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

PP8 – Grand E Nov +

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Purpose of the document

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

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

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

Areas	**Pilots**
1. SIO2 Zahodna Slovenija	1. LP TPLJ 2. PP10 JSI
2. DE21 Oberbayern	3. PP2 TUAS Rosenheim
3. DE11 Stuttgart	4. PP3 bwcon
4. DE27 Schwaben	5. PP14 UCB
5. AT13, Wien	6. PP4 aws
6. AT32, Salzburg	7. PP5 ITG
7. AT31, Oberösterreich	8. PP6 Biz-Up
8. ITH3, Veneto	9. PP7 VI 10. PP13 CCIAA Venezia Rovigo
9. FR42, Alsace	11. PP8 Grand E-nov
10. FR71, Rhône-Alpes	12. PP9 AURAE
11. FR82 Provence-Alpes-Côte d'Azur	13. PP15 RISINGSUD
12. ITC1, Piemonte	14. PP11 TOWL
13. ITC4, Lombardia	15. PP12 Confindustria Bergamo

The present document encompasses the following elements:

- Overall methodology applied by all partners in the consortium to achieve the implementation of their own local pilot action.
- Description of the local pilot action for the partner PP8 Grand E Nov +
- Lessons learned by PP8 Grand E Nov +
- Durability and follow-up

Methodology to achieve the output

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

<table>
<tr><td>Step 1:</td><td>Planning digitalised CE processes in Alpine Space area addressed to SMEs

Development of feasibility plans to foster digitalised CE processes in SMEs from the Alpine Space, according the 3 approaches: CE design, CE optimal use and CE value recovery.

Each feasibility plan includes plans for local actions defined by the relevant partners, according to the following distribution across the partnership:

<table>
<tr><th>CE design</th><th>CE optimal use</th><th>CE value recovery</th></tr>
<tr><td>LP TPLJ & PP10 JSI
PP4 aws
PP5 ITG
PP9 AURAE</td><td>LP TPLJ & PP10 JSI
PP3 bwcon
PP7 VI
PP8 Grand E-nov PP11
TOWL</td><td>PP2 TUAS Rosenheim
PP6 Biz-Up
PP13 CCIAA Venezia
Rovigo
PP14 UCB</td></tr>
</table>
</td></tr>
</table>

	PP12 Confindustria Bergamo PP15 RISINGSUD			
	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 PP8 Grand E Nov +

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	05.2022

To recruit SMEs wishing to transform themselves, to experiment and support digital innovation for the Circular Industry, the regional innovation agency Grand E Nov has launched a call for expressions of interest (AMI) at the beginning of the project and organised several online events open to public and published on several media.

The process of selection took several indicators into consideration to prioritise the support:

- The involvement of the SME in the transformation at a high hierarchical level

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

- The belonging to textile, bioeconomy (agrifood-wood), recycling industry (plastics-electronics), building and manufacturing sectors.
- The order of application and the availability during the pilot action timeframe

Methodology

All the selected companies were met to assess their level of circular and digital maturity, to measure the challenges they face and their support needs. A support programme was proposed to each company and summarised in an email. Depending on the level of maturity of the companies or their transformation projects for the most advanced ones, they were enrolled in the collective workshops, 2 days of training + 1 of individual support or 3 days of individual coaching by an expert financed by the INTERREG Alpine Arc programme.
Applicant companies have been informed they 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 a link:

https://forms.office.com/Pages/ResponsePage.aspx?id=5UQqvyTdf0WEAFuarHI2qvQwtN1zlotNm-wWYQaTIHxUOVlNRlcySFdVOTlOUlZPSEtNSVU0SEFNMS4u

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

Deadline for support indicated: March 2022 inclusive

To support the recruitment, in addition to the open call, the agency organised:

Activities to recruit and inspire SME's on circular business models

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

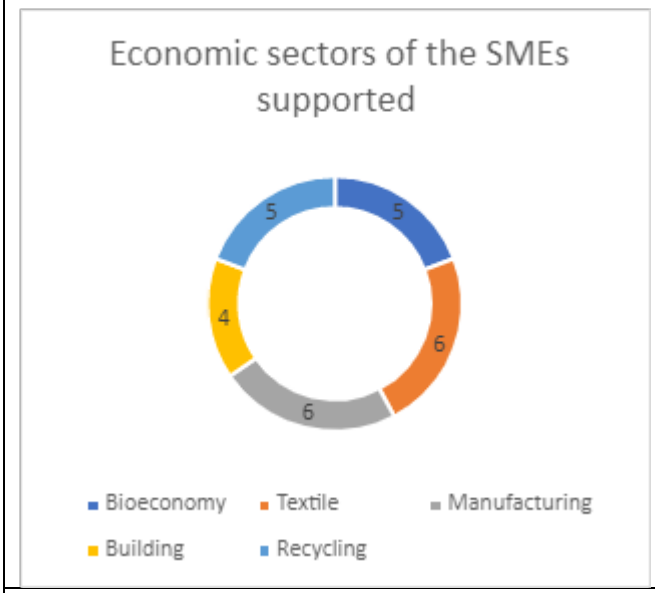
- Getting companies interested in their own transition through awareness-raising workshops showing them examples from their own or other sectors, by presenting methods for building an ambition and roadmap
- Recruiting companies through other local intermediaries capable of detecting targets for the program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

Before the start of any support, a circular and digital maturity assessment was carried out to define the support needs of the companies.

Activities to support the emergence of new business models

- The agency co-organized workshops with experts / intermediaries in circular economy (Initiatives Durables, Circulab, ecc.) to help SME's discover circular economic models and good practices to implement them.
- We also participated in various workshops to present circular and digital opportunities to the targeted sectors.

The selected businesses some from the following sectors in activity:



Overall, the focus on the targeted sector could be maintained.

The SMEs selected were small and mid-sized companies, with a number of employees from 1 to approximately 250. Three businesses were slightly larger with a number of employees between 270 and 400.

Additional activities:

Considering the extension of the project Circular 4.0 until October 2022 , participants were supported until May 2022.

Result

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

Achieved: 26 businesses 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**	05.2021
		End date	05.2022
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 Digital maturity assessment were performed in one go in the same meeting (1 distinct meeting per company). The assessments were performed by experienced projet managers, who were after implicated in a significant part of the support. This organisation is important to avoid any 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.* The assessments and further inputs from complementary interviews provided the basis for the definition of the support needs of the companies. The results were documented in a common template for all businesses.			
Result 26 documented CE and digital maturity assessments. The audit ends with the formalisation of the issues and needs identified and thus prepares the construction of an action plan			

TRAINING TO GENERATE NEW / IMPROVED OR TRANSFORMED BUSINESS MODEL

The awareness of the constraints and benefits that are driving companies to make their business models more circular is important. In this context, more and more manufacturers have begun their transition. Well upstream of recycling, their approach consists of proposing new operating modes to their ecosystem (sustainability of resources, extension of product use, repair, overcycling, etc.).

To design these economic models, companies must adopt a systemic vision to consider all the economic, social and environmental impacts of an activity. The Circulab tools make it possible to organise the approach, to ask the right questions in order to design products or services that better meet market expectations while optimising resources, and even regenerating ecosystems.

10 participants have been selected to be trained to the toolbox to generate new / improved or transformed business model

3		**Start date**	01.2022

	Training to generate new / improved or transformed business model	End date	03.2022

Training sessions were organised for specific target group:

- 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

Through 2 days of training + 1 day of individual support provided by the Circular 4.0 program, we propose to start from their problems, to inspire them with the best initiatives to generate new hypotheses of circular business models models.

- 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 / challenge a first hypothesis
- Personal work on the part of the companies for one month to validate or resolve the questions
- Meeting of the companies through two thematic half-days to develop the roadmap and implement the economic model (necessary resources, financing tools, etc.)
- Through the 1-day support, confirm the opportunities, identify the necessary resources (digital, human, organisational, partnership solutions, etc.) and clarify the steps in the action and follow-up plan.

Results

6 New circular business models generated / validated
2 days of collective support

MATURATION OF DIGITAL TRANSFORMATION TO SUPPORT CIRCULAR ECONOMY

The last activity consisted in several types of support to accompany different maturities. 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 sectoral workshops to help SME's discover how to integrate new technologies and operate 1:1 supports to help establish a digital roadmap and implement it: 3 days of individual advice to study the feasibility, viability and financing of the digital innovation project and then facilitate the development of the solution.

4	Maturation of digital transformation to support circular economy	Start date	05.2021
		End date	05.2022

To help SME's in their digital transition, leveraging digital technologies to activate their circular strategies, Grand E Nov organised personalised 1:1 support and various webinars to help them discover new possibilities and how to implement them.

Precision concerning the one-to-one support: Formalisation of your digital and circular innovation strategy

- 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

Depending on their maturity and the support provided, during workshop companies 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.
- Discovering the opportunities offered by new digital technologies
- 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 (environmental, social and economic impact).

Results

11 online / physical workshops involving more than 100 SMEs

15 Synthesis of digital innovation strategy

Lessons learned and recommendations for the follow-up

Lessons learned for the design of the pilot actions:

- *The companies are at different stages of maturity at the start of the Circular program (we have qualified different subgroups of target SMEs)*
- *Facilitating a circular and digital transition requires several step and types of support, to act at a strategic, human and equipment resource levels (independence of some actions)*
    - *The challenge to involve SMEs was different depending on whether it was mature on CE or digital technologies. The communication and support strategy to reach companies must be adapted according to their maturity level.*
    - *The overall support offer was sufficiently differentiated to suit to the maturity level of the businesses. The overall performance of the local pilot actions was thus acknowledged positively*
- *The focus on SMEs might have been too strict. Large SMEs which control, or influence value chains could have been involved in order to reach also their SME suppliers.*
- *The initial KPIs might not be too ambitious, so that SMEs could reach some quick wins according to the limited financial and time resources they can invest for the pilots and to keep them motivated..*
- *A digital and circular transition takes time and it's mostly impossible that an immature SME could reach the final stage of maturity within an 8 months pilot action timeframe.*

- *We were pleased to see the interest that SMEs had for the sector visits. The detailed presentation of the experience of integrating a digital technology that a player in their sector has had allows companies to measure more precisely the contours of a project that could be theirs.*
- *For some of the companies accompanied within the framework of Circular 4.0, additional obstacles to those mapped during the construction of the pilot action have been identified. Actions aiming at highlighting the developed solutions, facilitating their demonstration or marketing to private or public actors had not been planned.*

Lessons learned for the implementation of the pilot actions:

- *Combining digital and circular expertise in the assistance process is not easy and may need the intervention of different experts. Both transitions may not be processed in parallel but mixed teams of experts could help working on both aspects one after the other. Thus, the pilot action started too late and was too short to reach the best possible results for SMEs with a low maturity..*
- *We were also able to confirm that individual coaching is essential for SMEs to fully engage in their transformation. This helps them to make the process more dynamic and forces them to get involved, to invest themselves to the extent of the challenges. The establishment of a contract or a charter of commitment with the companies can prove to be a good practice to be deployed in the future. The implementation of a full Plan-Do-Check-Act interaction cycle with companies could also help.*
- *Giving the possibility to companies to meet during the training session helped to generated more innovative ideas. The interaction with CE experts, trainers and other SMEs established a peer learning situation accelerating experience sharing, generating more numerous and relevant ideas increasing the impact of the pilot actions. Creating a network/community of experts and business support providers promoting the improvement of circular economy by use of digital tools is essential. The community generated in the project is a valuable asset to be maintained.*
- *Roadmaps need to be connected closely with funding opportunities for SMEs in order to accelerate the design of innovative activities and investment decisions.*

Durability and follow-up

During the discussions with the region and the various partners, Grand E-Nov+ has, alongside the services of the Grand Est Region, carried out new missions of mapping, accelerating and making visible innovative solutions and solution providers (companies, laboratories, etc.), in connection with the ecological transition, in particular via the SoRezo GreenTech platform, the digital transformation via the structuring of the GET Numérique, a center of expertise and resources dedicated to the digital world, or concerning solutions for the territories via GrandTesteur. Thus, to complete the value proposition linked to the Circular 4.0 program, Grand E-Nov+ will be able to contribute in the future, in partnership with the other players in the ecosystem, to identifying state-of-the-art innovations or players capable of developing them in order to meet the needs identified as strategic for this sector. The agency will also be able to put to good use its know-how and methodologies for supporting and evaluating territorial experimentation projects, particularly for:

- *Setting up sourcing and qualification processes for innovative solutions,*
- *The collaborative framing of experimentation projects,*
- *The legal and financial set-up of such projects,*
- *The co-construction of evaluation protocols,*
- *The implementation of a governance and monitoring method for these projects over time, in particular to determine which projects would benefit from being replicated in other territories,*
- *Making them visible and promoting them to the ecosystem to accelerate replication.*

Annex

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

- D.T3.2.2 - Local actions to implement CE Optimal Use approaches with digitalisation processes - implementation report drafted by Grand E nov +

Interreg Alpine Space
Circular4.0

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

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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 feasibilities 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)**

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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

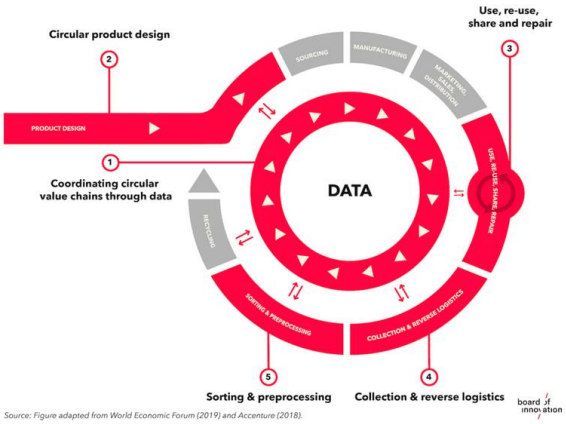
These selected sectors of interest are in accordance with the National Circular Economy Roadmap and other national strategic development plans:

	TPLJ+IJS	RISINGSUD	GRAND E-NOV	AURE	TWL	VINN+CCIAAVE	UCP	TUAS	BIZ-UP	AWS
	SI	R-Sud	Grand Est	Rhone-Al	Piemonte	Veneto	Swabia	Up-Bayern	Ober-Oster	Vienna
Wood processing industry					Forest based value chains			Furniture		
Plastics					Packaging platics					
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.

