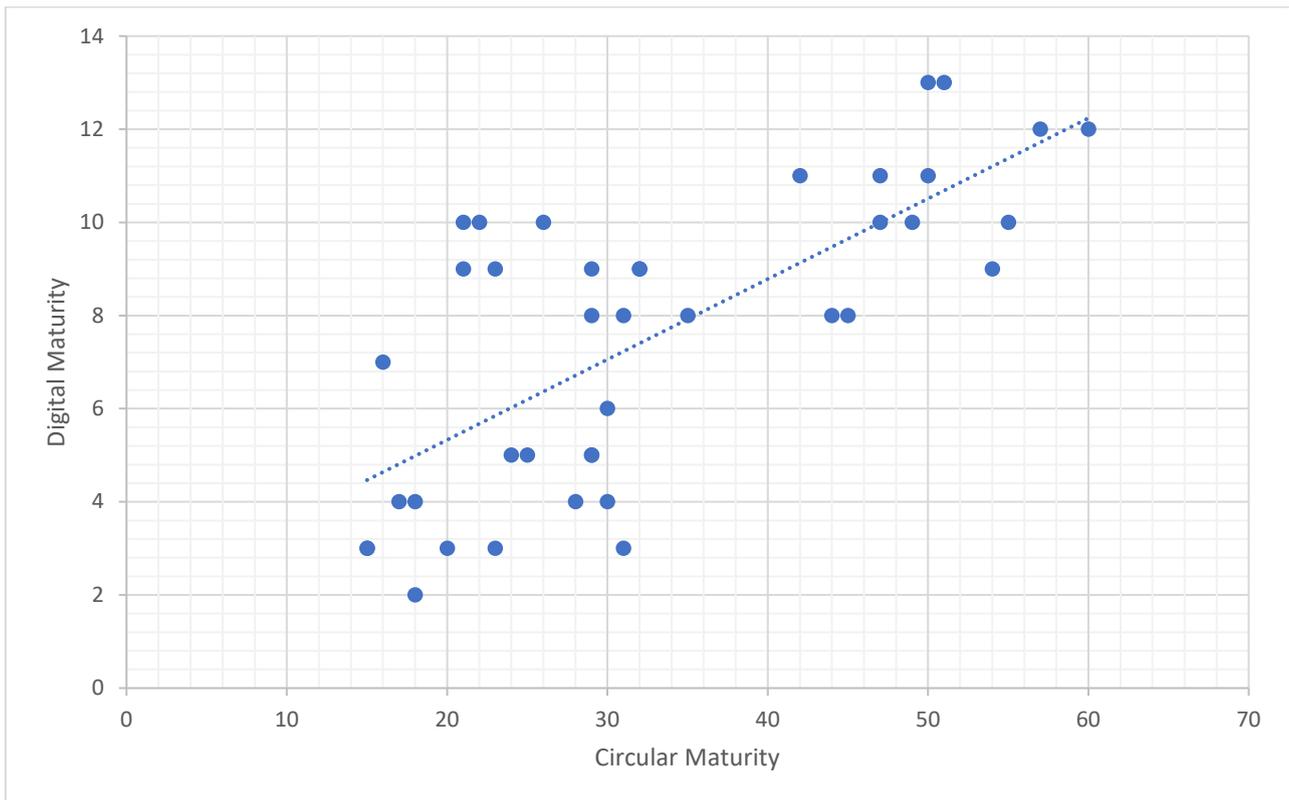
7.1. Achievements

The following achievements can be reported:

KPI	number of SMEs assisted	Identification of circular opportunities	Commitment level to CE implementation
Goal	<i>At least 16</i>	<i>100% of assisted companies identified a potential circular opportunity for their business</i>	<i>On average Increase in level of commitment, ideally in connection with a digital solution</i>
Achievement	37 SMEs + 3 larger enterprises	All 23 companies from the first bench received concrete recommendations building on the assessments and 1:1 meetings	11 companies (out of 23 from the first bench) did take part in a follow-up discussion and want to commit to new CE solutions. The level of commitment of the remaining companies could not be realistically estimated in the short timeframe of the pilot.

