

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

Work Package: T2

Activity: A.T2.3 Setting-up the toolkit to strengthen CE with digitalisation processes

Deliverable: D.T2.3.3 CIRCULAR4.0 toolkit implemented

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1. Methodology for selecting tools & toolsets and guidelines offered to intermediaries, public actors and sectoral agencies to assist SMEs

The Circularity Assessment Score (CAS) and other circularity assessment tools, the Digital Maturity Assessment tools (DMA), and the Circularity Acceleration Training course 4.0 (CAT4.0) are the three tools deployed in the training process of the Circular 4.0 project, which the Operators Training Course is aimed at. These three tools were simultaneously developed/proposed and **described in detail** under the **D.T2.3.1 Setting up the toolkit to support digitalisation processes to foster the CE in the Alpine space area** where the need for circularity assessment, digital maturity assessment and specific tools to address specific business needs for transformation from linear to circular business models were expressed by partners and experts involved in the Circular 4.0 project. Partners discussed the tools and instruments during the D.T2.3.2. transnational working group consultation and via feedback received by the project partners on the tools proposed from the activity in D.T2.3.1. Many additional tools and toolsets were proposed by experts and partners to assess circular and digital maturity levels of SME's, depending on the sectors they operate in, size & maturity levels of companies (micro, mid-size, large companies), complexity of value chains they operate in, industrial sectors and the circular business model they are to address i.e., product design, optimal use, value recovery.

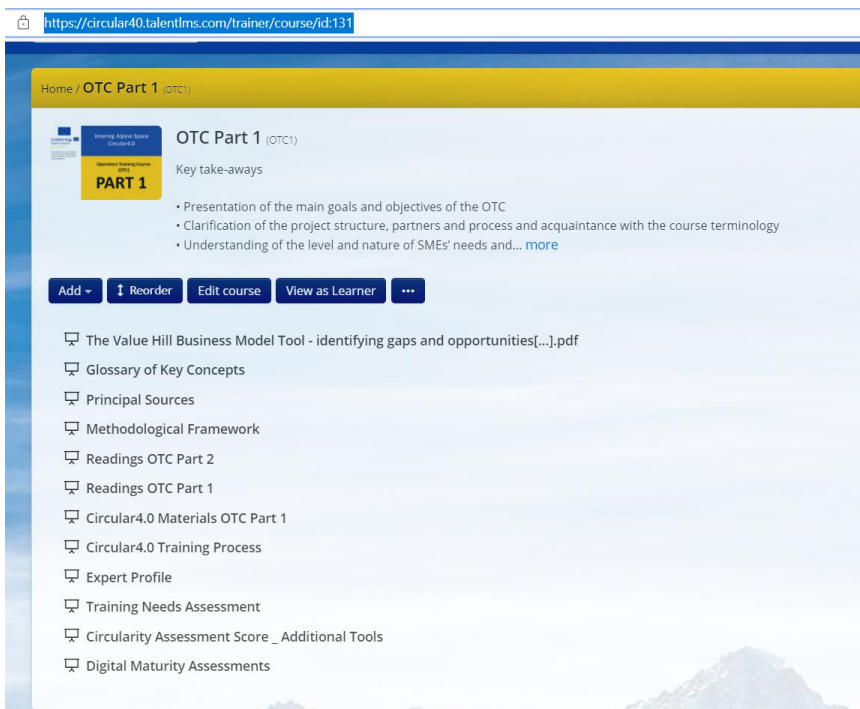
All **three sets of tools** were then developed/identified/proposed for use in the scope of the Circular 4.0 project and/or adopted from the existing tools that were assessed during a bench learning process in the scope of the activities:

D.T2.1.1 Elaboration of the training process

D.T2.3.2 Transnational working groups to contribute to the toolset

D.T2.3.3 Circular 4.0 toolkit implemented

These tools are also Appendixes to the integral delivery of the D.T2.1.1 Training process Circular 4.0 - capacity building manual and toolkit and are ready for use in the scope of actions in D.T2.2.3 and represent key tools deployed by project partners in the scope of a training process for the Operators Training Course. They will be deployed also in the scope of the T.3. as the fundamental tools to accelerate SME's transition to circular economy by project partners. Tools respecting local peculiarities (language, specific regional sectors and needs of local companies) were selected by project partners during the partner's consultation process as well as during the validation Steering Committee meeting on the 21st of May 2021 with regards to validation of the deliverables in D.T2.1.1, D.T2.3.1, and D.T2.3.3.



