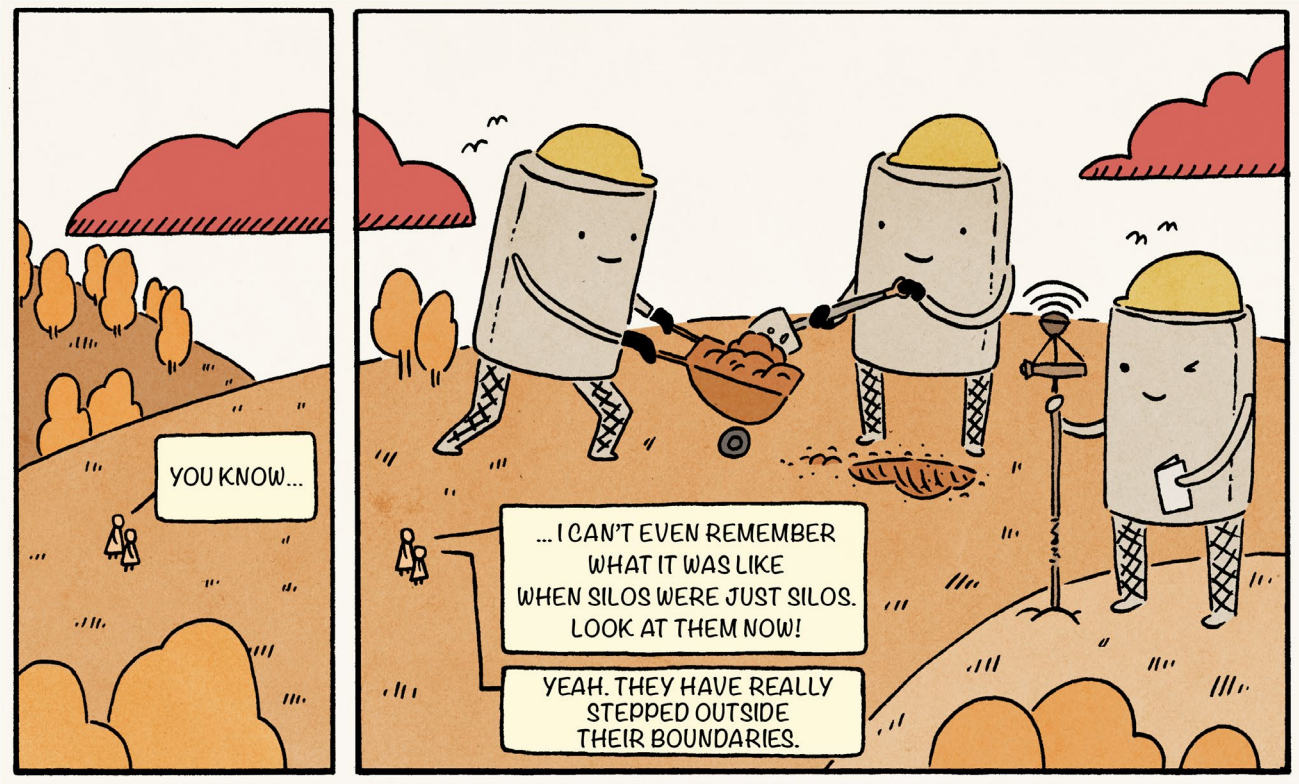


PROMOTING A CIRCULAR ECONOMY REQUIRES CROSS-SILO COLLABORATION

The transition from a linear economy to a sustainable circular economy (CE) requires close cooperation between stakeholders at local, regional and societal levels, to include all those who may affect the transition or whose actions are impacted by it. Among the key stakeholders in such a process, our research consortium—*CICAT2025 Circular Economy Catalysts: From Innovation to Business Ecosystems*—has identified companies, ministries, industry organisations, research, innovation and support organisations, cities, municipalities and other regional actors.

In the spring of 2019, we conducted interviews with representatives of these groups. The results indicate that numerous different interests come into play in the choice to support a circular economy, yet all share the goal of promoting a sustainable version in Finland.