7.2. Lessons learnt

From the assessments of the initial 23 companies we found a correlation between digital maturity and circular maturity; probably based on the ability to implement strategic intentions, which was confirmed with the assessments performed with the second bench of companies (correlation coefficient of 0,71)



From the direct interaction with the companies' representatives we could extract the following qualitative learnings:

- Overall, there is:
 - A large and growing interest in going green.
 - But a great deal of uncertainty, particularly in the smaller companies, as to how best to proceed
- The topic has arrived in the strategic environment of the companies, but the strategic goals have not yet been fully broken down into operational activities. Very often, however, the economic pressure is stronger than the "green" intentions.
- Greenwashing is practiced by virtually every company because all external stakeholders attach importance to it → the motto here is: fake it till you make it.
- So far, bottom-up activities dominate, as these serve well as show-cases to the outside world.
- It is expected that new legal requirements will be issued in the foreseeable future and that on this basis either economic advantages can be achieved or at least no disadvantages will result from green commitment.
- New technologically based topics, such as the digital product passport, are seen as sensible and promising approaches.

Key message for implementation in companies: Generating best practices, especially when breaking down strategic green goals into operational opportunities for action.

Recommendations for the policy level: provide a legal framework as fast as possible. Many companies do not get (sufficiently) involved because they fear they will be at an economic disadvantage compared to environmental offenders.

8. Annexes

Annex 1 - Hightech Breakfast at HTS 2021

Annex 2 – Overview assessment results

Annex 3 – Reporting template

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**

D.T3.2.2

Local actions to implement CE Optimal Use approaches with digitalisation processes

Reporting on local pilot actions –
BWCON

Annex 1 – Hightech Breakfast at HTS 2021

Hightech Breakfast at HTS 2021

An event to raise Awareness for Circular Economy supported by digitalization and inform about the opportunities offered by Circular 4.0 through the local pilot action in Baden-Württemberg was delivered in the framework of the High Tech Summit (<https://hightech-summit.de/der-hts-2021/>), a major innovation and technology related event organised yearly by BWCON. The event was organised as a hybrid event.

The Circular 4.0 project and more specifically the local pilot action was presented on 19. October 2021 during a session called TechBreakfast.

- Agenda
- List of participants
- Pictures
- Presentation of Circular 4.0, delivered by Lara Trikha

Agenda of HTS 2021

- Overall agenda – Techbreakfasts did take place on 19.10.2021 in the morning



The image shows a blue-themed agenda and program for the Hightech Summit 2021. The title 'Ablauf und Programm' is prominently displayed. The agenda is organized into three columns for the dates 18.10.2021, 19.10.2021, and 20.10.2021. A vertical time axis on the left side of the 18.10.2021 column lists times from 9:00 Uhr to 20:00 Uhr. The program includes various activities such as 'Warm-up', 'Start-up BW Elevator Pitch Special Cup', 'Eröffnung online', 'Media Karlsruhe', 'Manufacturing Ulm', 'Networking', 'Techbreakfasts', 'Top of the Summit mit CyberOne Preisverleihung', 'Matchmaking mit der Hightech Summit Community online', 'Medicine Mannheim', 'Mobility Breisach', and 'Abschluss online'. The Hightech Summit logo is in the top right corner.

	18.10.2021	19.10.2021	20.10.2021
9:00 Uhr	Warm-up startup bw	Techbreakfasts Rund um den Hospitalhof Stuttgart	Matchmaking mit der Hightech Summit Community online
10:00 Uhr	Start-up BW Elevator Pitch Special Cup		
11:00 Uhr			
12:00 Uhr			
13:00 Uhr	Eröffnung online		
14:00 Uhr			
15:00 Uhr	Media Karlsruhe	Top of the Summit mit CyberOne Preisverleihung Hospitalhof Stuttgart	Medicine Mannheim
16:00 Uhr	Manufacturing Ulm		Mobility Breisach
17:00 Uhr			
18:00 Uhr			
19:00 Uhr	Networking	Networking	
20:00 Uhr			Abschluss online



