



## Circularity for Educators

### BLOCK III Circularity in Architecture and the Built Sciences

#### Practitioners Interview Series

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I'm Gintare, an urban designer at PosadMaxwan, a company that works on healthy, sustainable and smart cities.

#### *What drew you to circularity?*

My interest in circularity started already in childhood. I'm fortunate that I grew up in a family who is environmentally conscious. We practiced sorting waste already way before that was a municipal requirement. When you are made actively responsible to take care of your waste, then you realize how much actually you generate.

Then I started working and I also wanted to integrate circularity in my projects. But soon I ran into challenges. For example, in public space projects, the common practice is to use materials from the *Openbare Ruimte* (public space) handbook. That's a local policy. Unfortunately circularity, or circular alternatives are not included. So "if that's a bottle neck, let's solve it," I thought. We started a research by design project helping municipalities to update their policies.

#### *Can you discuss one of your projects in terms of circularity?*

The project that I'm going to talk about today is 'Designing vital soil in urban areas'. This is a research by design project that resulted in

a handbook for designers and policymakers who want to create healthy soil in public space projects.

This project is circular because we analyzed different flows. We looked at water, nutrients and soil flows. We looked at what happens with rainwater, how much of it infiltrates on site. What happens with falling leaves, and how excavated soil is treated. Then we looked at what healthy soil needs and then how these flows need to be adjusted in order to support it.

One of the challenges in this project was limited availability of data about the subsurface before we started designing. We know the approximate location of cables and pipes. However, you can only be sure when you open the surface. It is not uncommon that you would discover old structures, cables left behind. For a long time we've regarded it as a void. A void in which we would place foundations, we would hide everything we don't want to see like parking, waste bins, cables and pipes, mobility infrastructure. As a result, right now it's too crowded. It's also not a void. It's actually an intricate ecosystem of nematodes, bacteria, fungi, biotic and abiotic factors, carbon, water. It is important to support everything that is above the ground.

When I started this project one fact really resonated with me. That the average lifespan of a tree in some of the cities is on 15 years. We definitely can do better.

In this specific project, we took the soil from the very beginning. Which can result into multiple design options, and here are a few:

The first scenario focuses on maximum climate adaptation.

The second one on the maximum biodiversity.

And the third one on maximum circularity. And here, besides what is common, to think about materials and structures to be reused and recycled, we also thought what if you would close some of the water, nutrient and soil loops locally, so leave them to be on site, how nature can develop throughout the time itself. And that requires us as designers to leave that space and time for the nature to finish our work.

The major lesson I learned is that you cannot create sustainable public space without healthy soil. In order to create conditions for healthy soil, we as designers need to actively take it into consideration, its needs from the very beginning of our design process. We need to make this a common practice.

### *How does the transition towards a circular built environment challenge the role of the architect?*

In the circular transition, we as urban designers need to pay attention to certain aspects and certain skills. We need to boost our curiosity in materials. That requires a bit of an industrial designers' approach at the beginning of the project, to take the material, to look at its characteristics, to think how can it be reused in more creative ways out of the box.

For that, we also need pilot project. Projects

where we can test unconventional materials and methods and make what is uncommon common.

Thirdly, we need to dispel myths about circularity. One common notion is that inhabitants prefer new materials because of its aesthetics. However, pilot projects in Rotterdam prove the opposite to be true. Therefore, involving inhabitants from the very beginning of the project is a key. We do that already, we just maybe need to pay more attention to it.