

# Circular Territorial Development

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## Introduction

*“Circularity is not a trend; it’s a culture shift”*

Ken Webster (2017)

Looking at the inefficient and polluting way that energy is produced and used worldwide, it becomes apparent that we are still following the linear economic development model of “take, make, use, lose” (Raworth, 2017): *Take* the material resources which are necessary to produce a product, *make* it by using additional matter and heat resources available at a

price or free, *use* the product, and finally *lose* or dump it. Our consumption patterns are still to a great extent based on this destructive form of development. In the local context, the social and environmental impacts of the linear economic model are particularly evident: the effects of climate change, ecological degradation and social exclusion.



For many years, we have jointly used and implemented methods with local actors to promote competitiveness for territorial development worldwide . Today we are faced with the question as to what extent our approach is compatible with the idea of

the circular economy, to what extent we have to question old paradigms and assumed certainties, and to what extent we need to unlearn, newly learn, adapt and adjust our world view in this respect.

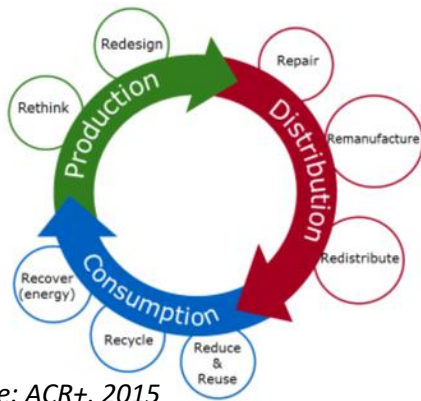
## A short introduction into the circular economy paradigm

The term “circular economy” was coined and promoted by the Ellen MacArthur Foundation (EMF). The EMF emphasises economic and business opportunities for a restorative circular model of economic development. Manufactured products are designed to be reused to their maximum potential before being recycled or dumped in a landfill. The “Multi-R-Hierarchy” is one of the critical elements of the approach (see Figure 1) with the emphasis on patterns of consumption, production and distribution.

Following the logic of a living ecosystem in which waste becomes the basis for a new life, products are reused circularly or are integrated into new products to retain the embedded resources of a product as long as possible. The term “waste” is questioned and is instead seen as a resource to be integrated again into the (circular) economy. Accordingly, the whole economic process should be fuelled by renewable and reusable energies.

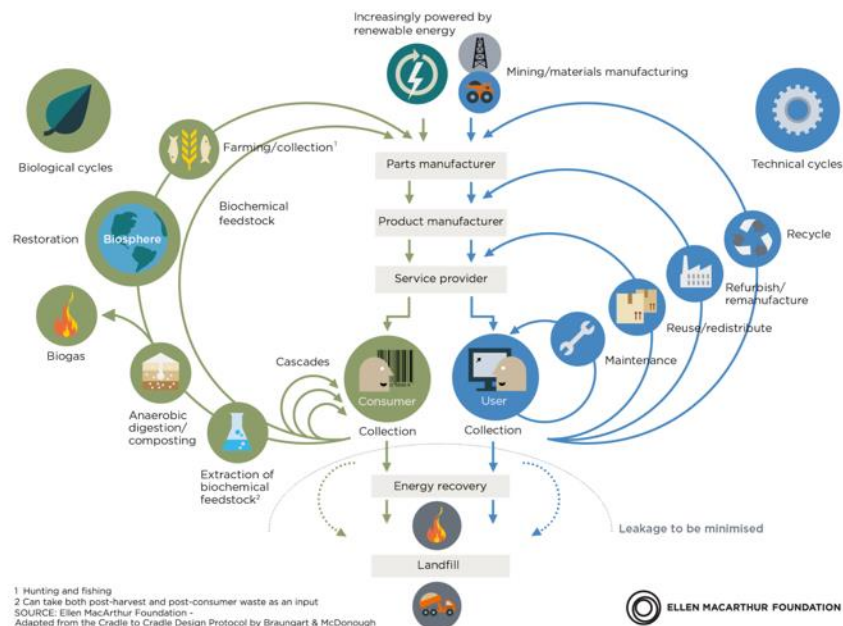
EMF’s butterfly model proposes a regenerative approach to product development and product use. A wide variety of new products and services can emerge from this circular paradigm, and at the same time new sustainable business model innovations are inherent. Figure 2 shows the two wings of the circular economy logic.