Ultimately, this policy brief presents six recommendations for CE-promoting initiatives:

1. **The creation of local CE platforms**
2. **The identification and exploitation of regional CE potential**
3. **The provision of support for sustainable CE business operations**
4. **The allocation of research, education and development investments**
5. **The creation of a digital online platform**
6. **The appointment of a Minister for Circular Economy**

Close stakeholder collaboration is vital to a sustainable circular economy

The goal of Finland and the European Union[1,2] to proceed towards a sustainable CE calls for a reduction in the use of natural resources, closing the loop in material, energy and nutrient cycles, and increased recycling efficiency.[3] Yet, as noted, our findings indicate that key stakeholders have a wide range of CE-related interests:

- **Companies** are looking for new business opportunities, while renewing their existing operations to better correspond to CE logic.
- **Ministries'** interests include sharing information and creating steering mechanisms in order to promote a circular economy.
- **Industry organisations** are interested in CE business models. They also want to share the latest knowledge with businesses in order to facilitate viable CE-related activities.
- **Research, innovation and support organisations**, such as R&D companies, want to enhance their CE competence in order to identify and take advantage of new solutions.
- **Regional actors**, including regional councils, wish to reinforce collaboration and to produce and share information on how to accelerate a circular economy.
- **Cities and municipalities** want to strengthen local stakeholder cooperation and to use research-based knowledge to support their decisions *(Figure 1.)*.[4]

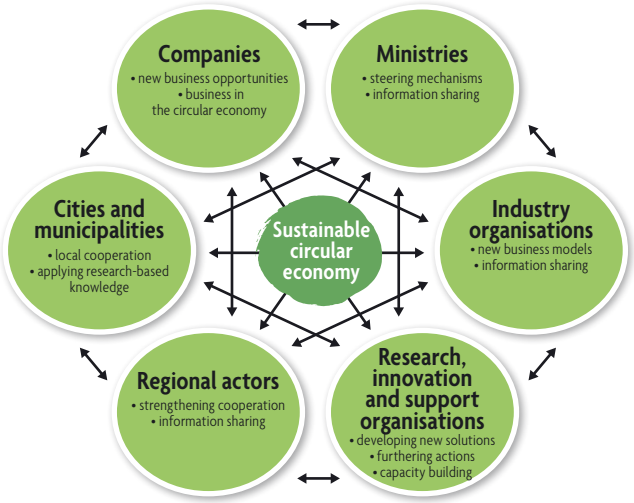


Figure 1.
The interests of key stakeholder groups in CE promotion.

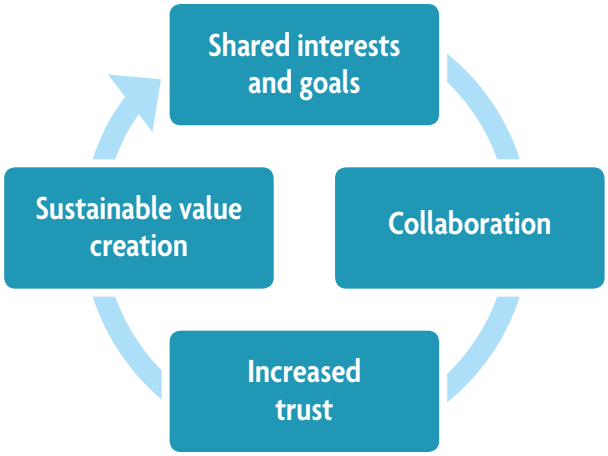


Figure 2.
Sustainable value creation in stakeholder cooperation

According to our findings, stakeholders share the goal of sustainable CE promotion; however, close stakeholder collaboration across industries and sectors is lacking. Without such cooperation, the interests of stakeholders can only be partially served, if at all, while sustainable value creation is also inhibited.

In order to promote stakeholder cooperation, favourable policies and collaboration processes must be reinforced. According to previous research,[5] sustainable value creation and stakeholder engagement across silos requires:

1) **the identification of common interests and objectives**
2) **the ability and willingness to collaborate**
3) **practices that increase trust** *(Figure 2.)*

1 Government Programme 3 June 2019 Inclusive and competent Finland – a socially, economically and ecologically sustainable society https://valtioneuvosto.fi/en/marin/government-programme

2 European Commission. Circular Economy. https://ec.europa.eu/growth/industry/sustainability/circular-economy_en Retrieved on 7 October 2019.

3 The Ellen MacArthur Foundation What is the circular economy? https://www.ellenmacarthurfoundation.org/circular-economy/what-is-the-circular-economy Retrieved on 10 October 2019

4 Kujala, J., Heikkinen, A., Tapaninaho, R., Marjamaa, M., Gonzalez Porras, L. & Salminen, H. 2019. Stakeholders and their interests in transition towards circular economy. A poster presentation. Finnish EU Presidency Event: European Days for Sustainable Circular Economy 30 September - 1 October 2019, Helsinki, Finland.

