



# Up2Circ – Uptake of Circular Business Model, Product and Process Innovation

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## **Deliverable 3.1** **Mapping of open-source online materials**

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## 1 Introduction

**Up2Circ** is a project for boosting the uptake of circular business model, product and process innovation. It is running in 2023-2026 and will demonstrate a replicable pathway to motivate and effectively support SMEs to innovate and transform towards sustainable growth. It addresses the need of EU innovation support ecosystems to better join forces and make best use of synergies to enable a quick and comprehensive transition of Europe's SMEs towards a circular economy on a large scale.

Project partners from 7 countries are involved in all project activities: Italy, Estonia, Czech Republic, France, Poland, Germany and Spain. Up2Circ will develop and implement attractive and efficient SME support measures. During the first year of the project, the partners will work most on setting up all steps of the **Up2Circ Client Journey** (Fig.1).

With the **Up2Circ Accelerator** the project accompanies SMEs from exploration of opportunities to concrete implementation projects concerning the uptake of circular business model, product and process innovation, focusing on achievable innovation measures with clear mid-term benefits for the SMEs. Up2Circ is dismantling barriers with a customized, client-centric advisory approach and gives access to specific expertise and skills that SMEs need to develop a concrete action plan on how to transition.

The first step, **Wake Up2Circ** is targeted on awareness raising among the main target groups of the project – SMEs, business innovation advisors and innovation support ecosystem.

Learning modules of **Up2Circ Academy** will connect sustainable innovation, the uptake of advanced technologies and social innovation aspects under the holistic concept of a circular economy and will be compiled based on existing results and in close cooperation with different EU networks and initiatives.

One of the key tools for maximizing impact of the project is **Up2Circ Incentive Scheme for SMEs** to test, develop and run circularity projects within their business processes.

Up2Circ methodology and materials will be made available to SME innovation advisors and trainings will be offered targeting EU sustainability advisors to upscale project results. Further, to increase efficiency of EU innovation support ecosystems, four leveraging effects will be demonstrated and exploited throughout the project:

- make use of existing results as there is a lot of relevant knowledge and best practice examples available on the topic of circularity,
- reach out more efficiently to SMEs with tailored advice services and funding of concrete transition projects towards circular economy,
- make use of complementary strengths,
- establish closer connections between different stakeholders.

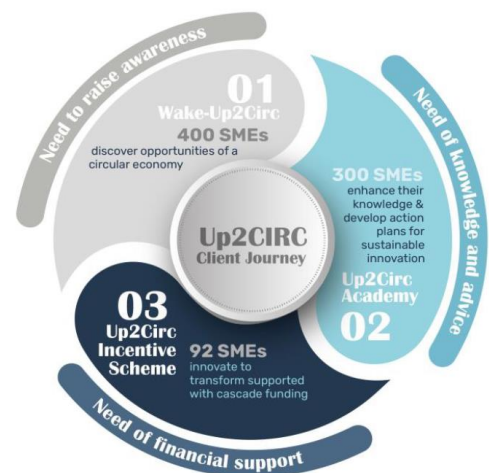



Figure 1 Up2Circ Client Journey



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Current document is the report of the desk research activities planned within project Work Package 3 (WP3) - **Deliverable D3.1 – Mapping of open-source online materials**. The main aim of the activities in WP3 “Cooperate to perform better” is to develop and demonstrate approaches on how to cooperate and collaborate efficiently between European innovation networks and stakeholders with the aim of boosting the implementation of circular economy strategies among SMEs and to offer the SMEs a network of experts and institutions that can help them in their triple transition towards sustainability, digitalisation and resilience.

Specific objectives of the WP3 are:

- Increase awareness about one another and strengthened connections between different stakeholders,
- Demonstrate the mutual benefit of using synergies between expert initiatives (on advanced technologies, social innovation and circular economy) with networks having best access to specific sectors (ECCP) and with networks having broad access to SMEs (e.g. EEN, EDIH, etc.),
- Expand mutual knowledge about working procedures and eligibility criteria of each stakeholder.

## 2 Planned activities

As described in the Up2Circ project application, to make better use of already existing materials and results Up2Circ Accelerator contents will mainly build on the many great tools and materials that have already been developed by stakeholders of EU innovation support ecosystem and other players and that are available open source. Materials most suitable for supporting SMEs with circularity transition will be selected and customized according to need.

The mapping of open-source online materials assessed within preparation of WakeUp2Circ and Up2Circ Academy contents will be made available for stakeholders on the project website and will actively be disseminated to stakeholders e.g. on the European Circular Economy Stakeholder Platform.