**Figure 1: The Multi-R-Hierarchy**



Source: ACR+, 2015

**Figure 2: The butterfly model**



Source: Ellen MacArthur Foundation

The left wing visualises the biological cycle where biological nutrients of products are regenerated and captured at each stage of the decomposition. The right wing represents the technical cycle where

technical nutrients are designed to be repaired, reused, refurbished and only then recycled. The final opportunity is still to burn or dump them.

### The relevance of the territory for the circular economy

Urban and local contexts are highly relevant to promote circular economy efforts for different reasons:

- **Reduction of emissions, inflow dependency, costs:** Distances are short. Energy for transport and the associated emissions can be avoided and dependence on external resource inputs reduced.
- **Availability of resources:** Close material flows are easier to realise because products and resources are locally consumed, locally collected and often also close to the locations where they are either dumped or reused.
- **Use of resources:** Resources are not only locally available but can also be more intensively used for further value addition. Analysing the urban metabolism structure and identifying circular material and energy flow opportunities for endogenous development provides a good entry point at the local level.
- **Make use of new opportunities:** In a specific territory, cross-sectoral resources can be easier identified, potential stakeholders approached

quickly, new business and co-creation opportunities identified, and policy actions, organisations and change initiatives can be promoted directly. For instance, local businesses that recreate and reuse traditionally non-used resources or establish repair shops can more easily be encouraged at the local level with positive effects on local employment and social interaction.

Figure 3: The importance of the territory for circular economy development



Source: ACR+ (2015)

## Taking on a circular economy lens in our analysis approach

Mesopartner often uses terms such as “competitive advantages”, “systemic competitiveness”, “new business opportunities”. They also stand for our efforts to promote local development creatively and inclusively. For a long time our focus was on promoting value chains and innovation system linkages to generate employment and develop thriving localities. Strengthening value addition as well as the increase in the quantity and quality of production was the means to this end. In some of the territorial development, value chain and innovation network initiatives we started to integrate sustainability and ecological production considerations. Now we are keen on promoting more opportunities in this regard.

A more systematic application of the principle of circularity can provide us with new entry points at the business, consumer and civil society level, at the organisational as well as at the policy and social and cultural level. It also opens up a new lens for innovation processes and sustainable development initiatives in the field.

At the business level, the circular economy lens would require economic development promoters and analysts to look into additional aspects of value chains or local economies:

- **Identifying and analysing the multiple “R” opportunities** within the locations. This improves the local stakeholders’ understanding of the resource-use of the technical and biological nutrients in their economy and gives them a new idea about challenges and opportunities to promote businesses in these fields
- **Promoting circular economy business models and businesses** to make better use of the existing resources and innovation potentials. This also includes strengthening the visibility of existing businesses and business networks, which become good examples of the promotion of circularity.
- **Promoting conceptual rethinking and redesign of products** in a way that they are up to 100% reusable or recyclable. This is a trend that is being more and more actively promoted by many governments in the EU. It is based on circular sustainable development cycles which enable new economic and environmental innovation and development. Nonetheless, this transformation process is only just starting and is still playing a niche role. In countries such as Germany, only around 14% of the resources used in industrial production come from recycled products, the rest of the product ingredients are still based on primary materials (Wuppertal Institute, 2017).
- **Promoting the move towards “zero” waste or circular models in locations instead of waste management** mainly characterised by segregating waste that is generated in the local economy. Here local governments and local public utility services play an essential role. Analysing solid waste management efforts, water supply, sanitation and drainage services would open new insights into development opportunities. Especially solid waste management needs to be redefined. In general, it looks at opportunities to recycle waste versus just dumping it.





- Instead waste is treated as an infrastructure challenge due to the absence of waste treatment facilities, such as waste incinerators, water treatment plants or biogas plants. The focus is predominantly on managing and recycling waste instead of becoming sensitised to different consumption patterns or income generation opportunities from traditional waste resources. The analysis of waste collected in a value chain or a local economy can provide much information on potential business opportunities.

### Supporting civil society groups and meso organisations to identify circular economy opportunities

Most territorial developments and local innovation system promotions are still focusing on understanding of innovation based on linear, non-sustainable growth models of industrialised countries. New knowledge is required to deal with the consequences (Renn, 2020). The circular economy and transformation logic introduce a unique perspective, which is mostly still unknown to knowledge and support organisations (in the following “meso organisations”) and to policy representatives. Due to close contact with partners in the locations where we work, we see different entry points to promote the necessary understanding for discovering more extensive development opportunities:

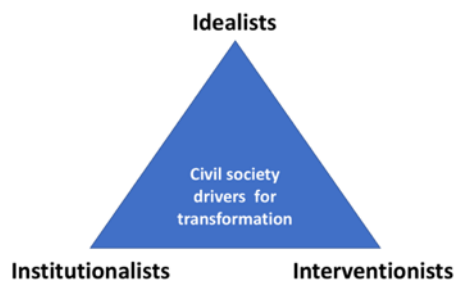
- **Integrating the circular economy perspective into our methodologies** of analysing the local economies. In general, we take representatives of meso organisations with us when gathering insights from interacting with local businesses and knowledge providers.