Agenda

	Green Technologies	Hochschule meets Industrie	Venture Capital	Data X - Driving New Businesses with AI
9:00 Uhr	Begrüßung	Begrüßung Dr. Raoul Haschke (Universität Heidelberg), Rebecca Off (Hochschule Konstanz)	Begrüßung	Begrüßung Armin Heinzl (Uji Mannheim), Markus Linha (BW Bank), Welcome-Video – Ikhtaq Sidhu (UC Berkeley), Marc König (bwcon)
9:15 Uhr	Impulsvortrag: Aktuelle Herausforderungen „Green Technologies“	Industrie @ Entrepreneurship Education: Wie profitiert die Industrie von der Zusammenarbeit mit Entrepreneurship Lehrstühlen	Finanzierung von Start-ups in Baden-Württemberg – Die Finanzierungslandschaft im Bereich Frühphase	Keynote Carsten Kraus (Omikron)
9:30 Uhr				
9:45 Uhr	Diskussionsrunde: Relevante Technologien für die Nachhaltigkeit	Kaffeepause und Frühstück	Kaffeepause und Frühstück	Ethics on the Engine - Wie kommt Ethik ins digitale Geschäftsmodell? Eberhard Schmebel (Goethe Universität / Commerzbank AG)
10:00 Uhr		Industrie @ TechTransfer: Wie funktioniert TechTransfer zwischen Industrie und Hochschule	Talkrunde mit Finanzierungspartnern	Networking & Pause
10:15 Uhr	Kaffeepause und Frühstück	Networking		Gaia-X Holger Kett (Fraunhofer IAO)
10:30 Uhr				Keynote Michael Bach, Frank Schäfer (CST GmbH)
10:45 Uhr				Keynote Deborah Mateja (LogoAI)
11:00 Uhr				
11:15 Uhr	Pitching Session			
11:30 Uhr				
11:45 Uhr	Networking			
12:00 Uhr				

Circular 4.0 was presented during the session on Green Technologies by Lara Trikha (BWCON), who also moderated the whole session.

List of participants (onsite)

Green technologies - Circular Economy | 19. Oktober
 2021 | 9:00 Uhr – 12:00 Uhr |
 Rosenau - Lokalität & Bühne, Rotebühlstrasse 109
 b, 70178 Stuttgart (West)



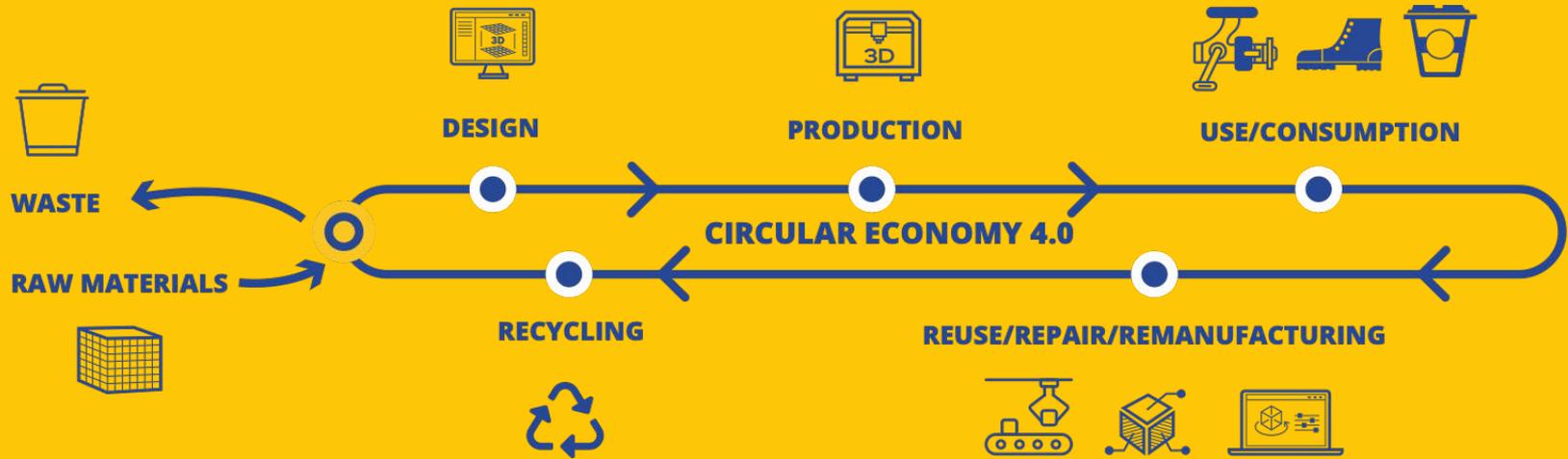
	Titel	Name	Vorname	Unternehmen	3G Nachweis	Unterschrift
1		Buhmann	Timo	TEQneers GmbH & Co. KG	✓	<i>Timo Buhmann</i>
2		Ryschka	Karin	ENNAGY	✓	<i>Karin Ryschka</i>
3		Terry	Johanna	NovaLoop GmbH		
4	Dr.	Thomann	Robert	MVV Energie AG		
5		Girke	Carsten	iPoint-systems gmbh	✓	<i>Carsten Girke</i>
6		Krain	Norbert	Ericsson	✓	<i>Norbert Krain</i>
7		McKay	Alexandre	Klinge Paper and Packaging Group	✓	<i>Alexandre McKay</i>
8		Sorg	Florian	Herr Florian Sorg	✓	<i>Florian Sorg</i>
9		Trikhra	Lara		✓	<i>Lara Trikhra</i>
10		Balasubramanian	Kedar	OLI Systems GmbH		
11		Hiemann	Hjalmar	Wirtschaftsförderung Region Stuttgart GmbH	✓	<i>Hjalmar Hiemann</i>
12	Dr.	Lehner	Lars	LEHNER GmbH Sensor-Systeme		
13		Oliveira-Lenz	André	Industrie- und Handelskammer Südlicher Oberrhein		
14		Warzecha	Volker	IV Ventures		
15		Zordel	Lisa	bucon	✓	<i>Lisa Zordel</i>
16		Wohner	Benjamin	InnoEnergy	✓	<i>Benjamin Wohner</i>
17		Meyer	Leonie		✓	<i>Leonie Meyer</i>
18		Grosman	Yuri		✓	<i>Yuri Grosman</i>
		KOMOR	RALF	KOMOR INTERIM MANAGEMENT	✓	<i>Ralf Thomann</i>
		Robert	Thomann			