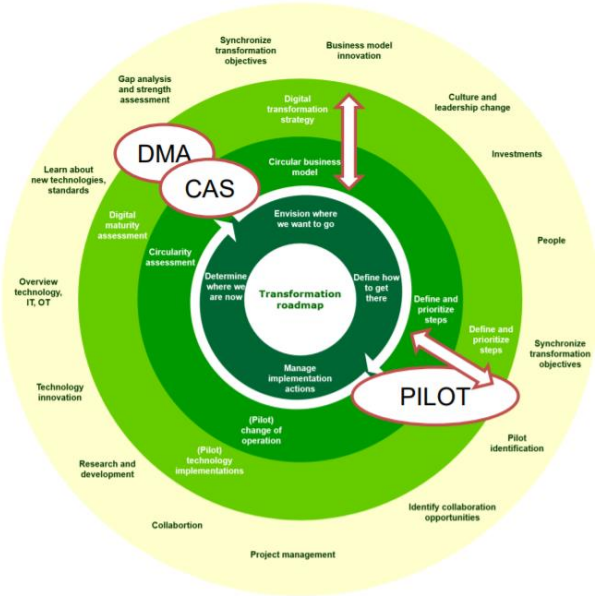
Circular economy approach we plan to undertake for pilots is the circular design model (approach) and optimal use model (approach) as defined in the scope of the Circular 4.0 project. If applicable for Slovenian SMEs also value recovery model (approach) will be used.

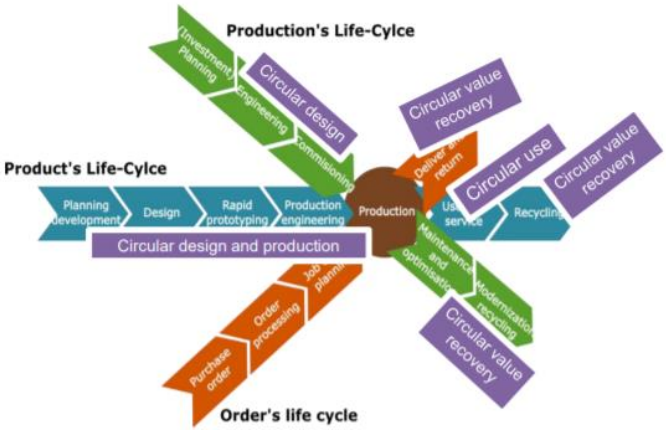
In addition, digital data-based models and systems changes will be adopted where applicable (example in advanced manufacturing) for coordinating business chains transformation and digitalization as enabler of circular transformation will be strongly emphasized along the value chain transformation. CAT4.0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

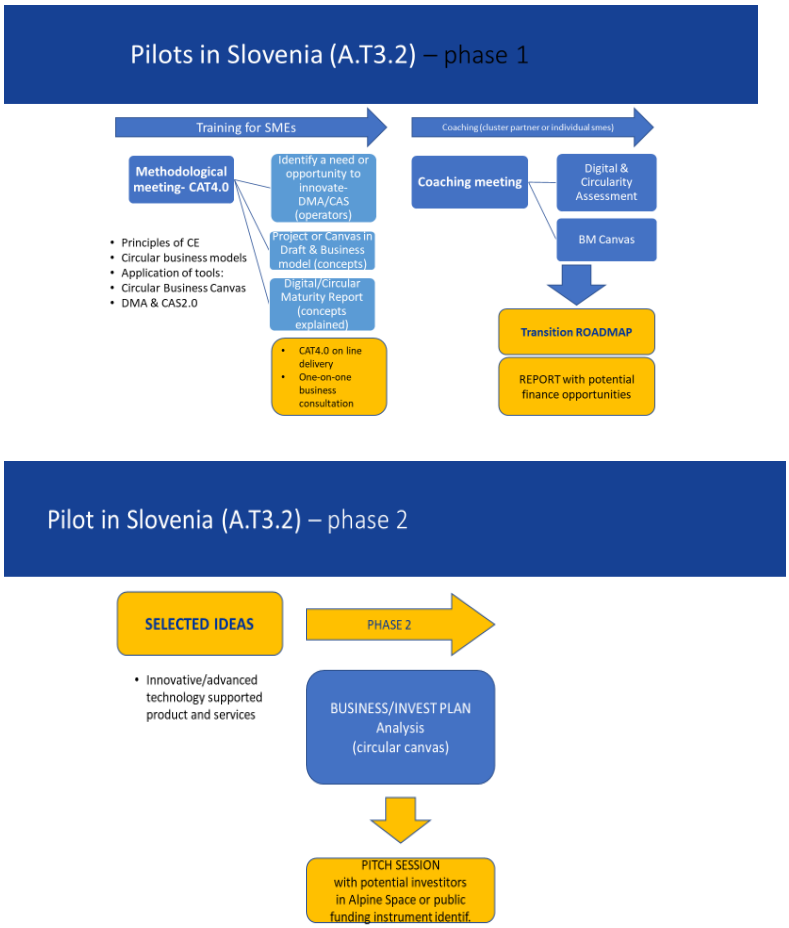
Underlying principles of pilots used in Slovenia are explained in the
Module 1 (Part 2) of the CAT4.0 training course Enabling the potential for circular transformation – tech readiness–digitalization and I4.0 (available over https://circular40.eu/).
The process encompasses systemic changes as well as 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, sensoring. 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/rc17RxI7bd7Kw8d

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**

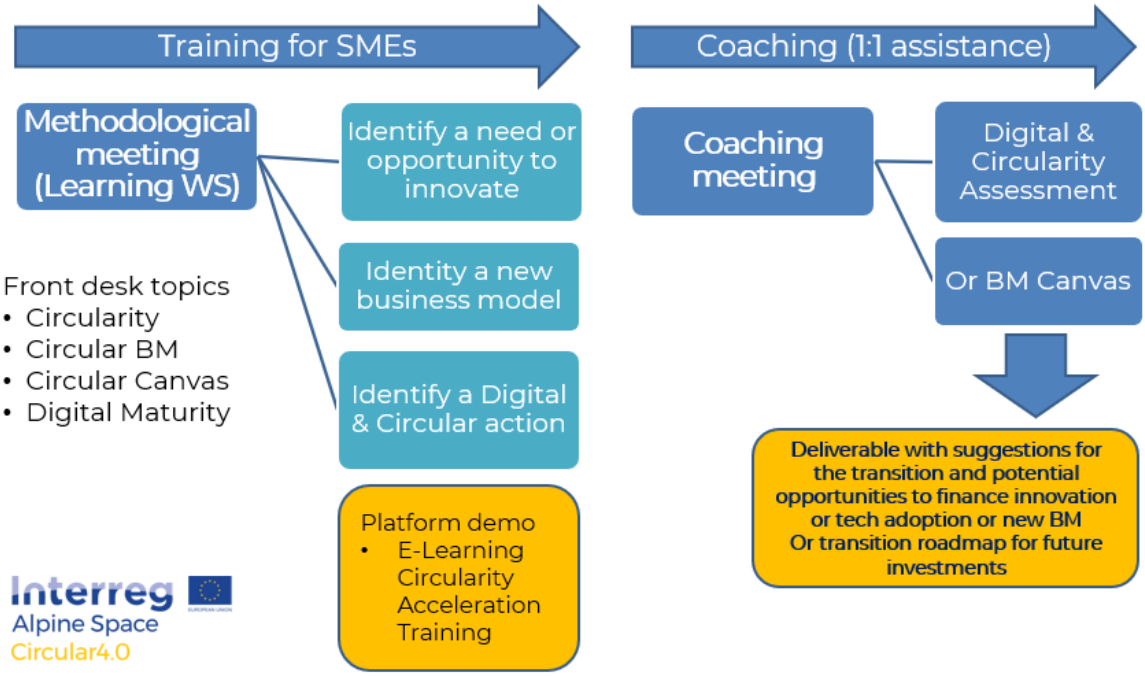
  In this part we will provide an overview of the methodology that will be used to select and assist SMEs in their circular transformation (common to all pilots).
  Involvement phases: with a call for action, we will offer the possibility to all companies in the territory to be supported during the path 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 SELFI4.0 (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

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.

DMA (SELFI4.0 or ZOOM4.0) will be done individually.

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

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.

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.

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 bythe 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 andVENETO 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, ifnecessary.

- Methodology

The combined effort of the two partners will hopefully be particularly effective with regard to the selectionand 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 topresent the pilot actions path to local entrepreneurs and promote opportunities offered on the matters ofcircularity ad digitalization at local and at national level.

The local workshops will particularly focus on awareness and financial instruments offered to the SMEs toimplement 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/orinterested 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 willlaunch in January and intermediaries will be invited to give their support to disseminate the potential opportunity of the call among their stakeholders.

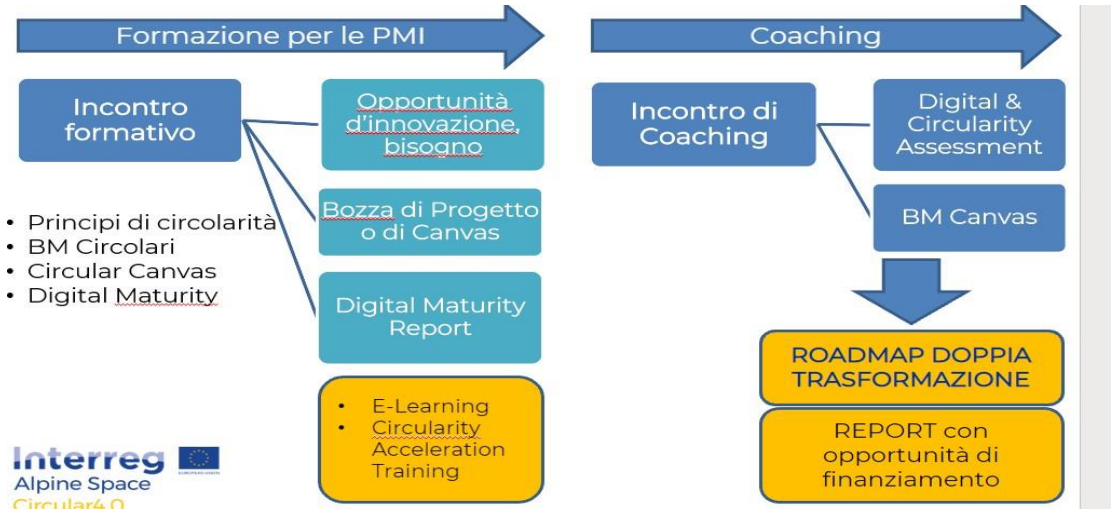
The call will give the opportunity to a maximum of 50 SMEs (selected according to the order of subscriptionto the call) to join the pilot action and be assisted by experts.

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 ofthe selected SMEs. Both tools are included in the CIRCULAR4.0 Toolkit

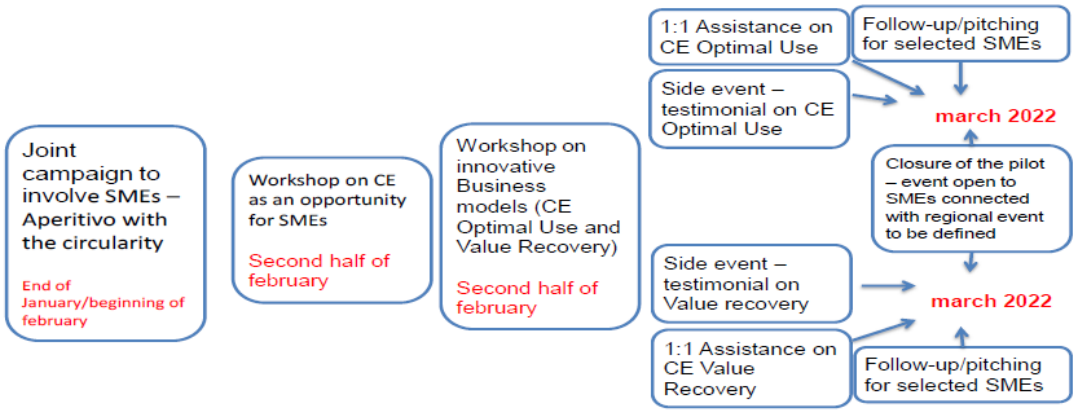
According to the combined results of the assessments carried out a customized plan of action will be elaborated and proposed to the SMEs. In this plan experts will suggest instruments and changes that couldbe adopted to improve the circularity and digitalization of the SMEs, also with regard of financial 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 inthe 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 astextile, 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 cooperationof 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 ofa 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 thecall 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 andcircularity 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 toimprove 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: 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 proprietarily 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.