- **Organisational and service development support** for meso organisations, such as economic development agencies, technology organisations and business membership organisations, to provide support services and innovation networking for efficient use of resources
- **Promotion of dialogue and lateral thinking in networks** with a focus on circular business development opportunities and paths.
- **Promotion of circular economy relevant to civic organisations:** Civil society actors and NGOs with an interest in circularity and green transformation themes often lack organisational power, structure and economic understanding. Supporting civil society groups to better organise themselves and developing a creative voice in promoting sustainable development also helps to create new partner coalitions and new development dynamics. Their role as citizens needs to be valorised to strengthen not only the economic and

ecological but also the social dimension of local development.

- **Innovation network promotion between applied knowledge organisations and businesses** on regenerative product design and composition, material flows, dismantlability, repairability, recyclability, etc.

**Figure 4: The combination of driving characters for transformation**



*Source: Designed by Mesopartner based on Schneidewind (2018)*

Overall, targeting circular economy opportunities requires (re)combining knowledge and bringing together different characters with specific capabilities. Transformation schools emphasise the

requirements for involving different characters driving change. For a transformation process from a linear to a circular economy, it requires the combination of idealists, institutionalists and interventionists (Schneidewind, 2018). The idealists are the forerunners and visionaries. They are living the necessary change, such as social networks promoting permaculture or ecological housing solutions, promoting alternative lifestyles and demonstrating what is possible.

These groups are rather radical in their thinking and are regarded as somewhat extreme by mainstream society. The institutionalists believe less in the idealistic power of change and more in the institutionalisation of rules and regulations, control structures or market incentives in favour of the targeted change. The interventionists are the ones who believe in technological solutions to manage the transformation, such as environmental technologies, electric cars, renewable energies and cradle-to-cradle approaches. Change initiatives need to integrate all three characters.

### Promoting a systemic approach towards a more circular economic development

In developing countries and EU countries, governments and businesses are starting to promote a circular economic policy or to create new business models. However, in many industrialised countries, a technological and invention-driven approach is still dominant. Instead, a resource-sensitive circular economy policy is required that assures the reuse of typical waste products. The circular economy

emphasises the importance of socio-cultural values. It questions current dominant lifestyles and consumption patterns. At the meta level, it demands that a culture should live in balance and harmony with nature, to question the traditional growth model and to value remanufactured or recycled products and a more ecosystem-friendly production system.

**Table 1: New questions emerging for the promotion of a more circular economic development process**

Micro-level	What new business innovation and social innovation opportunities of firms are available? What opportunities of civil society actors and consumers contribute to a more circular consciousness and demand behaviour?
Meso level	What meso organisations, or civil society groups, are there to promote circular economy initiatives? What is their knowledge, their interest and their capacity?
Meso/Macro policy level	What are relevant, targeted meso and generic macro policies at the local and national level that support circular economic/business solutions? Where are valuable policies not in place or policies hindering the use of circular economic opportunities?
Meta level	What are the fundamental values that drive/shape (or hamper) the interest of the local society to strengthen the circular economy, while respecting planetary boundaries and social justice?

Source: Mesopartner

For Mesopartner, the different levels of the Systemic Competitiveness Framework are relevant to consider when identifying opportunities to support circular development. New questions emerge and require answers (see examples in Table 1). Future orientation will require different governance and social organisation modes including markets, hierarchy and networks. Markets can partly promote the circular economy due to increasing awareness of consumers to sustainable products and services and producers being wary of their image. Hierarchy will play a role through laws and regulations or lead companies pushing for compliance in their supply chains. Finally, network solutions are essential for support and knowledge organisations that depend on the

knowledge exchange with other relevant actors.

Local promotion activities of circular economic models would reach their limit if relevant knowledge were not provided, and circular products were not valued in the respective society. Here a broader search process for potential circular innovation opportunities is required. This process needs to involve a wider group of societal actors in the analysis. It requires meso organisations to be strengthened in order to offer services that support circular economic innovations. This needs to be done in a context-specific manner, working with the individuals and organisations interested in developing circularity of their local economy.



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*Photos: Partly downloaded from Pixabay and Pexels.*