As a first preparatory step, the partners decided to map available:

- assessment tools,
- platforms and online guides and
- online learning modules.


Based on the mapping, current document was created and published as **Deliverable D3.1 – Mapping of open-source online materials** suitable for supporting SMEs with circularity transition. Main target groups for the deliverable are: SMEs, business innovation advisers and EU innovation support ecosystem.

Planned outputs of the tasks according to the target groups:

- SMEs get a comprehensive overview of suitable available materials;
- Business innovation advisors can make use of the overview both to train the advisors and to better support SMEs;
- EU innovation support ecosystem gets a better overview of suitable materials for SME support and can avoid double work



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Project partners were involved in following activities related to the task:

- scanning and mapping of available content, customisation, publication (current document),
- during kick-off meeting in Hamburg, 24-26.01.2023 the partners defined criteria for the online materials related to quality of content and presentation as well as suitability for SMEs,
- review and mapping of available online materials was carried out by partners, who also made a first selection of material according to criteria defined and introduced materials selected to one another during online meetings in February 2023,
- selection of materials most suitable for supporting SMEs with circular transition, deciding which materials will be included in a mapping of suitable open source online materials and which materials will be further used to prepare content of **WakeUp2Circ** and **Up2Circ-Academy**,
- publication of the mapping on Up2Circ website (to be published with launch of the website in March 2023), active dissemination to stakeholders of EU innovation support\_ecosystem, e.g. to EEN sustainability advisors and publication on ECESP,
- initiating a discussion how to sustain and further update the mapping - regular updates will be made after publication according to feedback and experience during utilization of the materials throughout the project.

### 3 Mapping results

Mapping of open-source online materials on circularity was carried out using online shared tools and regular meetings to discuss the chosen materials and the main focus was on applicability for future assessment tools for Up2Circ project activities e.g. SME intake interviews and in-depth assessments.

The activity was focussed on publicly available and open-source assessment tools, platforms, online guides and learning modules. The available tools have usually been developed by universities and other projects focused on the topic. Some of the key tools were already mapped during the project application preparation, but most were added during the desk research carried out by Up2Circ partners.

#### 3.1 Assessment tools

Regarding assessment tools, the partner network mapped 19 different tools and most were assessed to be at least partly applicable for Up2Circ project. 7 tools were rated as not applicable and as a result have been left out of the following discussion. Four standout tools will be followed-up closely and could be considered as potentially useful for application almost directly with some adjustments. Individual discussions are planned with the developers of the tools to map potential cooperation opportunities.

**(1) ready2LOOP circular readiness assessment** (<https://ready2loop.org>)

This tool is being developed by Technical University of Denmark. The holistic tool helps define seven key Value Chain layers for manufacturing companies to make a successful transition to Circular Economy. Application is also possible to other types of companies, like logistics providers, product retailers, maintenance & repair services and value recovery companies.

The 30-45 min. Circular Readiness Assessment will be followed up by company profile analysis with



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prioritization suggestions (Action Plan). A library of 100+ transition tools will support the action plan/roadmap implementation. The approach emphasizes importance of building the value chain partnerships for circularity.

Follow-up activities for Up2Circ project will include meetings with the toolkit developers for potential cooperation. Certification is needed for ready2LOOP consultants.

## (2) Circular Economy Business Models Toolkit developed by R2PI project in 2019

R2PI project was carried out 2016-2019. As the website is not available any more, toolkit with canvases, templates and questionnaires used can be accessed via project publications, e.g. the case study reports (search: r2piproject in scholar.google.com). As a basis for circularity assessment, the toolkit uses circular business model patterns (Fig.2), presenting the different

