



### 04. An Interdisciplinary Approach to Circularity

#### The Six Dimensions of Spatial Circularity Transitions

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*The six dimensions framework is a valuable tool in helping you understand the process a region is undertaking towards circularity. It can also help you in your daily practice to identify which aspects of an integral circularity transition you should consider. I will now introduce you to this framework in more detail and use Amsterdam as an example to help you understand how the framework can be put to use.*

The framework consists of the following dimensions: *the first is the conceptualization of circularity.* This is mainly communicated in policy documents. The most common conceptualizations are related to the value chains and the R strategies. Amsterdam, like many other cities, uses a combination of both.

*The second dimension is the material dimension;* regions and cities need to set priorities when making policies. Therefore, many of them choose specific economic sectors, or material streams to start with and focus on. The focus should be context-dependent and the result of a process which analyses where the highest potential for a circular economy is, and which part of the existing linear economy has the most severe negative effects. Concerning the material dimension, Amsterdam selected Food and Organic waste streams, consumer goods, and the built environment.

*The third dimension covers the applied*

*sustainability frameworks and transition concepts;* The shift towards circularity is a means towards sustainable development. Cities and regions can take a holistic sustainability-oriented approach or look specifically from an industrial-manufacturing and business perspective. Amsterdam uses a holistic approach; the concept of Doughnut Economics developed by Kate Raworth and turns this into a tool for transformative action. Thereby, it connects local aspirations with planetary limits, explicitly including social and environmental aspects.

*Next follows the social dimension;* this deals with the role of people. Are people seen as consumers and users or as essential parts of a circular economy? Does the strategy concern the inhabitants of the city only, or does it look beyond its borders? Also, for this aspect, Amsterdam is an interesting example. In their 2015 Vision, people were portrayed only as contributors to the market of circular materials and goods. However, in their current strategy, themes such as social justice; as well as thriving, healthy environments, and public participation in decision-making are elevated in importance and now considered central to the overall strategy. They even go one step further and consider the impact of their decisions on the well-being of people around the planet.

*Fifth, we have the territorial and spatial dimension.*



## Circularity for Educators

This dimension tackles how policies deal, on the one hand, with spatial boundaries and, on the other hand, how they reflect on spatial qualities. With spatial boundaries, I mean the many different administrative divisions of a territory, ranging from cities up through regions, nations and, in some cases, even larger bodies such as the EU. Often, each of these administrative bodies has its own policies, and in the best-case scenario, they are interrelated and complementary. In reality, they often have different foci, because of the different policy responsibilities of the different tiers of governance. Sometimes, differences in political views and ambitions are apparent through the scales.

Concerning different spatial qualities, we can distinguish between two types of approaches, one where space is seen as a container, and proposals and solutions are dealt with on the level of principles or typological solutions, as was done in Amsterdam's 2015 vision. Alternatively, others consider the qualities of a specific place and context, as in Amsterdam's current vision, where they have included a floating circular neighborhood.

*Finally, the sixth dimension is the assessment and monitoring dimension.* This deals with how cities and regions make sure that they are on the right track. The Amsterdam circular monitor uses a framework of five sections to assess their status quo and progress. These are strongly related to their doughnut approach and assess progress using: input indicators, throughput indicators, waste collection of public authorities; waste treatment of regional industries, and social indicators.

In this video, I have explained that the transition of cities and regions towards circularity is a complex

and dynamic process which involves many disciplines and stakeholders. I have introduced six dimensions that allow you both to understand the process a region is undertaking and help you in your daily practice to keep an overview of which policies you should consider. I gave you examples of how Amsterdam addressed these dimensions. Keep in mind there is no single blueprint for the circularity transition, and that the process is context dependent.

Now I'm curious, what's your region's approach towards circularity?