<table>
<tr><td rowspan="2">1</td><td rowspan="2">Selection/identification of SMEs</td><td>Start date</td><td>10.2021</td></tr>
<tr><td>End date</td><td>11.2021</td></tr>
<tr><td colspan="4">The selection and identification of companies (in priority SMEs) to take part in the pilot in Bade-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.</td></tr>
<tr><td colspan="4">Result

Reach at least 16 interested SMEs to participate in the pilot action.</td></tr>
<tr><td>1</td><td>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.</td><td>Date</td><td>11.2021</td></tr>
</table>

<table>
<tr><td rowspan="2">2</td><td rowspan="2">Circular CE capability/potentiality and Digital Maturity Assessment of SMEs</td><td>Start date</td><td>11.2021</td></tr>
<tr><td>End date</td><td>12.2021</td></tr>
<tr><td colspan="4">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.</td></tr>
</table>

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
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

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 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):	Lallemand Benjamin, PP8 –Grand E Nov +
Contributors:	

Type:	**D - Deliverable**
Dissemination level:	**CO = confidential**
Revision:	**FINAL**
Due Date:	**November 2021**
Date of submission:	**December 2021**

1. **Overview of the local pilot action – Grand Est Region (PP08 Grand E Nov) 3**
2. **Planned activities..... 7**
3. **Indicators (KPIs) and monitoring 12**

1. 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**

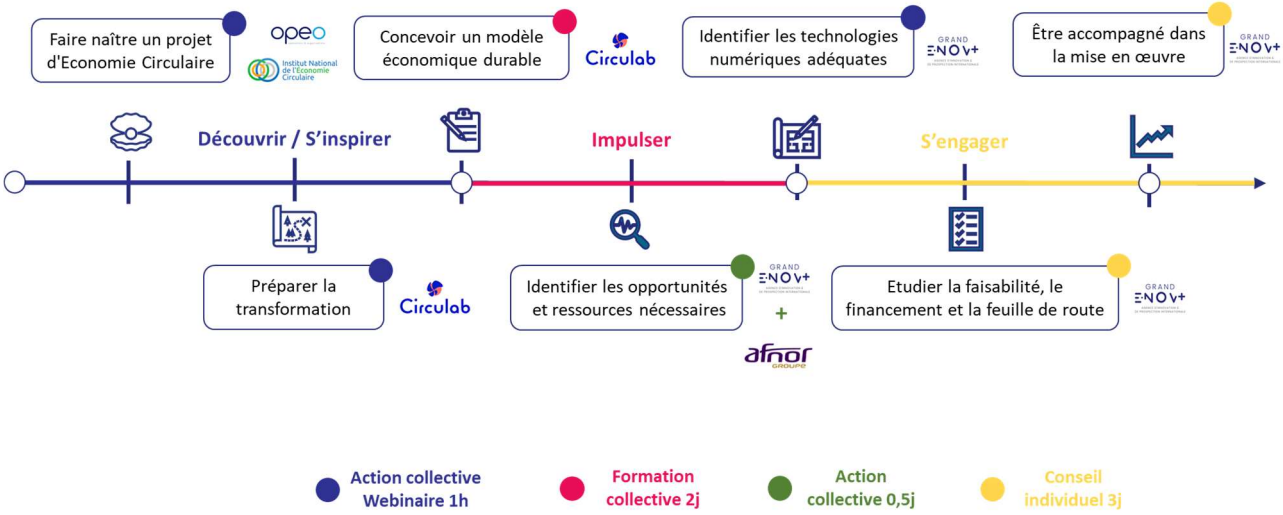
The regional innovation agency Grand E Nov has launched a call for expressions of interest (AMI) in order to experiment and support digital innovation for the Circular Industry. To complete the regional service offer, we focused on the pillars of the circular economy related to optimal use and value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

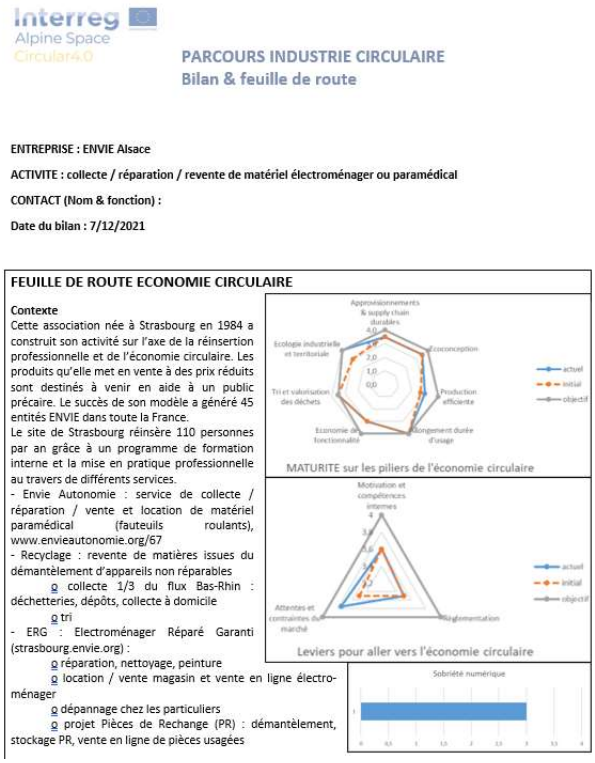
- **Methodology**

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-wWYQaTIHxUOVlNRlcySFdVOTlOUlZPSEtNSVU0SEFNMS4u
For further information, they can contact b.lallemand@grandenov.plus
Deadline for support indicated: March 2022 inclusive



Tools used



Interreg Alpine Space Circular4.0

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

FEUILLE DE ROUTE ECONOMIE CIRCULAIRE

Contexte

Cette association née à Strasbourg en 1984 a construit son activité sur l'axe de la réinsertion professionnelle et de l'économie circulaire. Les produits qu'elle met en vente à des prix réduits sont destinés à venir en aide à un public précaire. Le succès de son modèle a généré 45 entités ENVIE dans toute la France.
Le site de Strasbourg réinsère 110 personnes par an grâce à un programme de formation interne et la mise en pratique professionnelle au travers de différents services.
- Envie Autonomie : service de collecte / réparation / vente et location de matériel paramédical (fauteuils roulants), www.envieautonomie.org/67
- Recyclage : revente de matières issues du démantèlement d'appareils non réparables
  - collecte 1/3 du flux Bas-Rhin : déchetteries, dépôts, collecte à domicile
  - tri
- ERG : Electroménager Réparé Garanti (strasbourg.envie.org) :
  - réparation, nettoyage, peinture
  - location / vente magasin et vente en ligne électro-ménager
  - dépannage chez les particuliers
  - projet Pièces de Rechange (PR) : démantèlement, stockage PR, vente en ligne de pièces usagées

MATURITE sur les piliers de l'économie circulaire

Leviers pour aller vers l'économie circulaire

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

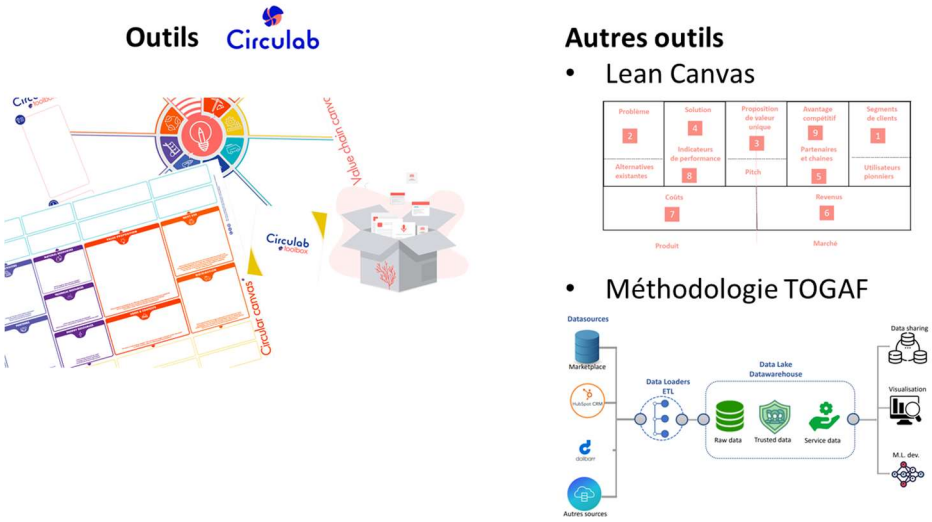


Figure 2: Circulab toolbox and specific tools used to support digital transitions

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.

2. Planned activities

1. 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.

2. 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.

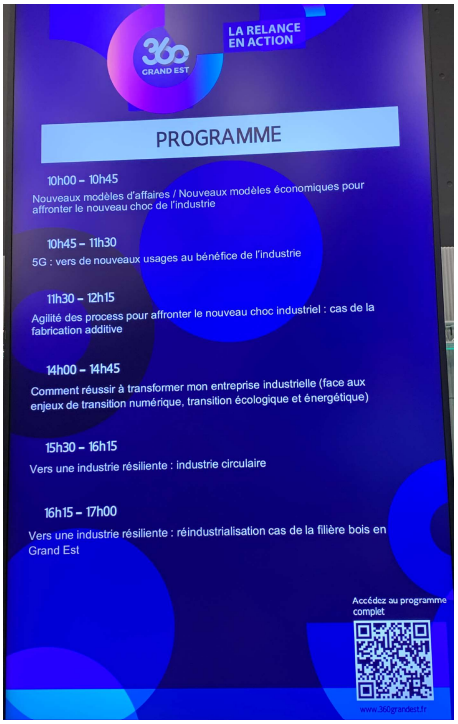


Figure 4: Track Circular 4.0 (7th of Dec 2021)

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

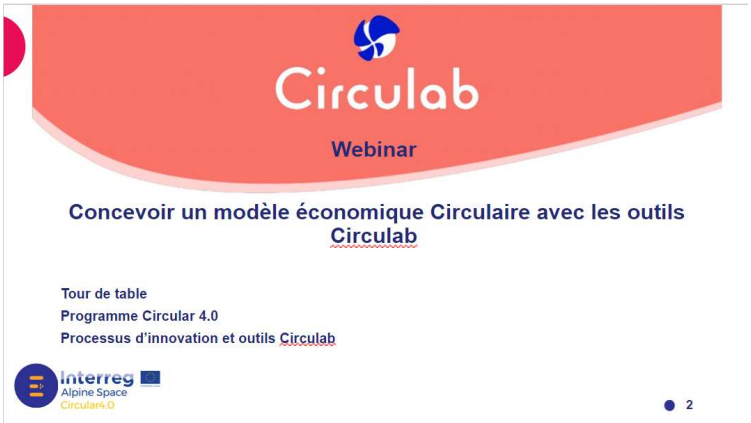
Mulhouse, le 6 octobre 2021

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).

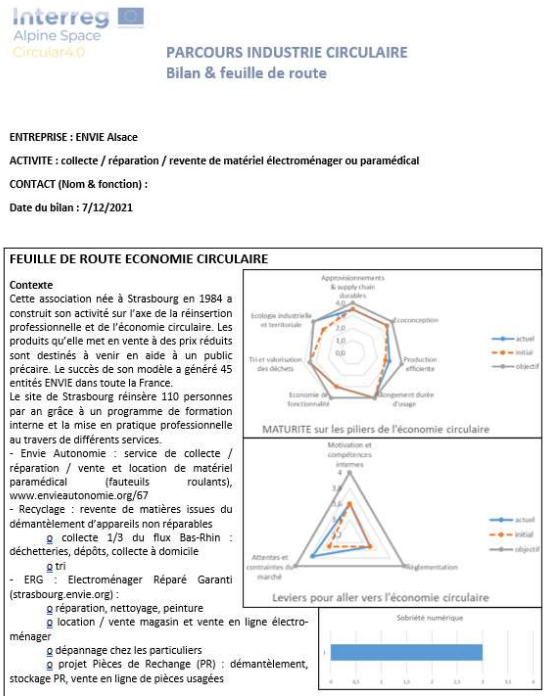
Réservez dans vos agendas la matinée du mercredi 8 décembre 2021 ! Nous serons accueillis par ***Lionel LIMOUSY, Directeur de l'Institut Carnot MICA*** pour démarrer le programme suivant :

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



3. 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.