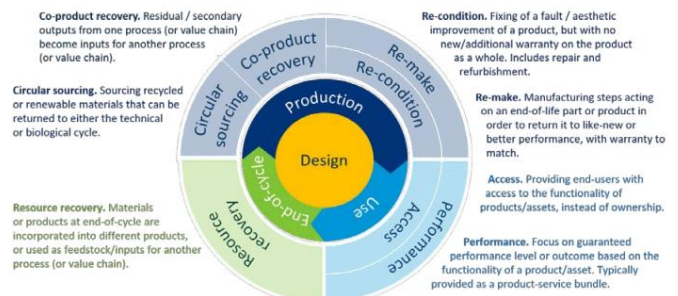
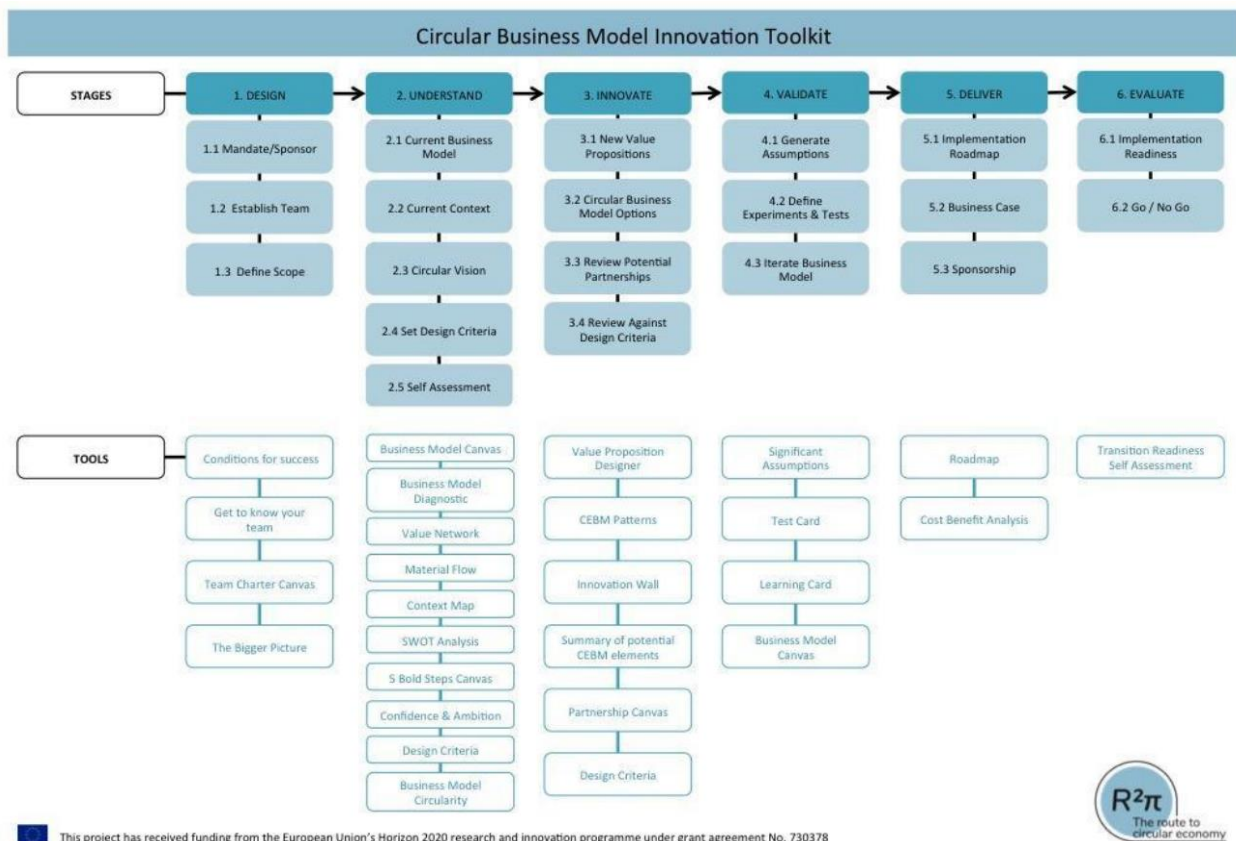


Figure 2 Circular business model patterns

steps of products' life-cycle from production to consumption and end-of-life. It is presented in a circular way to illustrate the possibilities of creating circular business model by connecting products' end-of-life to the production of new products. The individual business analysis is carried out in different stages with specific tools utilized as needed, e.g. business model and value proposition canvas, etc.



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Figure 3 Toolkit elements (R2PI project)



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### (3) Circular Economy Toolkit (<http://circulareconomytoolkit.org>)

Circular Economy Toolkit, developed already in 2013 at the University of Cambridge by Jamie Evans, provides free, open-source materials to help create sustainable products, services and business models. The website provides a 5 Minute Assessment Tool, which analyses SMEs product/service and gives guidance on 7 potential improvement areas according to opportunity and feasibility.

Additionally, tools are available to start ideation workshops with the SMEs to improve the key areas for circularity. The toolkit is a bit outdated in terms of the user interface, but the content is still highly relevant and usable for both SMEs as business advisors and other facilitators.