Pictures





Circular 4.0



Hightech Summit Techbreakfast
Green Technologies

Lara Trikha, bwcon GmbH
19.10.2021

Alpine Space Projekt Circular 4.0



CIRCULAR4.0

Hauptziel:

Digitalisierungsprozesse von KMU zu stärken, um Übergang zur Circular Economy im Alpenraum zu beschleunigen

- Bewusstseinsbildung & Wissenstransfer
- Transnationale Arbeitsgruppen
 - Circular Design
 - Optimal Use
 - Value Recovery

CIRCULAR4.0

Output:

- Perspektiven, Bedürfnisse und Erwartungen von KMU analysieren
- CIRCULAR4.0-Toolkit & Trainingsmethoden
- Lokale Maßnahmen für KMU zur Förderung von CE-Themen durch Digitalisierungsprozesse
- Action Plan zur Stärkung der Umsetzung des EU-Kreislaufwirtschaftspaket
- Circular Economy Community

Oktober 2021 bis März 2022: KMU's gesucht

Pilot Projekte

Online-Events, 1:1-Coachings, Workshops & Förderungsangebote
Zugang zu Mentor*innen und Expert*innen
Bewertung der Wirksamkeit der Digitalisierung von KMUs und Vorantreiben von
Prozessen von Circular Economy

Ziel: Teilnahme von 280 Unternehmen an Pilotaktionen

Danke



Lara Trikha



<https://www.bwcon.de/projekte/circular-40>



Trikha@bwcon.de

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**

D.T3.2.2

Local actions to implement CE Optimal Use approaches with digitalisation processes