Interreg Alpine Space Circular4.0

PARCOURS INDUSTRIE CIRCULAIRE
Bilan & feuille de route

ENTREPRISE : ENVIE Alsace
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CONTACT (Nom & fonction) :
Date du bilan : 7/12/2021

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- Recyclage : revente de matières issues du démantèlement d'appareils non réparables
  - collecte 1/3 du flux Bas-Rhin : déchetteries, dépôts, collecte à domicile
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  - dépannage chez les particuliers
  - projet Pièces de Rechange (PR) : démantèlement, stockage PR, vente en ligne de pièces usagées

MATURITE sur les piliers de l'économie circulaire

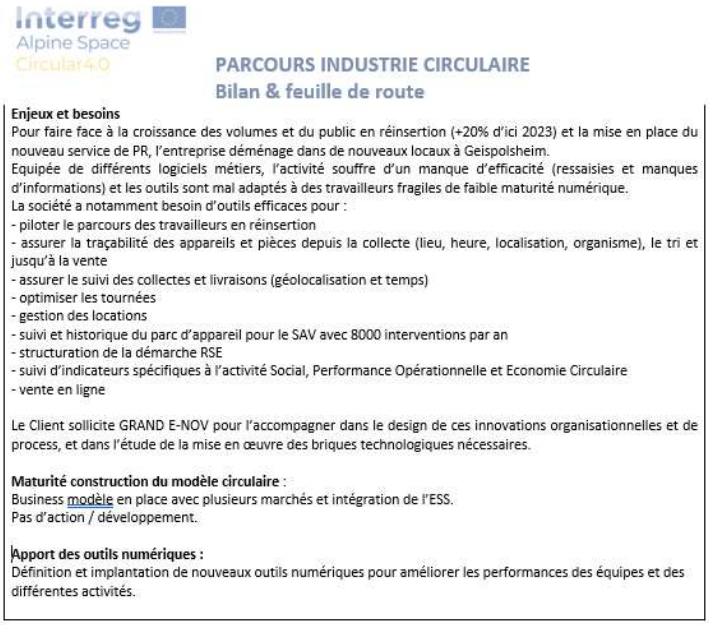
Leviers pour aller vers l'économie circulaire

Sobriété numérique

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.



PARCOURS INDUSTRIE CIRCULAIRE
Bilan & feuille de route

Enjeux et besoins
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 :
- 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

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.

Maturité construction du modèle circulaire :
Business modèle en place avec plusieurs marchés et intégration de l'ESS.
Pas d'action / développement.

Apport des outils numériques :
Définition et implantation de nouveaux outils numériques pour améliorer les performances des équipes et des différentes activités.

Figure 6: Example of an audit conclusions

4. 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
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

- Bring out new circular and digital transition projects.
- Discover inspiring initiatives to facilitate Technology adoption

Add sub-activities if necessary

Support emergence of new business models
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.

Support technology adoption
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 SME's discover those new technologies.

Results

1	3 online / physical workshops	**Date**	2021-2022
2	30 participatinig SME's	**Date**	2021-2022

Title	Training to generate new / improved or transformed business model	Start date	01.2022
		End date	03.2022

Description

Training cession organised for specific target group:

- 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

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.

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.

Personal work on the part of the companies for one month to validate or resolve the questions

Meeting of the companies through two thematic half-days to develop the roadmap and implement the economic model (necessary resources, financing tools, etc.)

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

Industrial SME's who wish to be accompanied to :
At the strategic level
- 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.

At the operational level
- 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).

Objectives:

- 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.

Precision concerning the one-to-one support: Formalisation of your digital and circular innovation strategy

- 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

3. Indicators (KPIs) and monitoring

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

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

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

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 – Grand E Nov+

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):	Lallemand Benjamin, PP8 – Grand E Nov +
Contributors:	
Type:	**D - Deliverable**
Dissemination level:	**CO = confidential**
Revision:	**Final**
Due Date:	**03.2022**
Date of submission:	**06.2022**

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1 Introduction

General goal of the pilots and place of the local actions to implement CE Optimal Use approaches with digitalisation processes in the overall project context.

Within the Circular 4.0 project, WP3 main objectives are:

- Assist SMEs in digital management innovation by conducting several Local Pilot actions (T3.3):
  - check their maturity for CE processes,
  - facilitate the implementation of digital technologies into processes, products and business models to accelerate circular transition,
  - build the investment plan required and the way to implement it
  - etc.
- Monitor the effectiveness of SMEs digitalisation to push them toward CE processes and monitor the efficiency /performance of the actions implemented (an evaluation committee will support the analysis of the performance according to chosen KPIs described in T2.5).

Those deliverables should help to study the outputs and produce the following CIRCULAR4.0 Action Plan (T4.1). The Identified success cases will be included in one exhibition tour to disseminate good practices.

The present deliverable displays for the local pilot action in Grand Est region (France) the:

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

2 Local pilot action in Grand Est (Grand E Nov) - Overview

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.

Grand E Nov analysed several sectors at the beginning of the project to understand the economic tensions that oppress them and identify the ambition that drives them. 5 Sectors were selected due to their regional importance and the prevalence of the prevalence of the opportunities offered by the circular economy to address the challenges they face: textile, bioeconomy (agrifood-wood), recycling industry (plastics-electronics), building and manufacturing.

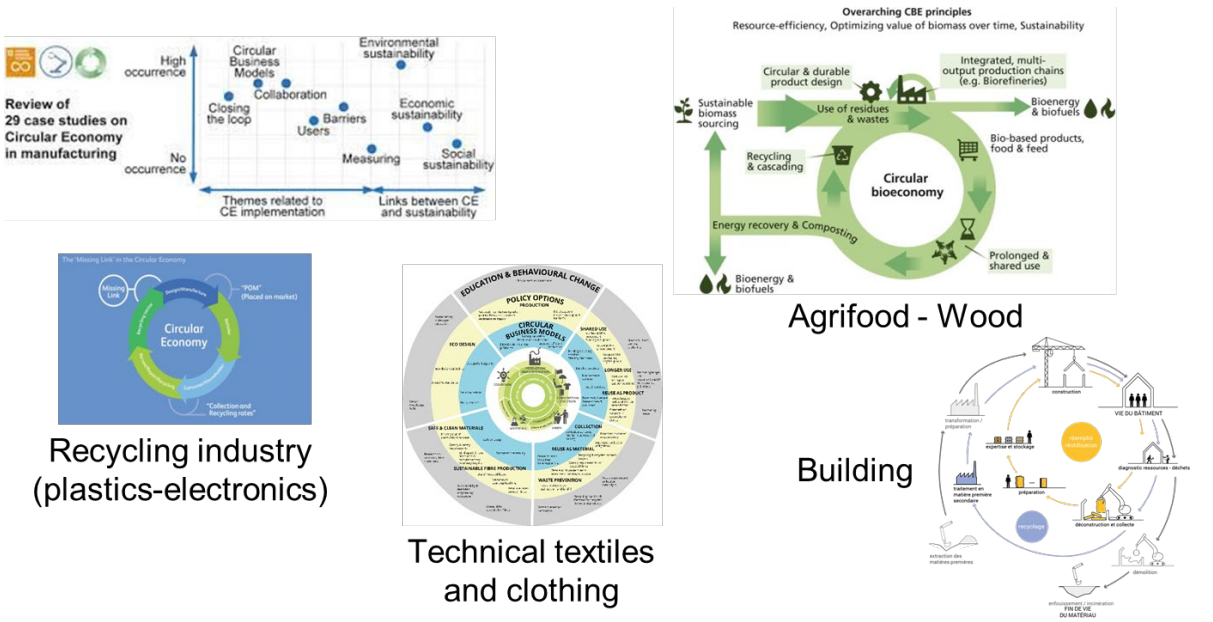


Figure 1 : Industrial sectors involved with the pilot action in Grand Est

Then the agency organised the most appropriate support pathway based on the toolkit selected by the partners, the ecosystem of business support organisation present and the needs expressed by SMEs**.** To complete the regional service offer, we focused on the pillars of the circular economy related to optimal use and value recovery. The complete plan to increase SMEs optimal use (D.T3.1.2) and reuse & recycling business models (D.T3.1.3) is schematized hereafter:

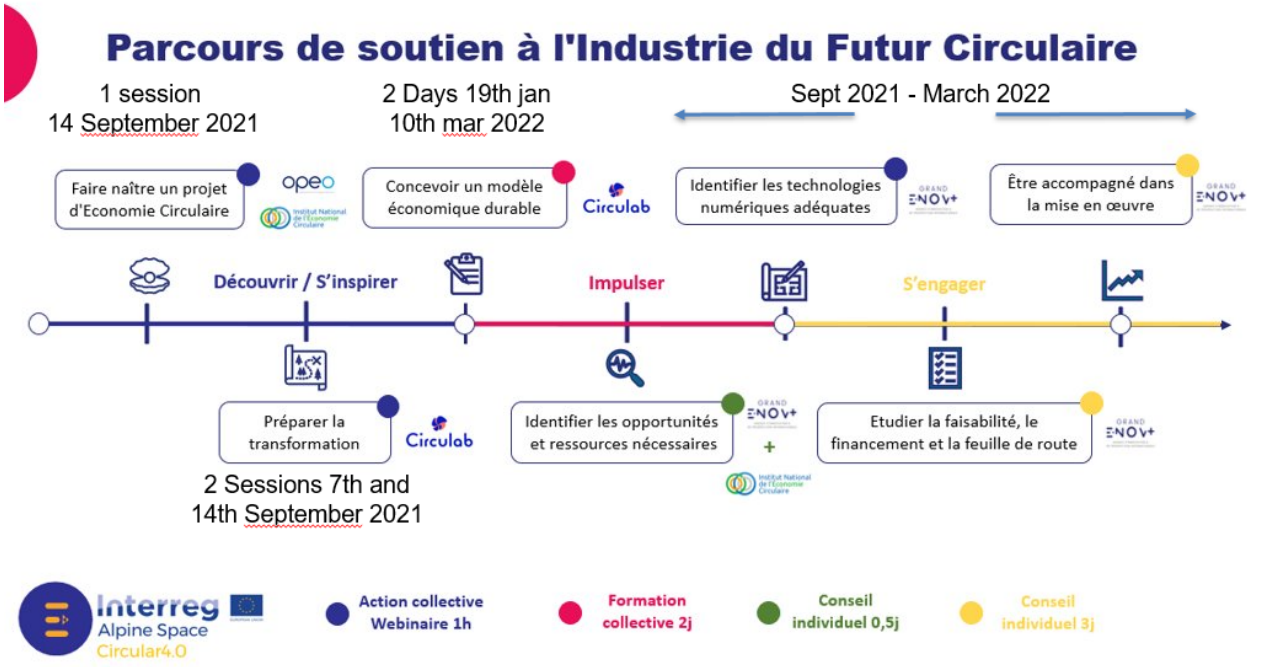


Figure 2 : The support in Grand Est region includes 4 collective workshops and 3 days of individual support by an expert financed by the INTERREG Alpine Arc program (1:1 support or training session according to the maturity).

3 Identification and involvement of the SMEs for the Pilot Action

- **Local context and CE approach**

To recruit SMEs wishing to transform themselves, to experiment and support digital innovation for the Circular Industry, the regional innovation agency Grand E Nov has launched a call for expressions of interest

(AMI) at the beginning of the project and organised several online events open to public and published on several media.

The process of selection took several indicators into consideration to prioritise the support:

- The involvement of the SME in the transformation at a high hierarchical level

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

- The belonging to textile, bioeconomy (agrifood-wood), recycling industry (plastics-electronics), building and manufacturing sectors.
- The order of application and the availability during the pilot action timeframe

- **Methodology**

All the selected companies were met to assess their level of circular and digital maturity, to measure the challenges they face and their support needs. A support programme was proposed to each company and summarised in an email. Depending on the level of maturity of the companies or their transformation projects for the most advanced ones, they were enrolled in the collective workshops, 2 days of training + 1 of individual support or 3 days of individual coaching by an expert financed by the INTERREG Alpine Arc programme.

Applicant companies have been informed they 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-wWYQaTIHxUOVlNRlcySFdVOTlOUlZPSEtNSVU0SEFNMS4u

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

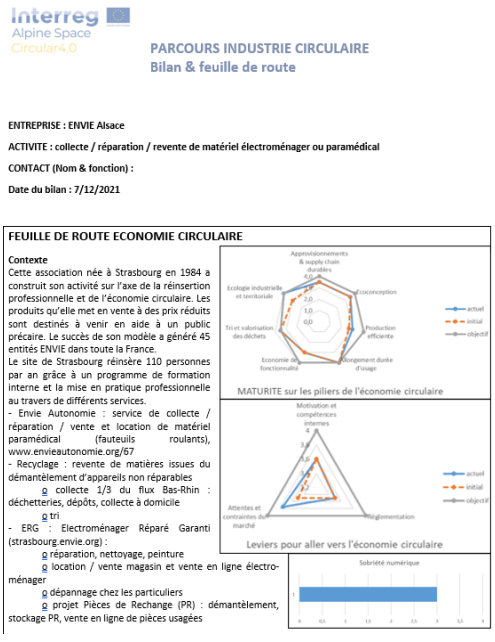
Deadline for support indicated: March 2022 inclusive

4 Implementation report

Tools used

To support the different stages of the support pathway, various tools were used and are summarised in the figures below.