**Figure 4 Improvement fields for circularity**

### (4) Other tools

In addition to the aforementioned tools, several others were found (see Table 1) as partly applicable to use as input for future Up2Circ toolkit.

They provide useful approaches to:


- raise awareness about opportunities of circular innovation,
- evaluate the maturity of the SMEs in terms of circularity,
- measure the status quo regarding Up2Circ impact indicators:
  1. reduction of GHG emissions;
  2. decrease in waste generation;
  3. decreased consumption of primary materials, number of jobs created and preserved, increased turnover;
  4. reduced energy consumption / economic output.
- pre-qualify the company's needs and ambitions and identify opportunities for circular innovation,
- provide a rough profitability calculation of innovation measures, etc.





#	Tool	Link	Tool developer/provider	Description
1	Circular Pathfinder	<a href="https://www.ideal-co.nl/pathfinder/">https://www.ideal-co.nl/pathfinder/</a>	IDEAL&CO	Ideation tool. Based on the best practices of other companies, to explore and identify the most suitable circular pathways for their products by answering a few questions. Outcome: general advice.
2	Moveco Checklist	<a href="https://www.interreg-danube.eu/uploads/media/approved_project_output/0001/18/d80bd307d6bb83b4d1afe341dae0b177a96a2259.pdf">https://www.interreg-danube.eu/uploads/media/approved_project_output/0001/18/d80bd307d6bb83b4d1afe341dae0b177a96a2259.pdf</a>	Interreg Danube Region MOVECO project	50 questions, 5 categories. Checklist with questions and fact sheets to support SMEs <ul style="list-style-type: none"> <li>• to increase their know-how on circular thinking</li> <li>• to identify their status quo regarding CiE</li> <li>• to ask themselves the right questions</li> <li>• to get an extensive list of supporting tools.</li> </ul>
3	Toolbox from Circular Economy playbook	<a href="https://teknologiateolisuus.fi/fi/circular-economy-playbook">https://teknologiateolisuus.fi/fi/circular-economy-playbook</a>	Sitra, Technology Industries of Finland and Accenture Strategy	Excellent overview of Circular Economy and linked tools incl.: 2 tools to identify the most relevant circular business models: business model development toolkit, value case tool 1 capability maturity assessment tool to understand the starting point and areas to develop 1 technology maturity assessment tool to prioritise technologies to focus on Set of tools to get started with the circular transformation journey (cultural gap, ecosystem identification partner, funding requirement analysis, roadmap development).
4	Circularity Deck	<a href="https://www.circularitydeck.com">https://www.circularitydeck.com</a>	Jan Konietzko	Facilitated brainstorming tool for creation of new circular business innovations. Miro board version available.
5	Circular Design Guide	<a href="https://www.circularidesignguide.com/">https://www.circularidesignguide.com/</a>	Ellen MacArthur Foundation and IDEO	The guide lines up a number of activities to help to understand, define, make and release circular innovations. Many good worksheets to discover CE opportunities.
6	Circularity check	<a href="https://ecopreneur.eu/circularity-check-landing-page/circularity-check-terms/">https://ecopreneur.eu/circularity-check-landing-page/circularity-check-terms/</a>	Ecopreneur.eu	Free, online tool. For-profit/not-for profit use ok. Needs login. Complete, strategic scan at product/Service level. Indicators: Design, Procurement and Production, Delivery, Use, Recovery and Sustainability. Outcome: % circularity. 500+ users and 2 earlier pilots.
7	Circularity assessment	<a href="https://cat.ganbatte.world/">https://cat.ganbatte.world/</a>	Circle Economy Foundation	Good tool for client uptake. Easy to use and short. Examples/case studies within key topics.
8	Circular Canvas	<a href="https://circulab.academycircular-economy-tools/circular-canvas-business-models/">https://circulab.academycircular-economy-tools/circular-canvas-business-models/</a>	Ciculab	Several canvases (value chain canvas, business model canvas) to help organizations rethink their business model or projects and create long lasting impacts. Embraces systems thinking to find a balance between economic viability, the ecosystem and sustainability. 2nd level assessment tool for interested companies, but training is needed for users.
9	Evaluez votre maturité circulaire	<a href="https://eenmaturitecirculaire.evalandgo.com/form/364943/s/?id=JTk5cCU5OHEIQUUIQUUM%3D&amp;a=JTk3byU5NXEIOUEIQUM%3D">https://eenmaturitecirculaire.evalandgo.com/form/364943/s/?id=JTk5cCU5OHEIQUUIQUUM%3D&amp;a=JTk3byU5NXEIOUEIQUM%3D</a>	EEN Méditerranée	Free tool used by French partner in Up2Circ, currently in French, but can be translated to different languages. Provides spider graphs on key topics. Assessment divided in different sections: <ul style="list-style-type: none"> <li>- challenges and ambition</li> <li>- internal organisation</li> <li>- business model</li> <li>- product and service design</li> </ul>