Reporting on local pilot actions –
BWCON

Annex 2 – Overview assessment results

LOCAL PILOT ACTION - BWCON

Overview of companies assisted in Baden-Württemberg

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	Follow up
BWCON 01	SME	Baden-Württemberg	Industrial solutions (I4.0)	11.2021	CAS4.0	11.2021	UP tool	11.2021	11.2021	20.03.2021
BWCON 02	enterprise	Baden-Württemberg	Automotive (Manufacturing)	11.2021	CAS4.0	11.2021	UP tool	11.2021	11.2021	20.03.2021
BWCON 03	SME	Baden-Württemberg	Automotive (Manufacturing)	11.2021	CAS4.0	11.2021	UP tool	11.2021	12.2021	20.03.2021
BWCON 04	SME	Baden-Württemberg	Automotive/Military (Manufacturing)	11.2021	CAS4.0	11.2021	UP tool	11.2021	12.2021	20.03.2021
BWCON 05	SME	Baden-Württemberg	Automotive (Manufacturing)	11.2021	CAS4.0	11.2021	UP tool	12.2021	12.2021	
BWCON 06	SME	Baden-Württemberg	Plastics	11.2021	CAS4.0	11.2021	UP tool	11.2021	11.2021	
BWCON 07	SME	Baden-Württemberg	Chemical	11.2021	CAS4.0	11.2021	UP tool	11.2021	11.2021	
BWCON 08	SME	Baden-Württemberg	Automotive (Manufacturing)	11.2021	CAS4.0	11.2021	UP tool	11.2021	n.a.	
BWCON 09	SME	Baden-Württemberg	Food	11.2021	CAS4.0	11.2021	UP tool	11.2021	12.2021	20.03.2021
BWCON 10	SME	Baden-Württemberg	Assembly (Logistics/I4.0)	11.2021	CAS4.0	11.2021	UP tool	11.2021	12.2021	
BWCON 11	enterprise	Baden-Württemberg	Automotive (Manufacturing)	12.2021	CAS4.0	12.2021	UP tool	12.2021	12.2021	
BWCON 12	SME	Baden-Württemberg	Software (Energy)	11.2021	CAS4.0	11.2021	UP tool	11.2021	30.11.2021	20.03.2021
BWCON 13	SME	Baden-Württemberg	Energy	11.2021	CAS4.0	11.2021	UP tool	11.2021	11.2021	20.03.2021
BWCON 14	SME	Baden-Württemberg	Logistics	11.2021	CAS4.0	11.2021	UP tool	11.2021	11.2021	20.03.2021
BWCON 15	SME	Baden-Württemberg	Automotive (Manufacturing)	11.2021	CAS4.0	11.2021	UP tool	11.2021	11.2021	20.03.2021
BWCON 16	SME	Baden-Württemberg	Finance (ICT)	11.2021	CAS4.0	11.2021	UP tool	11.2021	11.2021	20.03.2021
BWCON 17	SME	Baden-Württemberg	Mechanical engineering (I4.0)	11.2021	CAS4.0	11.2021	UP tool	11.2021	11.2021	20.03.2021
BWCON 18	SME	Baden-Württemberg	Mechanical engineering (I4.0)	12.2021	CAS4.0	12.2021	UP tool	12.2021	12.2021	
BWCON 19	enterprise	Baden-Württemberg	Mechanical engineering (I4.0)	211.2021	CAS4.0	11.2021	UP tool	11.2021	12.2021	
BWCON 20	SME	Baden-Württemberg	Mechanical engineering (I4.0)	12.2021	CAS4.0	12.2021	UP tool	12.2021	12.2021	
BWCON 21	SME	Baden-Württemberg	Tools (Manufacturing)	11.2021	CAS4.0	11.2021	UP tool	11.2021	12.2021	

LOCAL PILOT ACTION - BWCON

Overview of companies assisted in Baden-Württemberg

BWCON 22	SME	Baden-Württemberg	Materials (construction)	11.2021	CAS4.0	11.2021	UP tool	11.2021	11.2021
BWCON 23	SME	Baden-Württemberg	Waste recycling	12.2021	CAS4.0	12.2021	UP tool	12.2021	12.2021
BWCON 24	SME	Baden-Württemberg	IT	05.2022	CAS4.0	05.2022	UP tool	05.2022	
BWCON 25	SME	Baden-Württemberg	Plastics	05.2022	CAS4.0	05.2022	UP tool	05.2022	
BWCON 26	SME	Baden-Württemberg	Automotive	05.2022	CAS4.0	05.2022	UP tool	05.2022	
BWCON 27	SME	Baden-Württemberg	IT	05.2022	CAS4.0	05.2022	UP tool	05.2022	
BWCON 28	SME	Baden-Württemberg	IT	05.2022	CAS4.0	05.2022	UP tool	05.2022	
BWCON 29	SME	Baden-Württemberg	IT	05.2022	CAS4.0	05.2022	UP tool	05.2022	
BWCON 30	SME	Baden-Württemberg	IT	05.2022	CAS4.0	05.2022	UP tool	05.2022	
BWCON 31	SME	Baden-Württemberg	IT	05.2022	CAS4.0	05.2022	UP tool	05.2022	
BWCON 32	SME	Baden-Württemberg	Plastics	05.2022	CAS4.0	05.2022	UP tool	05.2022	
BWCON 33	SME	Baden-Württemberg	IT	05.2022	CAS4.0	05.2022	UP tool	05.2022	
BWCON 34	SME	Baden-Württemberg	IT	05.2022	CAS4.0	05.2022	UP tool	05.2022	
BWCON 35	SME	Baden-Württemberg	Energy	05.2022	CAS4.0	05.2022	UP tool	05.2022	
BWCON 36	SME	Baden-Württemberg	Automotive	05.2022	CAS4.0	05.2022	UP tool	05.2022	
BWCON 37	SME	Baden-Württemberg	IT	05.2022	CAS4.0	05.2022	UP tool	05.2022	
BWCON 38	SME	Baden-Württemberg	Tools (Manufacturing)	05.2022	CAS4.0	05.2022	UP tool	05.2022	
BWCON 39	SME	Baden-Württemberg	IT	05.2022	CAS4.0	05.2022	UP tool	05.2022	
BWCON 40	SME	Baden-Württemberg	Plastics	05.2022	CAS4.0	05.2022	UP tool	05.2022	