Maturity diagnosis and support needs stage


Interreg Alpine Space Circular4.0

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

FEUILLE DE ROUTE ECONOMIE CIRCULAIRE

Contexte
Cette association née à Strasbourg en 1984 a construit son activité sur l'axe de la réinsertion professionnelle et de l'économie circulaire. Les produits qu'elle met en vente à des prix réduits sont destinés à venir en aide à un public précaire. Le succès de son modèle a généré 45 entités ENVIE dans toute la France.
Le site de Strasbourg réinsère 110 personnes par an grâce à un programme de formation interne et la mise en pratique professionnelle au travers de différents services.
- Envie Autonomie : service de collecte / réparation / vente et location de matériel paramédical (fauteuils roulants), www.envieautonomie.org/67
- Recyclage : revente de matières issues du démantèlement d'appareils non réparables
  - collecte 1/3 du flux Bas-Rhin : déchetteries, dépôts, collecte à domicile
  - tri
- ERG : Electroménager Réparé Garanti (strasbourg.envie.org) :
  - réparation, nettoyage, peinture
  - location / vente magasin et vente en ligne électro-ménager
  - dépannage chez les particuliers
  - projet Pièces de Rechange (PR) : démantèlement, stockage PR, vente en ligne de pièces usagées

MATURITE sur les piliers de l'économie circulaire

Leviers pour aller vers l'économie circulaire

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

Stage of building a circular economic model

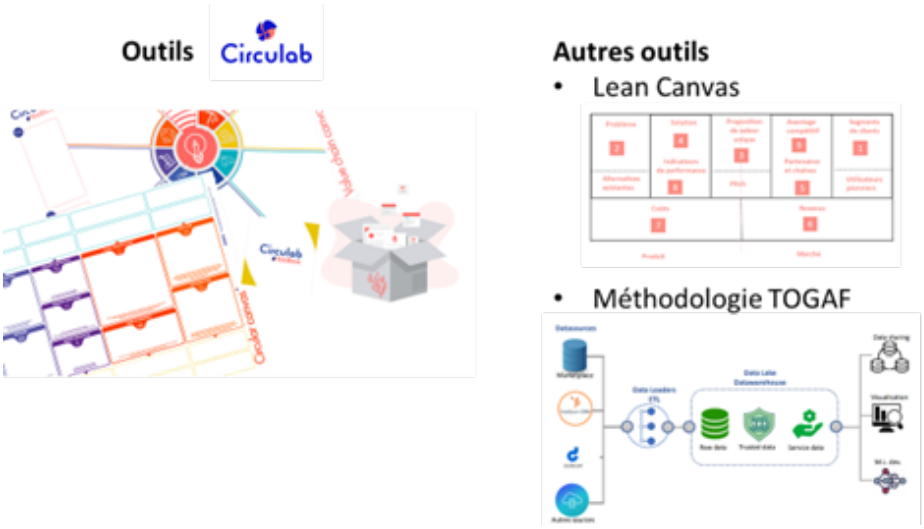


Figure 2: Circulab toolbox and specific tools used to support circular and digital transitions

Construction of an action plan and its follow-up

Interreg Alpine Space Circular4.0

PARCOURS INDUSTRIE CIRCULAIRE
Bilan & feuille de route

	Stratégie/Business model				*Développement Technologique*				*Transformation numérique*				*Financement de la transformation*				*Trainee level of satisfaction*	*Maturity improvement*	*Impact on CE related to the pilot action*
Objectif	Validation du modèle économique circulaire				Développement de la solution technique				Accompagner le changement				Sécuriser les investissements				Satisfaction level on tools and trainings provided	Project maturity phase to be reached 5	Circular metrics to be improved 6
Phase		Initial	Final	Obj		Initial	Final	Obj		Initial	Final	Obj		Initial	Final	Obj			
Indicateurs	Nombre de JH investi	2	8	10	Définition du CDC	0	100	100%	postes équipés Taux d'utilisation	20%	25%	80%	% budget investi	10%	95%	100%	Quality of trainers and tool, relevance, applicability …	TRL 6 → 7 BRL7 → 8 (voir diagnostic projet ci-dessus)	Bilan carbone : Volumes de carburant économisé, consommation énergétique, volume de déchets, etc.
	Nombre de partenaires contactés	0	10	10	Nbre de prestataires contactés	0	5	10	Op formés	10%	25%	80%	Co-financeurs contactés	1	2	3			
	Nombre de clients prospectés	0	2	10	Taux de fonctionnalités développés	0	95	100%	Taux de services fonctionnels	30%	40%	100%	Coût de la solution	500	200	100€/mois pour client			
	ROI Nbre de prospects signés	Na 0	Na 0	<2ans 25	Nombre de capteurs installés	0	20	30	Taux de disponibilité des données	10	80	100	Performance de la solution						
Commentaires	**Activité/Input** : Organisation d'une formation / séance de créativité **Output** : 1 hypothèse de modèle économique retenue ⇨ Reste à tester le modèle pour valider le ROI **Outcome** : … **Impact** : …				Un offreur régional à été identifié et à pu développer la solution. …				Le personnel devra être formé aux technologies Mysql pour manipuler…				Paramétrage solution devraient permettre d'arriver au coût objectif et accepté par les clients				Questionnaire de satisfaction envoyé, pas de retour.	La solution a été démontrée en environnement opérationnel et présentée à un client.	Analyses réalisées au moyen de la méthode …

Figure 3 : Monitoring dashboard

Modalities of the support programme

Depending on SME's maturity, we adapted the objectives, value proposition and type of action of the support:

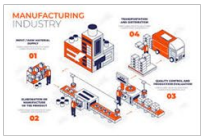
SME maturity level 1	SME maturity level 2	SME maturity level 3
		
My environment is changing, I need to adapt quickly. Where to start ?	*I want to test a new value proposition. I'm looking for the technical solution.*	*Dev is underway. How do I demonstrate/ communicate about the environmental performance for my commercial deployment?*

Figure 3: The 3 stages of maturity encountered

Stage 1 support "value proposition"

- 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 circular 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 + 1 day of individual support, reassess your company's needs, ambition, value proposition, products and services. With the tools and the support you will be able to elaborate or challenge a first hypothesis of a new circular business model. Through the 1-day support, confirm the opportunities, identify the necessary resources (digital, human, organisational, partnership solutions, etc.) and clarify the steps in the action and follow-up plan.

Stage 2 and 3 support "value proposition"

- 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: 3 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.
- Discovering the opportunities offered by new digital technologies
- 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 (environmental, social and economic impact).

4.1 Circular economy sensibilisation

Title	Circular economy sensibilisation, SME's recruitment for support to new / improved or transformed business model	Start date	12.2020
		End date	03.2022

Description

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 recruit and help SME's discover new business models and methodologies to develop those.

Add sub-activities if necessary

Activities to recruit and inspire SME's on circular business models

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 program and having synergistic missions with our own.
- Directly approaching companies previously referenced according to their sector of activity and indices obtained by various media.

Before the start of any support, a circular and digital maturity assessment was carried out to define the support needs of the companies.

Activities to support the emergence of new business models

The agency co-organized workshops with experts / intermediaries in circular economy (Initiatives Durables, Circulab, ecc.) to help SME's discover circular economic models and good practices to implement them.

We also participated in various workshops to present circular and digital opportunities to the targeted sectors.

Results

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

1	1 online workshop "Industrie Circulaire" We organised a webinar to present the recent publication of a report co-authored by INEC and the consultancy OPEO, "Pivoting towards a circular industry. Which models? How to accelerate?". This report, through various examples, explains why the industry of the future must and will be circular through 6 circular business models, from resource sustainability to extended product use and regeneration.	**Date**	14.09.2021

The presentation was in 3 parts. The first part, "Understanding", reaffirmed the need and interest to engage in a systemic transition towards a circular industry. The second part, "Rethink", described how to rethink the circularity of business models, product design and industrial models. Finally, the third part, "Accelerate", identified the obstacles encountered and the levers for industrial and institutional actors to set in motion and accelerate.

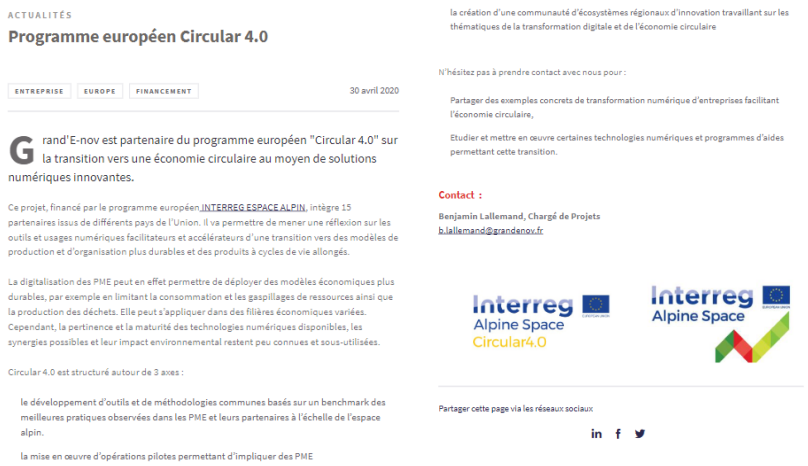
9 registered companies

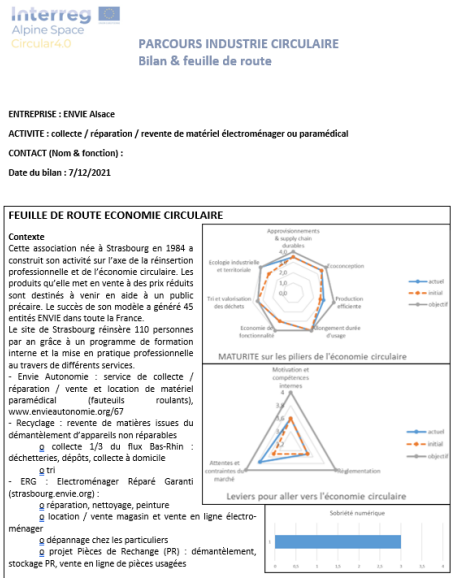
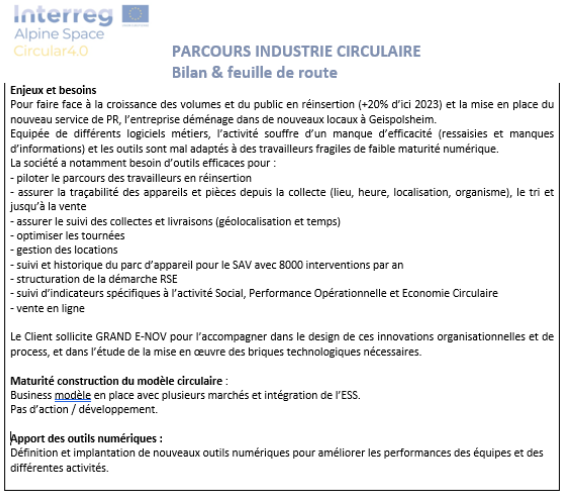
We organised 1 online workshop with Initiative Durable (an expert intermediary of the economy of functionality) and its members (companies that have already designed new circular economic models). The objective was to discover/identify and understand how digital technologies could accelerate the implementation of their value proposition.

28.04.2021

Results:
By reviewing the participants' projects, we were able to identify 4 SMEs members that could benefit from the Circular 4.0 program.

The discussion also led us to organise another workshop targeting other intermediaries of the ecosystem to make them discover the principles of Economy of Functionality (CFE) and constitute eventually a community of ambassador of the CFE.
More precisely, it appeared necessary to share within an extended network a common vocabulary and methodologies to facilitate the detection and the support of enterprises interested to alternative economy models such as SSE, CE or FCE.

	This leads to participate to workshops driven by Initiatives Durables (Grand Est agency promoting FCE) and IEEFC from October 2021 to march 2022, with actors wishing to engage in this dynamic of FCE in Grand Est region, in order to continue the work started. This work aims to co-construct tools and language elements common to regional economic development actors, in order to help companies better grasp the challenges of sustainable development. Those workshops gathered actors yet involved in CE but also regional partners such as local development agencies, Grand est government, competitiveness clusters or professional union. This action took a national dimension while among the participants were some regional offices of national actors such as ADEME, DREAL or CCI network.		
2	Example: 1 call for applications • Copy of publication (website, newsletter, …)  ACTUALITÉS **Programme européen Circular 4.0** ENTREPRISE EUROPE FINANCEMENT 30 avril 2020 Grand'E-nov est partenaire du programme européen "Circular 4.0" sur la transition vers une économie circulaire au moyen de solutions numériques innovantes. Ce projet, financé par le programme européen INTERREG ESPACE ALPIN, intègre 15 partenaires issus de différents pays de l'Union. Il va permettre de mener une réflexion sur les outils et usages numériques facilitateurs et accélérateurs d'une transition vers des modèles de production et d'organisation plus durables et des produits à cycles de vie allongés. La digitalisation des PME peut en effet permettre de déployer des modèles économiques plus durables, par exemple en limitant la consommation et les gaspillages de ressources ainsi que la production des déchets. Elle peut s'appliquer dans des filières économiques variées. Cependant, la pertinence et la maturité des technologies numériques disponibles, les synergies possibles et leur impact environnemental restent peu connues et sous-utilisées. Circular 4.0 est structuré autour de 3 axes : le développement d'outils et de méthodologies communes basés sur un benchmark des meilleures pratiques observées dans les PME et leurs partenaires à l'échelle de l'espace alpin. la mise en œuvre d'opérations pilotes permettant d'impliquer des PME la création d'une communauté d'écosystèmes régionaux d'innovation travaillant sur les thématiques de la transformation digitale et de l'économie circulaire N'hésitez pas à prendre contact avec nous pour : Partager des exemples concrets de transformation numérique d'entreprises facilitant l'économie circulaire, Etudier et mettre en œuvre certaines technologies numériques et programmes d'aides permettant cette transition. Contact : Benjamin Lallemand, Chargé de Projets b.lallemand@grandenov.fr Interreg Alpine Space Circular4.0 Interreg Alpine Space Partager cette page via les réseaux sociaux The call was published on the internet page, newsletter and linked in and sent to all intermediaries to mobilise their networks. Combined with all the other measures to present the program, we managed to recruit more SME's than expected.	**Date**	
3	**25 CE+digital maturity assessments of SMEs** During the pilot action, before the start of any support, a circular and digital	**Date**	05.2021 – 03.2022