Table 1 Other tools discovered by Up2Circ partners

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### 3.2 Platforms and online guides

In addition to hands-on online tools, different circular economy related platforms and online guides were scanned by partners. As the previous topic will provide content to SME uptake and hands-on support services, both this and the following topics will provide content to the Up2Circ Academy learning modules. Closer cooperation is planned with key stakeholders in EU to make use of complementary strengths.

Internationally, Ellen MacArthur Foundation (<https://ellenmacarthurfoundation.org>) has compiled a lot of circular economy resources both on their website as well as their Youtube channel available at: <https://www.youtube.com/@EllenMacArthurFoundation>. They have also been involved in the Circular Design Guide preparation in cooperation with IDEO: <https://www.circulardesignguide.com>.

SME specific information is continuously updated at the SME Climate Hub website: <https://businessclimatehub.org> and organisations providing circularity certifications e.g. Cradle to Cradle Products Innovation Institute (<https://c2ccertified.org>).

EU wide, there have been a lot of different programs and projects on the circularity topics. Circular Economy Practitioner Guide by EIT ClimateKIC (<https://www.ceguide.org>) provides business case examples and access to resources and tools. Additionally, there are also a lot of country-specific initiatives and networks available for people interested on the topic. A comprehensive overview has been provided by Nordic Innovation in their publication Nordic Circular Economy Playbook 2.0: <https://pub.norden.org/us2022-468>

### 3.3 Learning modules

Available online learning modules were scanned to research, how different organisations and projects are approaching online trainings, specifically providing content on circular economy topics. Up2Circ partners have mapped several key service providers and will utilize knowledge gained within Up2Circ Academy online modules. A similar project CircularStart, funded by Erasmus+ program, has already launched their online environment: <https://learn.circularstart.eu>

Other examples of currently available online learning modules:


- Lund University has prepared a 5-week course on circularity available at: <https://www.iiee.lu.se/moocs-iiee>
- EIT Raw Materials provides several online courses at <https://eitrawmaterials.eu/academy/online-learning>
- European Consortium of Innovative Universities (<https://engage.eciu.eu>) provides access to accredited courses. Potentially SMEs could be delegated to these, but initial meetings are needed with the participating universities.

Circular economy is also covered on well-known international online training portals:

- Coursera <https://www.coursera.org/search?query=circular%20econom&>
- edX <https://www.edx.org/search?q=circular+economy>
- Futurelearn <https://www.futurelearn.com/search?q=circular+economy>



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Up2Circ partners will select and customise materials most suitable for supporting SMEs with circularity transition. As a result, Up2Circ Academy contents will be made available for stakeholders on the project website and will actively be disseminated to stakeholders.

## 4 Discussion

Up2Circ will develop and implement attractive and efficient SME support measures. During the first year of the project, the partners will work most on the **Up2Circ Client Journey** and the current mapping exercise is focusing on available tools and materials to make use of existing results as there is a lot of relevant knowledge and best practice examples available on the topic of circularity.

The main aim of the current activity is to develop and demonstrate approaches on how to cooperate and collaborate efficiently between European innovation networks and stakeholders with the aim of boosting the implementation of circular economy strategies among SMEs and to offer the SMEs a network of experts and institutions that can help them in their triple transition towards sustainability, digitalisation and resilience. The desk research has provided a lot of input for the design of tools for the Up2Circ client uptake and business support processes.

Based on the desk research materials, there will be 2-3 different questionnaires prepared. A short one will be created mainly for SME intake with focus on awareness raising about opportunities of circular innovation. A longer one (or two separate ones) will be prepared for in-depth assessment, ideation, and action plan development for the SMEs for circularity transition. In the latter one, more hands-on support is required by participating SME advisors. The topics will be focusing on status quo, maturity and readiness evaluation of the SMEs. Additionally, the mapping of potential innovation measures will be carried out and their profitability will be assessed. As a result, the participating SMEs will receive a list of recommendations as input to their action plans.

WP2 “Innovate to Transform” of the project will build on the available materials and decide on the final format and test these with the clients. Ongoing discussions will be held with the partners to improve the approach as needed.



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