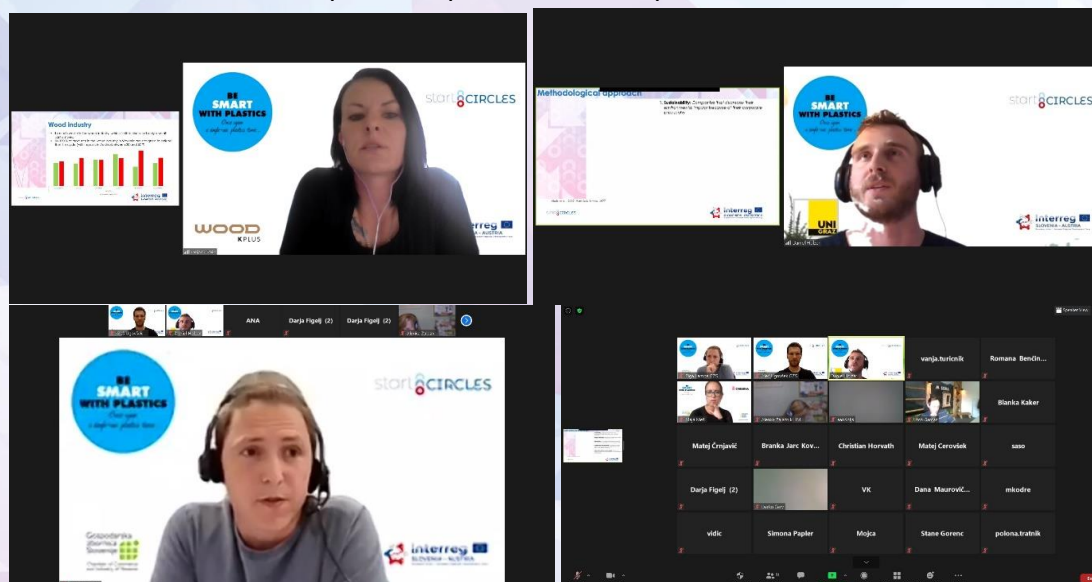


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INTERACTIVE ONLINE WORKSHOP ON CHALLENGES OF THE CIRCULAR ECONOMY

On 5th June 2020, Start Circles project partners organised interactive online workshop „Challenges of the circular economy – collaboration between SMEs and research organisations“. The workshop, at which participants worked together using tool for synchronous collaborative work, was a part of 19th Environmental Business Day, and was primarily dedicated to the collaboration between SMEs and research organisations from Slovenia and Austria. Workshop took place in English. **Vanja Turičnik** from Wood K Plus competence center presented the results of analysis of the state of circular economy in Slovenia and Austria at wood and polymer sector, **Daniel Holzer** from University of Graz showed interesting results of self-evaluation tool filled by SMEs in Slovenia and Austria from wood and polymer sector, whereas **Žiga Lampe** from Chamber of commerce and industry of Slovenia moderated the practical part of workshop in Mural.



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OPEN CALL FOR SMEs IN INTERREG SLOVENIA-AUSTRIA PROGRAMME AREA FOR PARTICIPATION IN START CIRCLES R&D PROJECTS

In July 2020 we closed and finished with Start Circles open call, which was dedicated to SMEs in Interreg Slovenia-Austria programme area for participation in Start Circles R&D projects. Open call was very successful as 21 SMEs - 15 from Slovenia and 6 from Austria, prepared the documentation with presentation of their R&D project and apply for the call. Among these SMEs, 10 were micro, 5 were small and 6 were medium sized companies whereas 10 SMEs came from polymer and 11 from wood industry.

Start Circles project partners distributed selected 18 SMEs and started working individually with each SME with an interview, which was a starting point for further support and work. The final goal is to finish the Start Circles project with six successful projects resulted with an innovation.

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OPEN CALL FOR SMEs IN INTERREG SLOVENIA-AUSTRIA PROGRAMME AREA FOR PARTICIPATION IN START CIRCLES R&D PROJECTS

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Circular Economy Business Model Innovation Workshops

by Tomas Santa María, MSc

December 2020

Tomas, a good colleague, and project employee (Marie Curie Fellow CRESTING project) at the Institute of Systems Sciences, Innovation and Sustainability Research in Graz, focuses on enterprises in transition to a circular economy as well. He recently presented a very successful webinar on **Circular Business Model Innovation** (Webinar recording: <https://youtu.be/IL8h0JJe2oQ>) this past Monday 22nd.