	maturity assessment was carried out. This maturity diagnosis helped in the definition of the support needs of the companies that we had identified during the organisation of several workshops. 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.  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 FEUILLE DE ROUTE ECONOMIE CIRCULAIRE Contexte Cette association née à Strasbourg en 1984 a construit son activité sur l'axe de la réinsertion professionnelle et de l'économie circulaire. Les produits qu'elle met en vente à des prix réduits sont destinés à venir en aide à un public précaire. Le succès de son modèle a généré 45 entités ENVIE dans toute la France. Le site de Strasbourg réinsère 110 personnes par an grâce à un programme de formation interne et la mise en pratique professionnelle au travers de différents services. - Envie Autonomie : service de collecte / réparation / vente et location de matériel paramédical (fauteuils roulants), www.envieautonomie.org/67 - Recyclage : revente de matières issues du démantèlement d'appareils non réparables o collecte 1/3 du flux Bas-Rhin : déchetteries, dépôts, collecte à domicile o tri - ERG : Electroménager Réparé Garanti (strasbourg.envie.org) : o réparation, nettoyage, peinture o location / vente magasin et vente en ligne électro-ménager o dépannage chez les particuliers o projet Pièces de Rechange (PR) : démantèlement, stockage PR, vente en ligne de pièces usagées MATURITE sur les piliers de l'économie circulaire Leviers pour aller vers l'économie circulaire		
	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.  PARCOURS INDUSTRIE CIRCULAIRE Bilan & feuille de route Enjeux et besoins 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 : - 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 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. Maturité construction du modèle circulaire : Business modèle en place avec plusieurs marchés et intégration de l'ESS. Pas d'action / développement. Apport des outils numériques : Définition et implantation de nouveaux outils numériques pour améliorer les performances des équipes et des différentes activités.		
	Figure 6: Example of an audit conclusions Documentation: • List of 25 SMEs having performed an assessment • Overview of the results (see section 7 of this deliverable)* All individual support of SMEs were conducted following these actions.		
	2 online workshops "Circulab tools" The journey to the circular economy starts with a change of mindset and new skills. So we organised a webinar with Circulab to show the first steps of this transition and the possible support.		7.09.2021 – 14.09.2021

The companies present were able to:

- Discover key concepts of the circular economy and handle a concrete methodology.
- Discover the cases of companies that have implemented it and have a tool to build a first draft of a sustainable economic model for their company.

For those who were more advanced, we designed a support programme to help them build technical solutions and/or the associated digital roadmap.

Results			
1	2 online / physical workshops	**Date**	2021-2022
2	12 participating companies	**Date**	2021-2022

On the 8th of December, the agency organised a new edition of the 360 Event devoted to the Business Act and dedicated to economic ambition of the French Grand Est Region.

Public and private decision-makers, industrialists, startuppers, researchers, this event was made for them! It was the occasion to share the economic recovery plan of the Grand Est Region, draft a roadmap to accelerate transformations, meet partners for projects and business.
The programme was structured around 3 drivers of change, 3 challenges for the economic recovery plan of the French Grand Est Region:

- Ecological challenge
- Digital challenge
- "Industry 5.0" Challenge

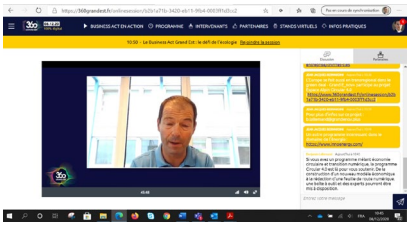
The day was structured around conferences, masterclasses, business meetings, networking and workshops!

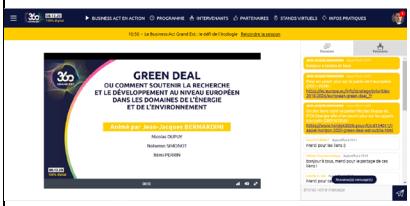
Date 08.12.2020

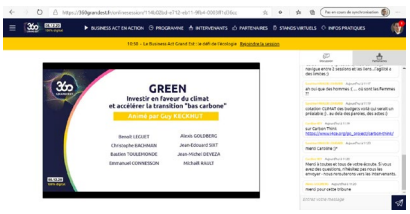
Within this transnational event on innovation (2800 participants), we organized several workshops to support SMEs finding a way to finance projects with a Circular Economy focus. It took place in such a way that the companies left with a picture of the financial aid route according to the degree of maturity of their project (vision, concept, prototyping / pilot line, demonstrator, marketing, ramp-up). To do this, we involve the European commission, Region, Ademe, BPI and private investors. The exchanges will enable us to complete the analysis started by the region's departments (measuring the impact of current systems, identifying new needs to complete the support process).

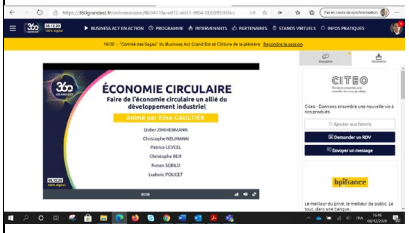
It was also an opportunity to make SMEs aware of the issues linking circular economy and factory 4.0. The event was a success. The fact that the workshops were recorded allowed for on-demand rebroadcasting and thus to reach a wider audience. It was also decided to repeat the event on shorter and specific formats but more regularly.

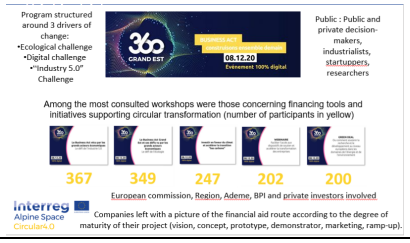
https://www.360grandest.fr/











Results	
1	3 online / physical workshops
2	30 participatinig SME's

Various individual accompaniments of companies are envisaged following these actions.

Deviations – corrective measures (as occurring)
n.a.

4.2 Training to generate new/improved or transformed business models

<table>
<tr><td rowspan="2">Title</td><td rowspan="2">Training to generate new / improved or transformed business model</td><td>Start date</td><td>01.2022</td></tr>
<tr><td>End date</td><td>03.2022</td></tr>
<tr><td colspan="4">Description

The awareness of the constraints and benefits that are driving companies to make their business models more circular is important. In this context, more and more manufacturers have begun their transition. Well upstream of recycling, their approach consists of proposing new operating modes to their ecosystem (sustainability of resources, extension of product use, repair, overcycling, etc.).

To design these economic models, companies must adopt a systemic vision to consider all the economic, social and environmental impacts of an activity. The Circulab tools make it possible to organise the approach, to ask the right questions in order to design products or services that better meet market expectations while optimising resources, and even regenerating ecosystems.

10 participants have been selected to we trained to the toolbox to generate new / improved or transformed business model</td></tr>
<tr><td colspan="4">Results
Please list below the results achieved, including the items available for documentation of the results (those items shall be put in the annexes to the deliverable).</td></tr>
<tr><td>1</td><td>Training sessions were organised for specific target group:
• 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

Through 2 days of training + 1 day of individual support provided by the Circular 4.0 program, we propose to start from their problems, to inspire them with the best initiatives to generate new hypotheses of circular business models models.

• 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 / challenge a first hypothesis
• Personal work on the part of the companies for one month to validate or resolve the questions
• Meeting of the companies through two thematic half-days to develop the roadmap and implement the economic model (necessary resources, financing tools, etc.)
• Through the 1-day support, confirm the opportunities, identify the necessary resources (digital, human, organisational,</td><td>Date</td><td>17.01.2022
–
24.03.2022</td></tr>
</table>

partnership solutions, etc.) and clarify the steps in the action and follow-up plan.

Results			
1	6 New circular business models generated / validated	**Date**	Jan 2022
2	2 days of collective support	**Date**	Jan 2022

Deviations – corrective measures (as occurring)

- n.a.

4.3 Maturation of digital transformation to support circular economy

Title	Maturation of digital transformation to support circular economy	**Start date**	05.2021
		End date	03.2022

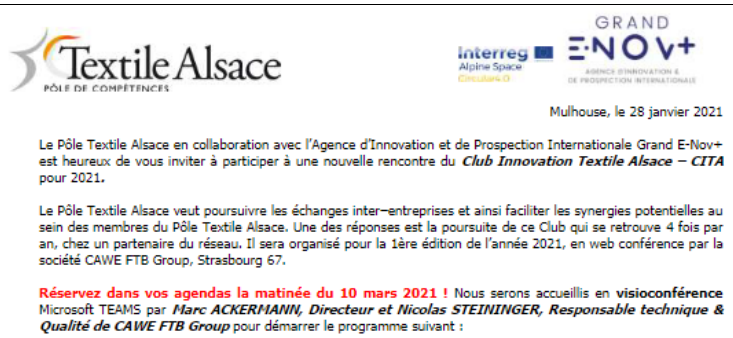
Description

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 SME's discover those new technologies.

Add sub-activities if necessary

To support the maturation of projects Grand E Nov had several activities:
- Connecting with digital experts or solution providers, establishing collaborations
- Facilitating brainstorming sessions to help structure projects
- Facilitating round tables to highlight projects that had reached a stage close to the market and needed

to be known in order to scale up or to inspire others.			
Results Please list below the results achieved, including the items available for documentation of the results (those items shall be put in the annexes to the deliverable).			
1	2 workshops to present how to integrate digital technologies (IoT and tracability in the production line) in the textile industry. - On the 7th of October 2020, Grand E-nov co-organised an online sectoral workshop dedicated to sustainable development in the textile industry. We gathered almost 20 SMEs and representants of local actors. The workshop was organized to describe the economic and environmental issues related to a non-optimized production activity. Then to describe how an SME can use digital technologies to both gain competitiveness and reduce its impact on the environment. Here is the agenda: Cross-functional strategic approach: Industry 4.0 made accessible to SMEs in the textile sector - Industrial performance through the prism of energy: - How and why the Corderie Meyer Sansboeuf has implemented a progressive transformation approach, presentation by Benoit Basier - Energy management in industry, and particularly in industrial processes, is an excellent starting point to initiate the digitalization of the production tool and move towards the connected factory. A quick and measurable ROI and showing the huge possibilities offered by Industry 4.0 to modernize in a different way a SME. - Presentation of the Kalliopê approach, by Etienne BARILLEY, illustrated with short videos shot in the workshops of Corderie Meyer Sansboeuf - Presentation of the Ewattch tools to facilitate the feedback of information and the piloting of the production tool. - The material and immaterial contributions of this transformation within Corderie Meyer-Sansboeuf. - Exchanges - questions / answers with the speakers: How to accompany the companies of the local textile sector in their path of improvement of their industrial performance? - On the 10th of march, we organized a similar event to depict good practices to integrate the digital technology that enable traceability and reduction of textile waste.	**Date**	07.10.2020 and 10.03.2021



Mulhouse, le 28 janvier 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 organisé pour la 1ère édition de l'année 2021, en web conférence par la société CAWE FTB Group, Strasbourg 67.

Réservez dans vos agendas la matinée du 10 mars 2021 ! Nous serons accueillis en **visioconférence** Microsoft TEAMS par ***Marc ACKERMANN, Directeur et Nicolas STEININGER, Responsable technique & Qualité de CAWE FTB Group*** pour démarrer le programme suivant :

08h55 - Accueil des entreprises textiles – Connexion web
09h00 - Présentation des participants au CITA – Actualité du Pôle Textile Alsace
09h10 – Présentation de l'entreprise CAWE FTB Group : ses métiers, ses marchés, son évolution, en images.
09h30 – Approche stratégique transverse : **L'industrie 4.0 rendue accessible aux PMI de la filière textile – les outils de traçabilité au service de la performance industrielle et commerciale :**
- Comment et pourquoi l'entreprise CAWE a mis en place une démarche de traçabilité, présentation de Nicolas STEININGER.

09h45 – Présentation du contexte légal, économique et marketing spécifique aux activités de CAWE :
- La maîtrise des consommations matières avec ses sous-traitants
- La maîtrise des process de fabrication
- La maîtrise du cycle de vie des produits (la maintenance prédictive, recyclage…)

10h15 – Exemple concret de la maitrise des consommations matières, de la preuve de concept au déploiement :
- Visite virtuelle et retour d'expérience des équipes de CAWE :
  - Le point de vue du chef de projet
  - Le point de vue du responsable IT
  - Le point de vue de l'opérateur

11h00 – Premier bilan : les difficultés rencontrées internes et externes, les bénéfices et économies au plan industriel et commercial pour CAWE – Accompagnement et poursuite du déploiement et perspectives d'avenir.
11h30 – Echanges - questions / réponses avec les intervenants : Comment voyez-vous la transition numérique de votre entreprise textile ?
12h00 – Conclusion

Nous profitons de cette invitation pour vous assurer que vous êtes notre meilleur(e) interlocuteur(trice) dans votre entreprise, que cette démarche du ***Club Innovation Textile Alsace – CITA*** vous intéresse et vous motive. Vous acceptez d'y participer ou de vous faire représenter et y voyez l'occasion de présenter votre entreprise et ses compétences.

Nous vous remercions de confirmer votre participation avant le 5 mars 2021 DERNIER DELAI.

Nous restons à votre disposition pour toute information complémentaire,

Results			
1	2 online workshops	**Date**	Mar 2021
2	+15 SMEs involved	**Date**	Mar 2022

Other meetings are already planned in the future to present other several concrete examples in the region of a strong and fruitful alliance between circular economy and the digital technologies of industry 4.0.