Domain		industrial solutions	automotive	automotive	military	automotive	plastics	chemical	automotive	food	assembly	automotive	software	energy	logistics	automotive	financial	machines	machines	machines	precision
Circular Maturity	Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	1	a	a	b	c	a	a	a	b	c	b	a,b	b	b	a	b	a	b	a	a	a
	2	b	a,b	d,e	e	e,f	a,d	a,b	a,b,d	a,b	b,d,e,f	a,b,c	a,b	b,d,e	e,f	b,c,e	b,c,d	a,c,d	a	a	a
	3	20202020	20104010	20201050	251010	25101010	25101010	20106020	25101010	30101030	20104010	25102010	451030	10102010	20301010	25101010	40201020	20106020	20106020	20106020	20106020
	1	0	0	3	1	1	1	1	2	3	1	1	2	0	4	1	3	3	1	2	1
	2a	0	0	2	1	0	2	2	2	2	2	2	2	1	3	1	2	2	1	2	3
	2b	0	0	1	1	1	2	2	2	2	2	2	2	0	3	2	2	2	0	2	3
	2c	0	0	0	0	0	0	0	2	0	2	2	2	0	1	1	1	2	2	1	1
	3	3	1	3	0	1	1	0	3	2	2	1	4	0	2	2	1	2	1	2	0
	4	0	1	1	1	1	1	0	3	0	1	1	2	2	2	1	1	2	1	2	1
	5	0	0	1	1	0	1	1	3	2	2	1	2	1	2	1	0	1	1	2	1
	6	2	0	2	0	2	1	0	2	0	2	2	4	2	2	2	1	2	2	2	1
	7	0	3	0	1	2	2	2	3	3	0	1	4	0	4	2	0	2	0	2	2
	8	0	3	3	1	1	2	0	2	2	1	1	4	0	2	2	1	4	2	2	1
	9	4	1	3	2	1	2	2	3	1	1	4	5	3	4	1	1	3	1	1	1
	10	3	0	3	0	0	2	1	2	1	3	2	4	0	1	1	0	3	1	3	1
	11	0	0	0	0	1	1	0	2	1	0	2	2	0	1	2	0	3	0	3	2
	12	0	0	1	0	0	2	0	2	1	0	2	3	2	2	2	0	2	0	1	0
	13	3	1	0	2	1	2	1	1	0	0	2	2	0	2	3	3	3	1	1	1
	14	2	3	1	3	1	2	3	2	2	3	1	3	3	3	1	3	3	1	1	1
	15	0	1	1	1	1	1	1	3	3	1	2	1	1	3	2	1	3	1	1	1
	16	1	0	2	1	1	2	1	3	1	1	1	2	3	1	0	1	3	1	3	3
	17	0	0	2	0	0	1	0	0	2	0	1	2	1	1	0	0	3	2	1	1
	18	0	1	2	0	0	2	1	2	3	0	1	2	3	2	1	0	3	2	1	1
	Sum	18	15	31	16	15	30	18	44	31	24	32	54	23	45	29	21	51	21	35	26
Digital Maturity	Question																				
	1	2	1	3	2	1	2	2	3	1	3	3	3	3	3	2	3	3	3	3	3
	2	b	b	a	a	a	a	a	a	b	b	a	a	a	a	a	a	a	b	a	a
	3	0	0	2	2	0	2	0	3	0	0	3	3	3	2	2	4	5	4	3	4
	4	a	b	a	b	b	b	b	a,b	b	b	b	b	a	b	a	b	a	a	a	a
	5	0	2	3	3	2	2	2	2	2	2	3	3	3	3	4	3	5	2	2	3
	Sum	2	3	8	7	3	6	4	8	3	5	9	9	9	8	8	10	13	9	8	10