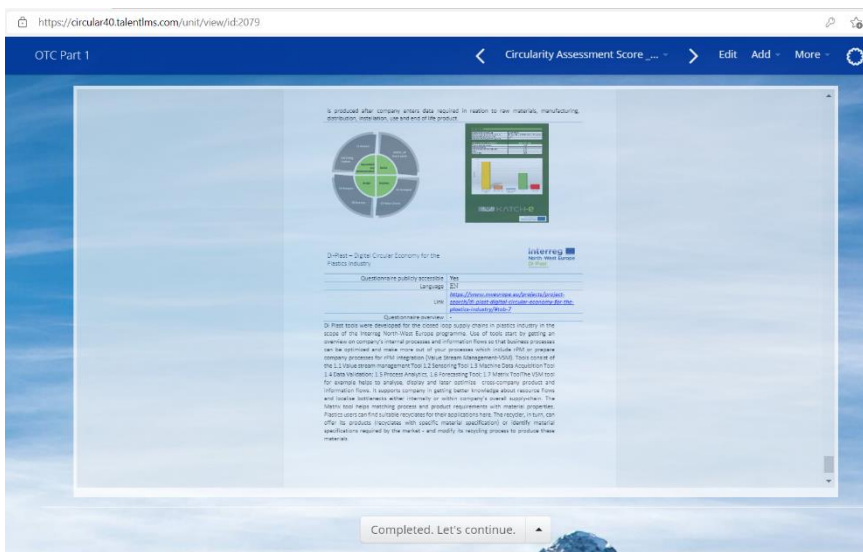
Circular 4.0 toolkit is finalized now also in the scope of the Operators' training program (D.T2.1.3) and is fully available in the scope of the Operators training course (OTC Part 1) accessible over the web site:

<https://circular40.eu/> and over e-learning platform <https://circular40.talentlms.com>

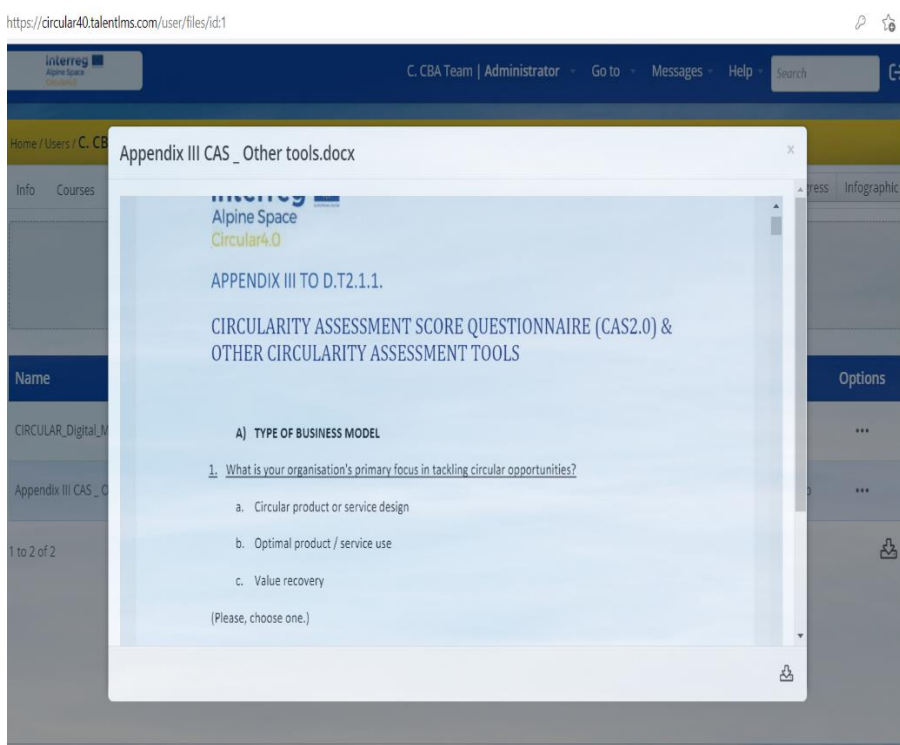
All tools are therefore also directly linked to the delivery D.T2.1.1. Training process in support of users to raise knowledge and increase competence being as:

- Circularity assessment score (CAS2.0) and other circularity assessment tools (Appendix III to D.T2.1.1)
- Digital Maturity Assessment (DMA) (Appendix V to D.T2.1.1)
- Circularity Acceleration training course 4.0 (CAT4.0) (Appendix IV to D.T2.1.1)

Set of tools include financial/investment schemes available and business plan to address circularity transformation (business canvas) and other supporting tools, assisting SMEs to embark on a circularity business transformation journey.



Tools linked to the Operators training program D.T2.1.3: <https://circular40.talentlms.com>



Tools are accessible and transferable from the Talents LMS platform and available for use by project partners, observers, SMEs, and other stakeholders.