2	1:1 supported SMEs **Description** Industrial SME's who wish to be accompanied to: At the strategic level - 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. At the operational level - 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.	**Date**	05.2021 - 06.2022

- 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).

Objectives:

- 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.

Precision concerning the one-to-one support: Formalisation of your digital and circular innovation strategy

- 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

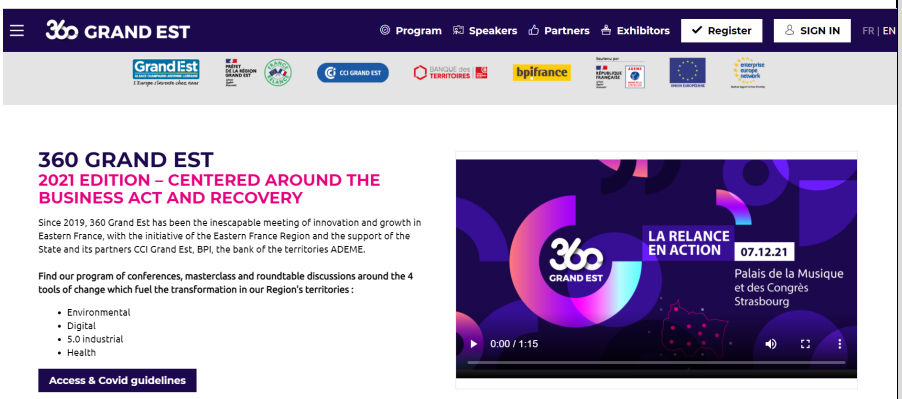
Deviations – corrective measures (as occurring)

- We had some additional appointments with SMEs supported until June who had additional questions. Additional activities were therefore carried out until June to accompany them further in their roadmaps

4.4 Physical workshops

<table>
<tr><td rowspan="2">Title</td><td rowspan="2">Physical workshops</td><td>Start date</td><td>06.2020</td></tr>
<tr><td>End date</td><td>12.2021</td></tr>
<tr><td colspan="4">Description

Add sub-activities if necessary</td></tr>
<tr><td colspan="4">Results
Please list below the results achieved, including the items available for documentation of the results (those items shall be put in the annexes to the deliverable).</td></tr>
<tr><td>1</td><td>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 two round tables to bring out new circular and digital transition projects.

Two examples:
First round table
Title : <u>New business models / New economic models to face the new industry shock</u>
Date and place : <u>360 Grand Est – 7 Décembre, PMC Strasbourg | 10h00 - 10h45</u>
Reconciling economic and environmental issues with the Economy of Functionality and Cooperation (EFC).
They faced the limits of their economic model and sought new solutions to revive their activity. Find out how Odyssée and Fortal create value by developing a service-based logic and optimising the management of their resources thanks to the Functional and Cooperative Economy (EFC) principles.
A round-table discussion moderated by Initiatives Durables, leader of the Club EFC Grand EST, also in the presence of the intervention and research laboratory ATEMIS, which supports companies in their transition to the EFC.</td><td>Date</td><td>07.12.2021</td></tr>
</table>

Second round table

Title : Towards a resilient industry : Circular industry

Date and place : 360 Grand Est – 7 Décembre, PMC Strasbourg | 15h30 - 16h15

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. Come and understand the digital challenges of eco-design with Altermaker, of re-use with ENVIE, of industrial heat recovery with R-PAS.

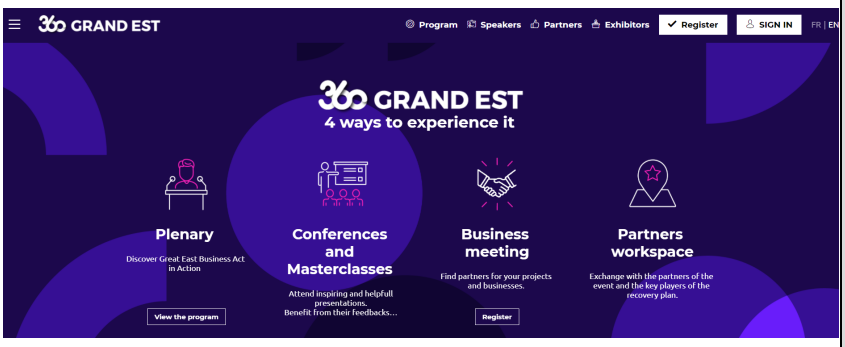
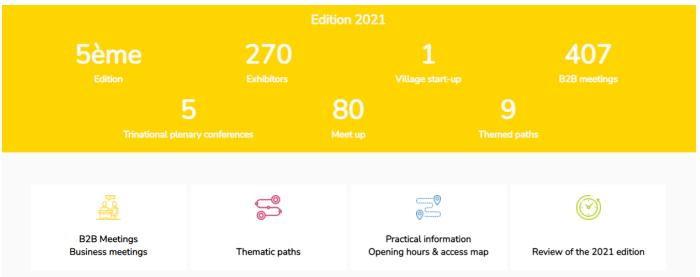


Figure 4: Track Circular 4.0 (7th of Dec 2021)

Results:
Several dozen companies participated in these round tables. Attendance sheets are available on request

Results			
1	5 physical workshops	**Date**	2021-2022
2	+50 participating companies	**Date**	2021-2022

2	**SALON INDUSTRIE DU FUTUR** – November 17th and 18th (https://www.industriesdufutur.eu/) : Transnational business fair in relation to Industry 4.0 solutions (4000 participants). Sustainable workshop foreseen on sustainable supply chain management by one of our colleagues (artificial intelligence and big data will be presented as possible solutions).	**Date**	17.12.2021

	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 a round table to bring out new circular and digital transition projects. Title : Digital as a Booster for the Circular Economy Date and place : 30 Nov. 2021 | 09:30 - 10:15 On the show in the Mercure room during the BE4.0 event. 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. Discover the inspiring initiatives of the Mer bleue group which builds circular industry projects with its customers (eco-design, material processing and communication) and Mittwill with its collaborative textile production platform.  For more details see : https://www.industriesdufutur.eu/en/?utm_source=search&utm_medium=google&utm_campaign=promo-google-search&gclid=CjwKCAiAqIKNBhAIEiwAu_ZLDkInD9vbE4BDuM8pZU5ijaODxVZ__TNjYX9z21ePtLpiFRThZXnRGhoCFeYQAvD_BwE **Results** 1 — 2 online / physical workshops — **Date** — 2021-2022 2 — 12 participating companies — **Date** — 2021-2022 Speakers could highlight projects that had reached a stage close to the market and needed to be known in order to scale up or to inspire others.		
3	1 Visit to a transfer centre was also organised to show the field of possibilities offered by digital technologies to the textile sector.	**Date**	08.12.2021

Textile Alsace
PÔLE DE COMPÉTENCES

Interreg Alpine Space Circular4.0

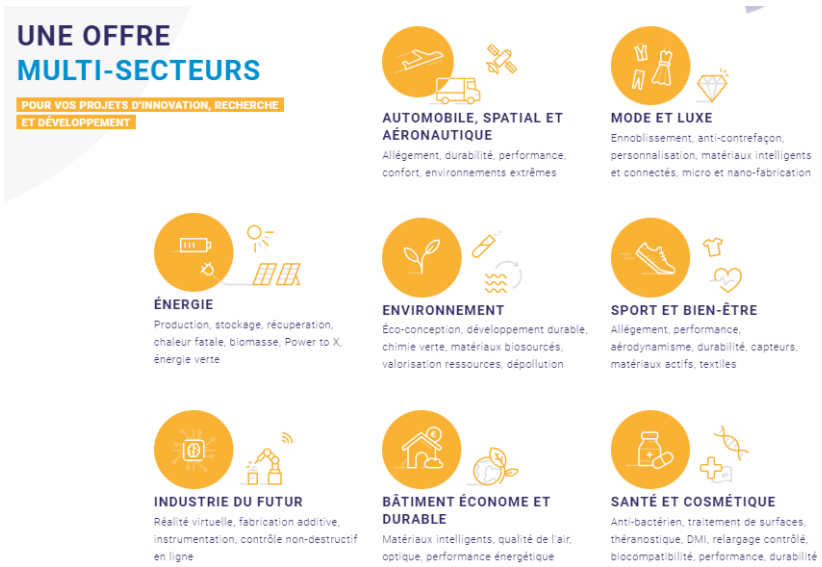
GRAND E-NOV+
AGENCE D'INNOVATION & DE PROSPECTION INTERNATIONALE

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 :



Results			
1	1 physical workshops	**Date**	2021-2022
2	12 participating companies	**Date**	2021-2022

4	At the end of 2019, the Grand Est Region signed a partnership agreement with the Solar Impulse Foundation. Created on the initiative of Bertrand PICCARD after the success of the first solar flight around the world, the Solar Impulse Foundation aims to select 1000 economically viable and environmentally efficient solutions in the fields of industry, sustainable cities, the circular economy, water and energy. Within the framework of this partnership, the Foundation has initiated an action to label the solutions that we could have in the Grand Est region. The labelling is based on a process of evaluation by international experts and allows the labelled companies to be put in visibility and in contact with companies and public actors from all over the world. It is therefore a very interesting business opportunity both for the search for clients and partners and for investors.	**Date**	30.06.2020

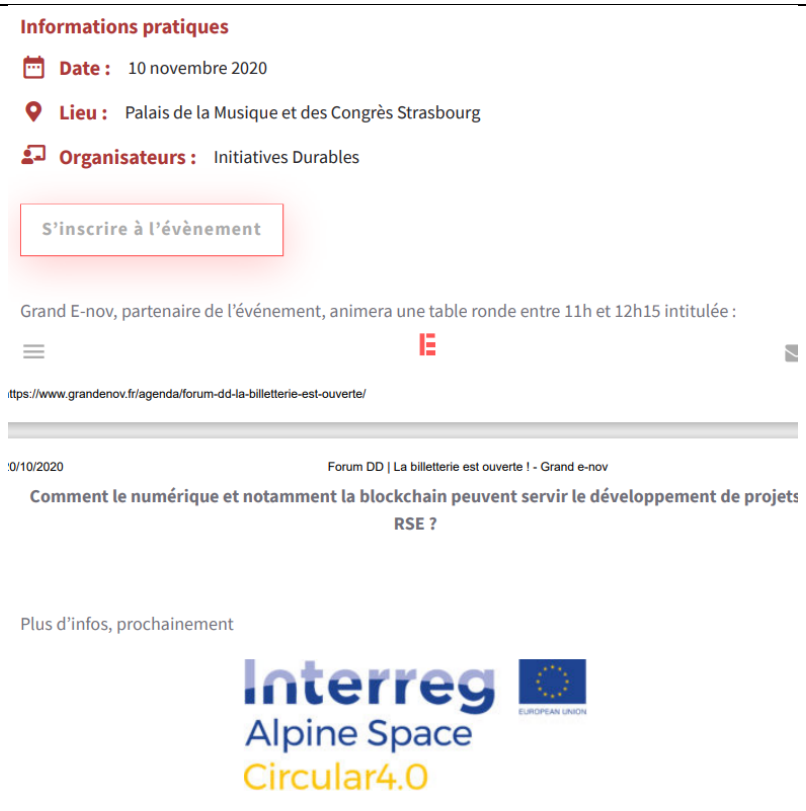
On 30 June 2021 we co-organised a webinar with the aim of introducing this label, identifying companies that have already developed a digital solution supporting the circular economic model and supporting them in demonstrating the economic,

environmental and societal value they have.

Results			
1	2 online / physical workshops	**Date**	2021-2022
2	35 participating companies	**Date**	2021-2022
3	1 SME Supported through Circular 4.0 is now labelled.		2021-2022

After a few months of action, and in order to accelerate the labelling of solutions from the Grand Est region, the Foundation proposes to provide 30 tailor-made support/coaching sessions by their team to help companies from the Grand Est region, supported by Grand E-Nov+ or the regional competitiveness clusters, in their labelling.

	The 10th November 2020; we organised a Sustainable workshop on blockchain technologies as possible solutions for a sustainable world during “forum développement durable 2020”. This was part of “le Forum du développement durable (dd)” local event to promote sustainable good practices (1136 registered). (Archive 2020 - Aux actes, ensemble ! - Forum du Développement Durable (leforumdd.fr) Round Table 10th November - Digital and CSR: a powerful duo On November 10, 2020, the regional agency Grand E Nov co-organized during the Sustainable Development forum (100% digital event), a round table - Digital and CSR: a shock duo. Various speakers sought to see how digital and especially blockchain can serve the development of CSR projects and the circular economy? With the health crisis, supply chains, logistics and industrial processes have been put under pressure and have shown the vulnerability of the system. At the same time, consumers and customers are increasingly demanding data transparency and circular economy projects. How can digital technology meet these challenges? How can blockchain be a solution to improve the reliability of data but also guarantee the traceability of a product? How can digital technology respond to CSR issues by enabling data processing never before imagined? *Note : Workshop built with Citeo our observer.*		10.11.2020



Deviations – corrective measures (as occurring)

- n.a.

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

The designed support program to bring transition projects to their maximum maturity stage has been broadly respected. There has been some delay in carrying out some of the D.T.3.2.2 actions due to a reorganization put in place by the public authorities, due to certain constraints linked to the health crisis.