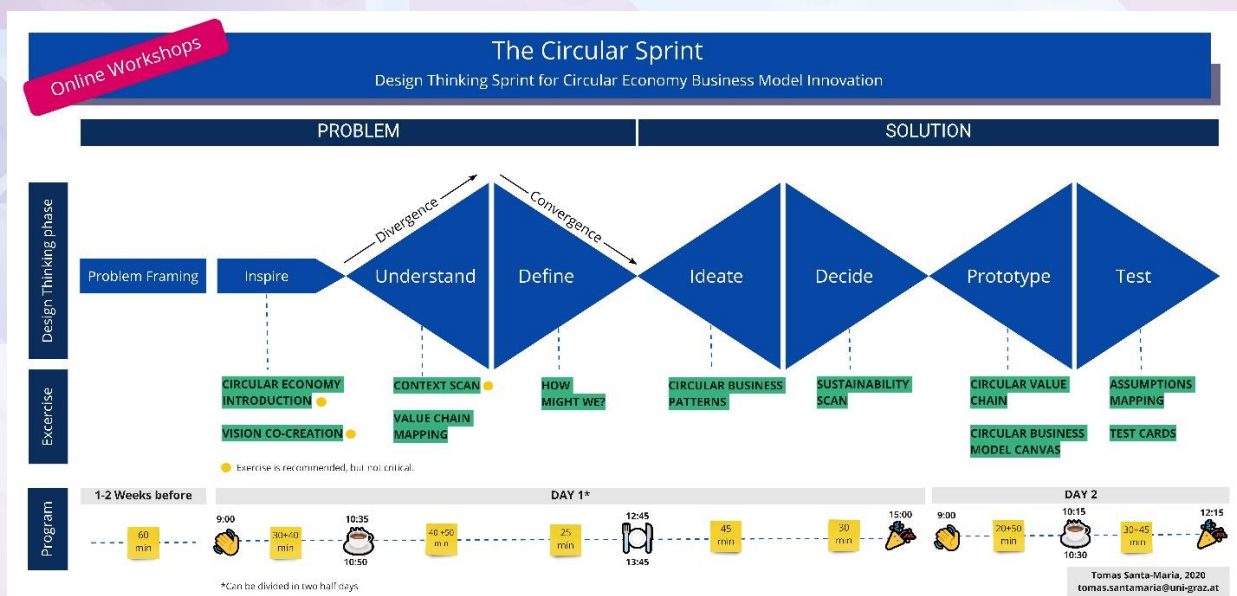
Tomas now offers **5 FREE online Circular Sprints** workshops series (i.e. Design Thinking Sprint for Circular Economy Business Model Innovation). The number of participants is of course limited and the opportunity to register is open until the **14th of December!**

You can find the registration form under the following link:

<https://forms.gle/rxXEBKjFeT4iFrLq7>

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The Circular Sprint is a multiple workshop format that aims at exploring in a short time the development of circular business models within a firm, or the refinement of an existing circular business model concept. The format is flexible, requiring a multidisciplinary team (ideal size 3-7) to participate two or three half days collaborating online through specifically designed activities in Miro (The online collaborative whiteboard platform). The Circular Sprint has been developed within his PhD Thesis, building on Design Thinking best practices and in-depth Circular Economy modelling research. By participating in the workshops, you will further help him to refine his proposals. Write him if you have any questions: tomas.santamaria@uni-graz.at



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Start Circles pilot project for reuse of mineralized sewage sludge



Compounding of a bioplastic composite (extruder die for two filaments (above) and water bath (below))

Sewage sludge occurs in wastewater treatment process, regardless the wastewater technology applied. It presents up to 40% of wastewater treatment costs and therefore impacts every household water bill.

Sludge drying reed beds are a natural technology for sludge mineralization, dewatering and stabilisation. The main benefits of the technology is its' low energy consumption and low operating costs. The technology is GHG emission-free.