tools	materials	waste	IT	plastics	automotive	IT	IT	IT	IT	IT	plastics	IT	IT	energy	automotive	IT	tools	IT	plastics
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
b b,c,d 20105010	b a,e,f 20102010	b a,e,f 20201070	b a,e,f 451030	a a,d 25101010	a a,e,f 25101010	b a,e,f 451030	b a,e,f 451030	b a,b 451030	b a,b 451030	b a,b 451030	a a,d 25101010	b a,b 451030	b a,b 451030	b b,d,e 10102010	a a,e,f 25101010	b a,e,f 451030	b b,c,d 20105010	b a,e,f 451030	a a,d 25101010
1	1	3	2	1	1	2	2	2	2	2	1	2	2	0	1	2	1	2	1
1	2	2	2	2	0	1	2	2	2	2	2	2	2	1	2	2	1	2	1
1	1	0	2	2	1	2	2	2	2	2	2	2	2	0	1	3	1	1	2
0	0	0	2	0	0	2	2	2	2	2	0	2	2	0	0	3	0	2	0
2	0	3	4	1	1	3	2	4	2	4	1	2	4	0	1	3	2	3	1
3	2	1	2	1	1	2	2	2	1	2	3	2	2	1	1	2	3	2	1
3	1	1	2	1	0	4	2	2	2	2	1	2	2	1	2	2	2	2	1
3	0	0	3	1	2	1	3	3	2	5	1	5	5	2	2	3	2	4	1
2	1	1	4	2	2	4	3	3	1	5	2	3	5	0	1	3	2	5	2
1	1	1	4	2	1	4	3	2	2	4	2	2	4	0	1	4	1	4	2
2	4	2	3	2	1	4	2	2	2	5	2	3	5	3	1	4	2	5	2
0	1	0	3	2	0	3	2	4	1	3	2	2	4	0	1	2	0	5	2
1	1	0	2	1	1	2	2	2	2	2	1	2	5	0	1	2	1	2	1
1	2	3	3	2	0	3	3	3	1	3	2	3	3	2	0	3	1	3	1
1	2	1	2	1	1	2	2	2	1	2	1	2	2	0	1	2	1	2	1
2	2	1	3	2	1	3	1	2	1	3	1	3	3	3	1	2	2	3	2
2	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	2	1	1
1	2	1	1	2	1	2	2	2	2	2	1	2	2	3	1	2	1	2	1
1	2	1	3	1	1	3	3	3	1	1	1	3	3	2	1	2	1	3	1
2	3	1	2	2	1	2	2	2	2	3	2	2	2	3	0	2	2	2	1
30	29	23	50	29	17	50	42	47	32	57	29	47	60	22	20	49	28	55	25
1	3	1	3	2	1	3	3	2	3	2	2	3	4	3	1	3	1	2	2
b	a	a,e,f	a	a	b	a	a	a	a	a	a	a	a	a	a	a	b	a	a
1	3	1	5	1	1	4	4	4	3	5	1	4	4	4	0	5	1	4	1
b	b	a	a	b	b	a	a	a	a	a	b	a	a	a	b	a	b	a	b
2	3	1	5	2	2	4	4	4	3	5	2	4	4	3	2	2	2	4	2
4	9	3	13	5	4	11	11	10	9	12	5	11	12	10	3	10	4	10	5

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**

D.T3.2.2

Local actions to implement CE Optimal Use approaches with digitalisation processes

Reporting on local pilot actions –
BWCON

Annex 3 – Reporting template

COMPANY: Company name

ACTIVITY: Sector

CONTACT (Name & position): Name, Position

Circular maturity assessment: DD.MM.YYYY

Digital maturity assessment: DD.MM.YYYY

1:1 meeting(s): DD.MM.YYYY

Action plan: DD.MM.YYYY

Follow-up: DD.MM.YYYY

Lead expert: Name

**Summarised results of the circular and digital maturity assessment
(‘innovation needs’)**

Recommendations - Action plan

Needs for further support (optional, as relevant)

What additional support does the company need to successfully complete its action plan?

Follow-up

Which activities towards higher circularity were initiated or implemented by the company?

ATTACHMENTS

- **Circular maturity assessment – full report (filled in questionnaire)**
- **Digital maturity assessment – full report (filled in questionnaire)**
- **Optional – further documents as relevant**