- We had to postpone some webinars/workshops, but their objective and content have not been changed.
- The training session was postponed for several months to fit in with the schedules of the various stakeholders in the ecosystem.

In order to finalize the pilot action in time, we had to rescheduled some of the support actions over the same periods (compress the program). This was possible because:
- the companies are at different stages of maturity at the start of the Circular program (we have qualified different subgroups of target SMEs)
- the 1:1 support needed were almost very specific to each use case and could be rearranged (independence of some actions)
- The objectives have been built with the SMEs in order to progress step by step, taking into account the health and economic situation and in order to be able to observe results, outcomes or impacts according to the initial maturity.

As expected, we were not able to observe some impacts because even the most advanced SMEs were not able to reach the final stage of maturity at the end of the pilot action (a digital and circular transition takes time).

It was not easy to catch up with the original timeframe because many other events and trainings were

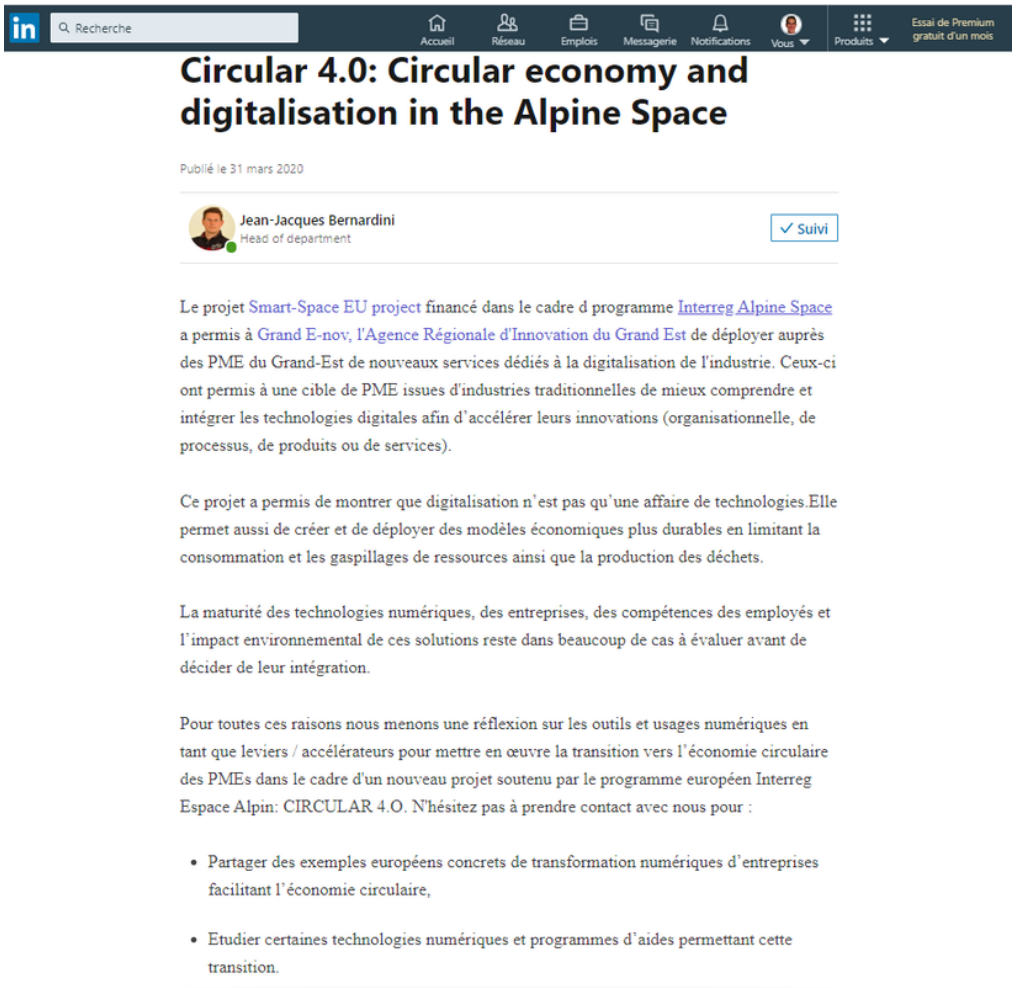
repositioned by other intermediaries, it was not always easy to catch the supported SMEs. For example, one training course had to be postponed to January 2022 to maximise its impact and to have a promotion filled with about ten companies.

Concerning financial aspect of the project and to carry out all these actions, we deviated from the initial plan defined two years ago due to the health crisis situation. Almost all the trips were cancelled, the planned actions had to be held at a distance, which leads to a deviation from the initial budget. For these reasons, the travel and accommodations budget was not used, nor were the external expenses. On the other hand, some lines related to the use of external expertise appear to be able to accelerate and compress the program. For these reasons we ask to be able to benefit from the flexibility of the budget and to put in place a transfer of the unused travel and accommodations budget to external expenses.

6 Communication activities implemented to support the pilot action

In order to carry out the programme, recruit SMEs, enhance the value of the support provided and carry out the necessary reporting, various communication operations were carried out on the basis of the actions of activity 3.2.2:

- DC 4.2 and 4.3: The agency Grand E Nov participated in the dissemination of the newsletters of period 3 by writing several articles and by communicating to the community various initiatives in progress.
- DC3.1/ DC 4.3: Some of the SMEs accompanied during the pilot phase can be identified as success stories. Some of them have indeed received awards or labels recognising the relevance of the solutions developed. Those SMEs will be part of the success case brochure, Regional infoday, press conference or press release.
- DC 4.1: Participation to a EU/EUSALP sectoral event
- DC 4.2: Participation in the dissemination of the newsletters by writing several articles and by communicating to the community various initiatives in progress.
- DC 4.4: The actions carried out also enabled us to have some articles published.



Recherche

Accueil Réseau Emplois Messagerie Notifications Vous Produits Essai de Premium gratuit d'un mois

Circular 4.0: Circular economy and digitalisation in the Alpine Space

Publié le 31 mars 2020

Jean-Jacques Bernardini
Head of department

✓ Suivi

Le projet Smart-Space EU project financé dans le cadre d programme Interreg Alpine Space a permis à Grand E-nov, l'Agence Régionale d'Innovation du Grand Est de déployer auprès des PME du Grand-Est de nouveaux services dédiés à la digitalisation de l'industrie. Ceux-ci ont permis à une cible de PME issues d'industries traditionnelles de mieux comprendre et intégrer les technologies digitales afin d'accélérer leurs innovations (organisationnelle, de processus, de produits ou de services).

Ce projet a permis de montrer que digitalisation n'est pas qu'une affaire de technologies.Elle permet aussi de créer et de déployer des modèles économiques plus durables en limitant la consommation et les gaspillages de ressources ainsi que la production des déchets.

La maturité des technologies numériques, des entreprises, des compétences des employés et l'impact environnemental de ces solutions reste dans beaucoup de cas à évaluer avant de décider de leur intégration.

Pour toutes ces raisons nous menons une réflexion sur les outils et usages numériques en tant que leviers / accélérateurs pour mettre en œuvre la transition vers l'économie circulaire des PMEs dans le cadre d'un nouveau projet soutenu par le programme européen Interreg Espace Alpin: CIRCULAR 4.O. N'hésitez pas à prendre contact avec nous pour :

- Partager des exemples européens concrets de transformation numériques d'entreprises facilitant l'économie circulaire,
- Etudier certaines technologies numériques et programmes d'aides permettant cette transition.

7 Summary of the achievements - lessons learnt

7.1 Achievements

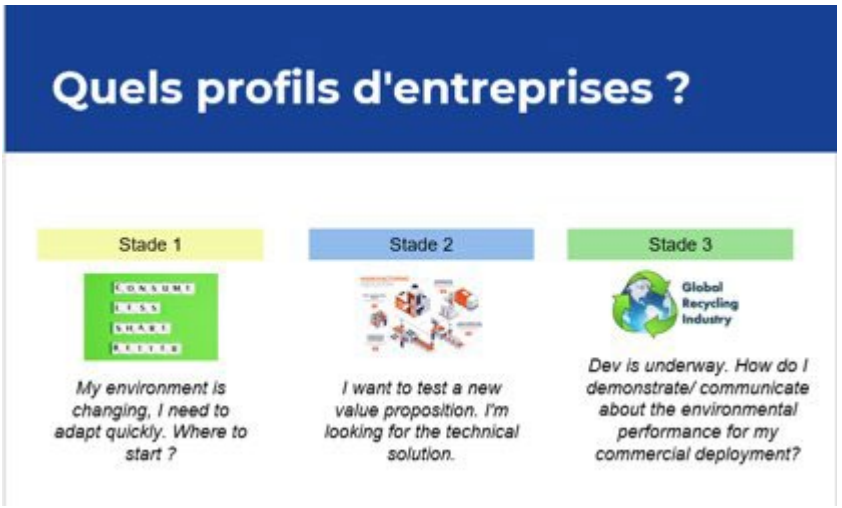
1:1 Individual support

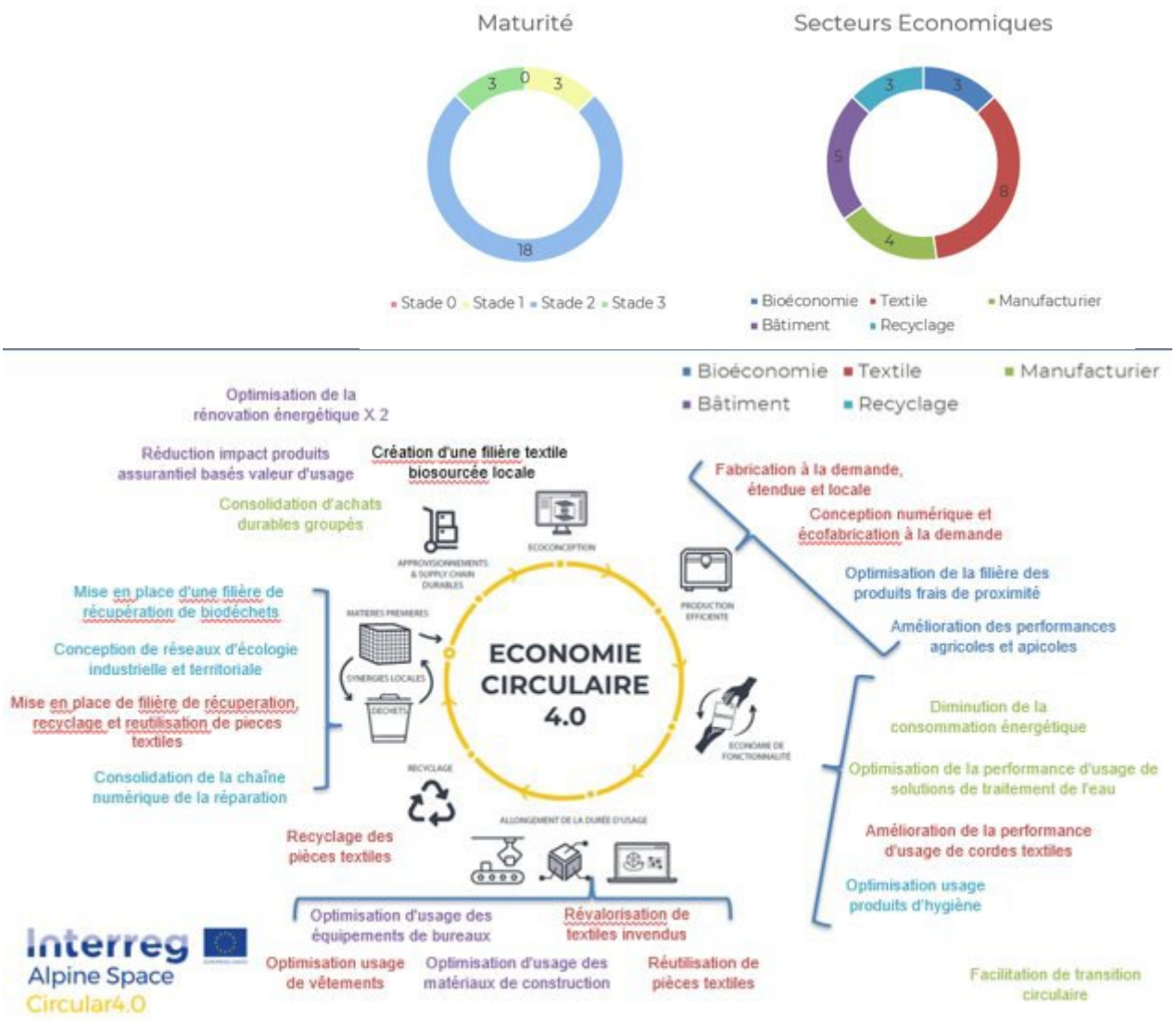
From May 2021 - March 2022

26 SMEs supported

3 types of SMEs according to degree of digital and circular maturity

5 sectors targeted





7.2 Lessons learnt

We were able to identify and start the support of more than twenty SMEs in the various targeted sectors (wood, building, textile, manufacturing, bioeconomy). We were able to confirm our initial hypotheses:

- the companies are at different stages of maturity at the start of the Circular program (we have qualified different subgroups of target SMEs)
- facilitating a circular and digital transition requires several step and types of support, to act at a strategic, human and equipment resource levels (independence of some actions)
- A digital and circular transition takes time and it's mostly impossible that an immature SME could reach the final stage of maturity within an 8 month pilot action timeframe.

8 Annexes

n.a