OTC Part 1 (OTC1)

Key take-aways

- Presentation of the main goals and objectives of the OTC
- Clarification of the project structure, partners and process and acquaintance with the course terminology
- Understanding of the level and nature of SMEs' needs and competencies

- The nature of the circular transformation in a firm: peculiarities and challenges
- Circular business model transformation and the value chain
- Organisational and competence challenges of the business model transformation
- Circular business model transformation, digitalisation and Industry 4.0 technologies: an overview
- Understanding the typology of circular business models and their association with linear and circular risks

- Circularity of a firm in relation to the advancement of the circular transition
- Boosting the circularity potential of a business model
- Seizing the circularity potential: organisational commitment to the circular transformation
- Workshop

- Industry 4.0 and its implications on the world's economy and societies: an overview
- Understanding the challenges of a digital transformation and the adoption of the new technologies
- Understanding the technologies, their limits and their impact on value creation in the context of circularity
- Where digitalisation and the circular economy meet
- Digital Maturity Assessment: overview of the main available tools
- Workshop less

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- 📄 The Value Hill Business Model Tool - identifying gaps and opportunities[...].pdf
- 📄 Glossary of Key Concepts
- 📄 Principal Sources
- 📄 Methodological Framework
- 📄 Readings OTC Part 2
- 📄 Readings OTC Part 1
- 📄 Circular4.0 Materials OTC Part 1
- 📄 Circular4.0 Training Process
- 📄 Expert Profile
- 📄 Training Needs Assessment
- 📄 Circularity Assessment Score _ Additional Tools
- 📄 Digital Maturity Assessments

Training on how to use tools has been provided as part of the Operators' training course so partners and interested SME's can directly learn how to apply tools and use tools for self-evaluation purposes as well.

2. An overview of circularity assessment tools: <https://circular40.eu>

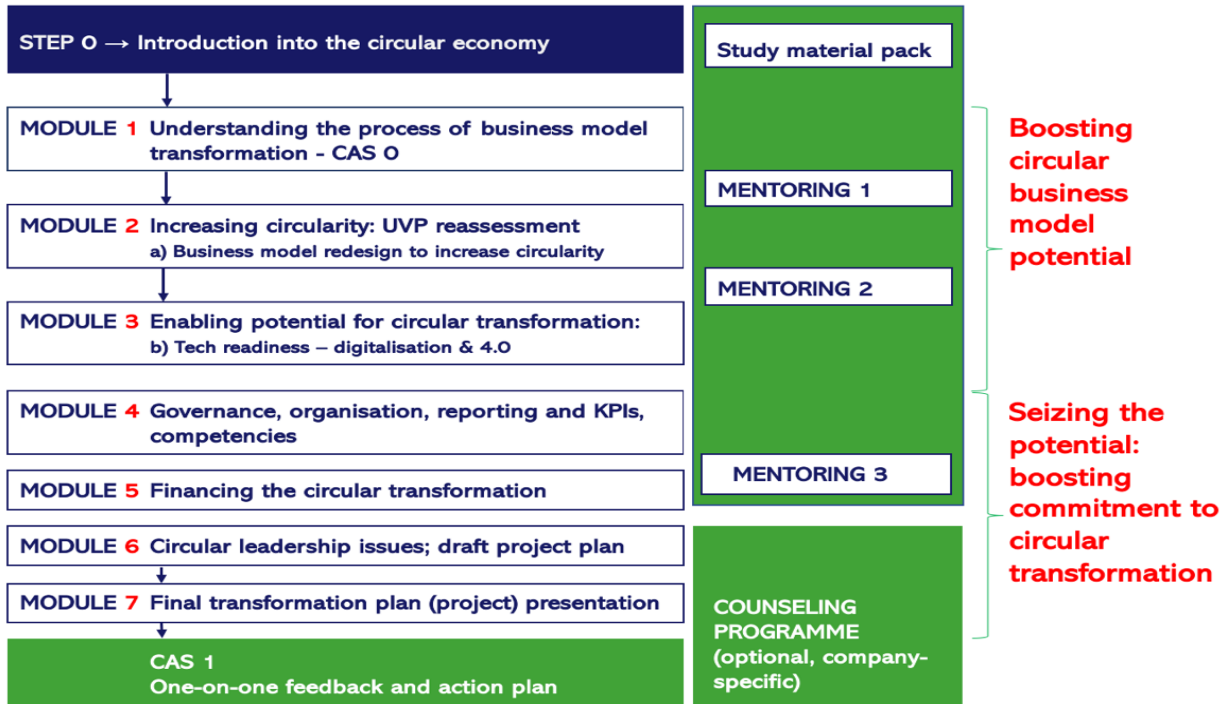
CIRCULARITY ASSESSMENT TOOLS (Circular4.0)	WHERE & HOW TO FIND THEM
CAS4.0	Talents LMS; OTC Part1 https://circular40.talentslms.com/unit/view/id:2079
Greencycle Questionnaire of Best CE Practices	https://www.greencycle.si/wp-content/uploads/2018/03/questionnaireof_the_best_ce_practices.docx
Circularity Check	https://ecopreneur.eu/circularity-check-landing-page/
Circulytics	https://ellenmacarthurfoundation.wufoo.com/forms/circulytics-application/
Circular Economy Toolkit	http://circulareconomytoolkit.org/Assessmenttool.html
Circle Assessment	https://www.circle-economy.com/digital/circle-assessment
Circular IQ	https://ec.europa.eu/environment/ecoap/scalingcircularbusiness/solution/circular-iq_en
Erec	https://www.resourceefficient.eu/tools#/?image=demo
C-Voucher	https://c-voucher.com/circularity-marketplace/online-tools/
Katch-e	https://www.katche.eu/
Di-plast	https://www.nweurope.eu/projects/project-search/di-plast-digital-circular-economy-for-the-plastics-industry/#tab-7
Nadine Speidels	https://global-flow.de/grundlehrgang-abfallbeauftragter/