5 Kujala, J., Lehtimäki, H. & Freeman R.E. 2019 A stakeholder approach to value creation and leadership. In: A. Kangas, J. Kujala, A. Heikkinen, A. Lönnqvist, H. Laihonen & J. Bethwaite (eds.) Leading Change in a Complex World: Transdisciplinary Perspectives. Tampere: Tampere University Press, 123–143. http://urn.fi/URN:ISBN:978-952-03-0845-2/ Retrieved on 13 November 2019.

From shared interest towards joint goals

A common will is a good starting point; however, attaining CE goals requires both continuous stakeholder dialogue and investment in everyday actions. The aim of dialogue is to create shared understandings of the meaning of issues being addressed.[6] Successful dialogue requires joint reflection on goals, the ability and willingness to listen to the opinions of others and appreciation of the different views being expressed.[7] Sufficient time should also be reserved for these processes to take place.

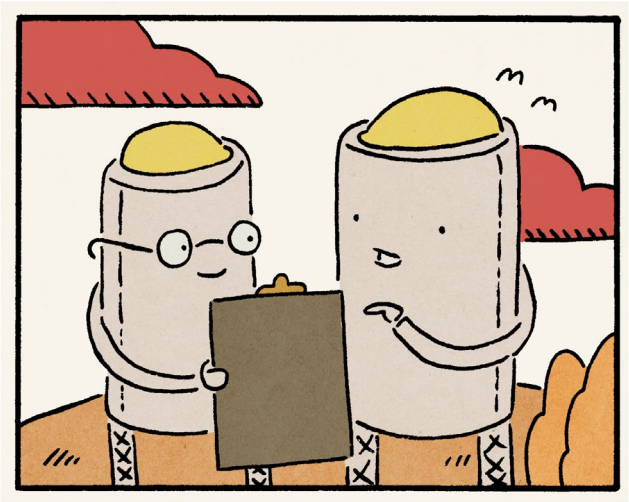
Bold innovation and determined actions are needed to unleash CE business potential. Closer stakeholder cooperation and coherent steering mechanisms could encourage CE entrepreneurship, while a stronger focus on public administration resources and funding for new CE projects can support businesses. New approaches and structures, such as digital and physical platforms, promote encounters and the use of diverse skills to generate CE innovations.

Joint efforts whereby various stakeholders work closely together across industries and sectors enable a sustainable circular economy, but achieving sustainability also requires the evaluation of collaboration results from economic, social and ecological perspectives.

Hiedanranta – where stakeholder cooperation is creating new business

The Hiedanranta area in Tampere, Finland, is an example of an innovative local CE platform where the interests of different stakeholders can meet; here stakeholder cooperation is being pursued to achieve ecological, social and economic sustainability. Hiedanranta is a large new neighbourhood fostering the goal of cross-silo collaboration between the City of Tampere, companies, educational institutions, research, development and support organisations, citizens and other regional actors.

This is facilitated by the active role of the City of Tampere in developing the area, while new business activities, such as the production of biocarbon and indoor vertical farming, have been created through business cooperation.[8] Examples of CE innovations being developed include exploration of the potential to treat and recover zero fibre from the bottom of Lake Näsijärvi and experiments related to wastewater recycling, nutrient recovery and the utilisation of toilet waste. The City of Tampere's development programme organises events in Hiedanranta in order to promote the networking of businesses involved in such schemes.[9]



Examples of measures to promote social sustainability in Hiedanranta include rehabilitative work activities and the provision of work-based learning environments for students.[10] Residents are involved in Hiedanranta's activities through, for example, urban farming and various events.[11] An international assessment method is applied in appraising planning and development of the area, one which takes into account ecological, social and economic sustainability.[12]

6 Holm, R., Poutanen, P. & Ståhle, P. 2018. Mikä tekee dialogin: Dialogisen vuorovaikutuksen tunnuspiirteet ja edellytykset. Sitra. https://www.sitra.fi/artikkelit/mika-tekee-dialogin-dialogisen-vuorovaikutuksen-tunnuspiirteet-ja-edellytykset/ Retrieved on 13 November 2019.