The case was contributed by LIMNOS Ltd. The material obtained is humus, but in case of heavy metal containment, the material can be recycled for bioplastics.

Within the project the partner Faculty of polymer technology developed a biocomposite with recycled polypylene as matrix material and characterized it to see whether it could be used for parts for the water treatment process and with this close the waste circle.

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Bioplastic composite with 15 wt.% humus (lower part of the picture) and 30 wt.% of humus (upper part of the picture)

For the compatibilization of humus into thermoplastic matrix the recycled polypropylene was chosen. To achieve good distribution of humus inside the composite and also to prevent thermal and oxidative degradation lubricant, antioxidant and compatibilizer were added. Tests were done with addition of 15 wt.% and 30 wt.% of humus into the composite.

The stiffness rise for 2 % and 13 %, the strength decreases for 15 % and 21 %, also the elongation at break decreases for 79 % and 87 % for the composites with 15 wt.% and 30 wt.% of humus respectively. The sewage sludge can be used as filler for thermoplastic matrix for the static loaded parts with low deformation or low load.

Further efforts will be required to demonstrate the industrial application (company selected) and cost efficiency defined. Next step is to build a business model around the case.

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Annual Circular Economy Stakeholder Conference

Every year, the European circular economy community from business, public authorities, NGOs to knowledge communities and civil society organisations gathers to discuss the transition to a circular economy. The conference is a flagship event of the European Circular Economy Stakeholder Platform, a joint initiative of the European Commission and the European Economic and Social Committee (EESC).

The fifth edition of the European Circular Economy Stakeholder Platform annual conference took place on 3-4 November. This edition of the main event for the circular economy in Europe went fully digital.



Circular Economy: Together for a cleaner and more competitive Europe.

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During the first day, hosted by the European Commission, participants familiarised with the new EU Circular Economy Action Plan and discussed its implementation. The potential of the circular economy for a green recovery was also covered in the sessions. Interaction and exchange with the panelists during the plenaries broadcasted from Commission's Charlemagne building were on the programme as well as online contribution to the thematic online parallel sessions.

The second day, hosted by the EESC, focused on stakeholders views in a series of online workshops highlighting successes and identifying new challenges. Eight workshops covered circular themes ranging from construction to food waste to procurement and roadmapping.

More informations: <https://circulareconomy.europa.eu>

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Circular economy a key topic at eNOVA 2020

On 27.11.2020, during the annual eNOVA this year in regard of the corona pandemic in a online edition, the increasingly emerging topic of circular economy was discussed and presented by several experts. Due to numerous directives in the direction of resource efficiency at both European and national level, new challenges are also arising for companies. In order to illustrate the transition to circular economy and to find proposals for implementation, this year's eNOVA has closely linked the topic of circular economy with a direct adaption of company's value chains.

The fact that, a lot of resources as for example wood, plastic, packaging and unused products end up disposed, gave rise to the idea that a change to a circular economy as a principle for production and the value chain could develop in the future and someday replace the actual predominant linear economy.

What is expected from companies in the context of sustainability?

For companies, sustainability means nothing other than to manage well, with a realistic balance between short-term profit making and securing future viability and longevity. It is important to continuously seek a balance between economic, ecological and social interests. Products and services should contribute to the sustainable development of society and also ensure a close to infinite lifecycle in terms of their resources. By embedding sustainability in their core business, companies create added value: for society and for the company. The difficulty of acting sustainably is to solve ever new conflicts of objectives by making compromises that are sustainable in the long term.

More informations and soon all presentations are available online as ppt or video:
<https://www.fh-burgenland.at/en/news-presse/veranstaltungen/e-nova-2020/#c13402>

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The Project Partners of START CIRCLES:

- LP: Gospodarska zbornica Slovenije
- PP02: Kompetenzzentrum Holz GmbH
- PP03: LIMNOS doo, Podjetje za aplikativno ekologijo
- PP04: asteenergy - Ingenieurbüro für erneuerbare Energie, Forst- und Holzwirtschaft
Christoph Aste Dipl.Ing, Msc.
- PP05: Fakulteta za tehnologijo polimerov
- PP06: Karl-Franzens-Universität Graz
- PP07: Forschung Burgenland GmbH