3. An overview of digital maturity assessment tools: <https://circular40.eu>

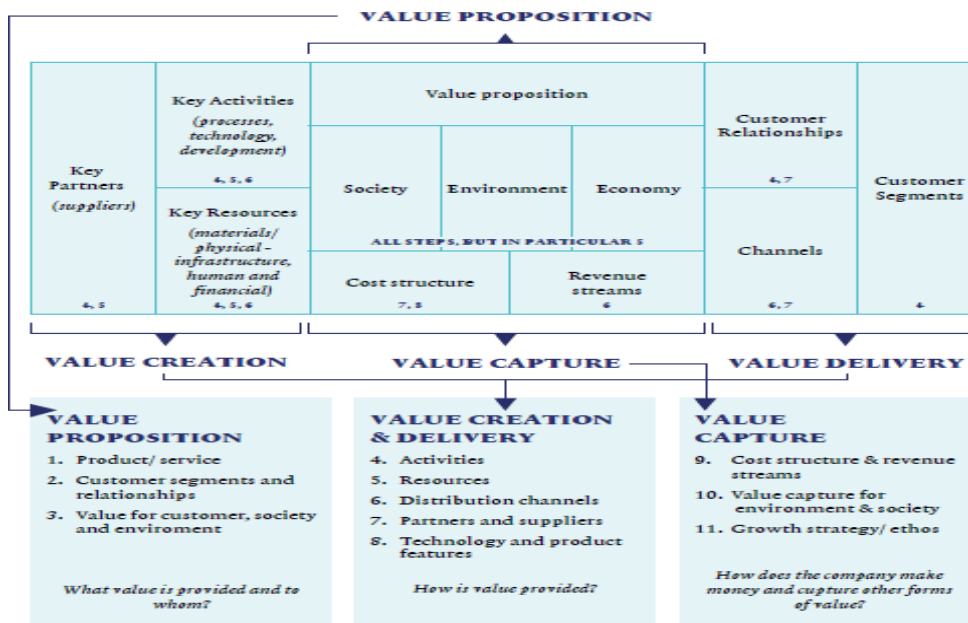
DIGITAL MATURITY ASSESSMENT TOOLS
Digital Maturity Model
Self-Check Industry 4.0
Industry 4.0 Readiness, online self-check
Benchmark Readiness I4.0
CCI- Scan Industry of the Future
Grand Est: Diagnostic of Industrie de Future
Selfi4.0
DREAMY, Digital Readiness Assessment Maturity model
Test Industria 4.0- Assessment of maturity for manufacturing companies
Digital maturity model
Digital Kostenlose Potenuialanalyse (KMU digital free portal analysis)
IMP rove Digital Innovation QUotient
ADMA- European Advanced Manufacturing Support Center
BIFOCALPS
An industry 4.0/Digital Operations Self-Assessment
SIMMI 4.0
VVT Model of Digitalmaturity
ACATECH Industrie 4.0 Maturity Index
DMAi4ready
<u>Link to all DMA tools: http://e2-owncloud.ijs.si/owncloud/index.php/s/rc17Rxl7bd7Kw8d</u>

4. Circularity acceleration training course CAT4.0 (Including investment schemes and business transformation plan)

Picture 1: CAT4.0 course modules



Picture 2: Adapted business model canvas



Source: Bocken and Short, 2016; adapted from Richardson, 2008; Osterwader and Pigneur, 2005; Bocken et al, 2014; Short et al.