7 Kujala, J. & Kuvaja, S. 2002. Välittävä johtaminen. Sidosryhmät eettisen liiketoiminnan kirittäjinä. Helsinki: Talentum.

8 Tampereen kaupunki. Hiedanranta. Innovaatioiden Hiedanranta. Teemasta toimeen. https://www.tampere.fi/asuminen-ja-ymparisto/kaupunkisuunnittelu-ja-rakentamishankkeet/innovaatioiden-hiedanranta/teemastatoimeen.html Retrieved on 19 November 2019.

9 Hiedanrannan "kiertotalous, kestävyys, älykkyys" -yritysten verkottumisaamukahvit. https://www.tampere.fi/tampereen-kaupunki/ajankohtaista/artikkelit/2019/10/28102019_1.html / Retrieved on 4 November 2019.

10 Sopimusvuori. Tutustu Hiedanrantaan. https://www.sopimusvuori.fi/hiedanranta/ Retrieved on 9 October 2019.

11 City of Tampere. Hiedanranta. https://www.tampere.fi/asuminen-ja-ymparisto/kaupunkisuunnittelu-ja-rakentamishankkeet/hiedanranta.html/ Retrieved on 13 November 2019.

12 City of Tampere. Innovaatioiden Hiedanranta. https://www.tampere.fi/asuminen-ja-ymparisto/kaupunkisuunnittelu-ja-rakentamishankkeet/innovaatioiden-hiedanranta.html/ Retrieved on 4 November 2019.

Policy recommendations

We need cooperation across silos so that Finland can reach its goal of becoming a leading CE country by 2025, which requires that all key CE stakeholder groups are encouraged to be active. In order to promote a sustainable CE, we propose the following actions:

1. The creation of local CE platforms

Municipal and regional decision-makers need to create new structures like the Hiedanranta platform so that key players can find each other and create businesses in line with a sustainable CE.

2. The identification and exploitation of regional CE potential

Municipal and regional decision-makers need to look at regional vitality from the perspective of a sustainable CE and take innovative action to unleash related business potential.

3. The provision of support for sustainable CE business operations

Ministries and central organisations need to cooperate more closely in order to encourage businesses to move towards a sustainable circular economy through the application of various steering mechanisms, such as legislation, taxation and business subsidies. The value of sustainable business must be measured in terms of economic, environmental and social well-being.

4. The allocation of research, education and development investments

Strengthening CE thinking and know-how calls for R&D and educational organisations to target their investments towards sustainable CE activities in all sectors and at all levels of society.

5. The creation of a digital online platform

Shared knowledge on information sources and activities is needed in order to promote the utilisation of knowledge and encounters between stakeholders. Information sharing and cooperation require digital networks. There are already several such platforms in the EU, and active participation in them will both accelerate change and help make the platforms more functional.

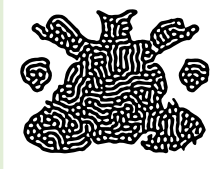
6. The appointment of a Minister for Circular Economy

The goal of attaining a circular economy should motivate all public action and decision-making, a transition that requires initiators at national, regional and local levels. At the national level, we propose the appointment of a Minister for Circular Economy tasked with promoting cooperation between different sectors of government, effecting CE innovation and acting as a forerunner in Finland's CE efforts. At the same time, however, we also want to emphasise that the circular economy should be on the agenda of all ministries.

CICAT2025

CICAT2025 Circular Economy Catalysts: From Innovation to Business Ecosystems aims to facilitate the transition from a linear to a circular economy and supports Finland's strategic objective of becoming a global CE leader by 2025. By combining the perspectives of technology, business, politics, legislation, arts, linguistics and stakeholder engagement, the consortium is developing new understandings of the factors that promote a circular economy. It also offers concrete solutions to businesses and decision-makers that help facilitate the transition. The project is funded by the Strategic Research Council at the Academy of Finland.

The CICAT2025 consortium has tested the use of augmented reality (AR), producing content that can be accessed through the free Arilyn application on a mobile device, such as a phone or tablet. Simply install the Arilyn app and point your device's camera at the picture on the right.



Contact details

Professor Johanna Kujala, Tampere University
+358 50 420 1509
johanna.kujala@tuni.fi

CICAT2025 research consortium
cicat2025.fi

SUOMEN AKATEMIA

strateginen TUTKIMUS

ISBN 978-952-03-2391-2 (print)
ISBN 978-952-03-2392-9 (pdf)