Nina Aalbers
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I am Nina Aalbers, one of the founders of Studio Architectuur MAKEN. We are here in the building *The Krone* where we have our office. And yeah, I'm an architect!

What drew you to circularity?

I think that I, and Ferri as well, we already had a strong sense of responsibility in our projects and we were also looking for ways to innovate in the building sector, which was quite hard to change stuff in the sector. But when we were designing our own house, these two things really came together. So we were able to build the facade with bricks that are made from waste. And we also used them in a way that you could see the waste. So it is really an ornament and it's part of the aesthetics of the building. That's where our office also started. So that's how we kind of created a new culture for ourselves for how we do projects.

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

Hortus Ludi is a very innovative circular project within the walls of an old cultural cloister in Nijmegen. It consists of nine houses entirely built out of wood and with the reuse of materials in the gatehouse, and around a common garden that really celebrates nature.

To me, this project is circular in multiple ways. The houses are built from bio-based materials. We used wood construction and wood facades. But also we try to reuse materials in this gatehouse. It was quite challenging to make that happen as well. And it is circular in a way that nature is really important to us. And we tried to make that the most important place. So this really beautiful garden is actually the identity of the project. And the people share that garden. They're not taking it in large private gardens, but they have a collective garden. So they have more, together. And they're also sharing this gatehouse. So they are meeting each other more than in a traditional project. And they share this space, but maybe also what's in there in the future. So yeah, it's circular on multiple levels.

What was challenging was that the builders were not used to constructing with wood. So they really had to learn from this project. And the planning is way different because this wooden construction comes way quicker, but also the way it's attached. So they really had to learn from it. And I think they also saw a lot of beautiful parts of building with wood because the whole street smelled super nice, and people in the surroundings were really happy that this building came, instead of this, you know, the traditional concrete mud pool where you're building in. It really has a different atmosphere, but it also means that you

have to keep everything clean. And you have to think about everything on forehand instead of afterwards. So it needs a lot more preparation and a lot more precision to construct with wood.

We achieved what we wanted to in this project because we were a design team that really had the same goals. So we learned from this that it's really important to have the same goals in a very early stage of the process. So we now in all our design processes, we talk about what is circularity to you, how do you look at it, what is important, is it the bio-based materials or is it more reuse or is it more about use of the building as a whole or is the beauty of the building sustainability to you, you know. So that's how we talk about this topic with clients in a really early stage so that we can define our ambitions together and reach those goals and achieve what we want in the end.

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

We face a lot more challenges now that we're working on circular projects. I find that we take a bigger role as architects in the process because we need to have more control. If we are talking about wood and concrete, we need to prepare more, we need to be more precise. If we want to reuse materials, we really need to make sure that they are stored somewhere and that they fit into the design. So there is a bigger role for us but on the other hand, we also need to be more flexible. We need to adapt to modular systems for instance, or we are using materials that are not available all of a sudden. For instance, we want to reuse window frames or we want to reuse cladding and the availability of those materials can change in a moment. And then not only the architect but also the design should be flexible to adapt to those changes. So yeah, we have a lot more challenges and also we develop new skills. So we are now calculating how much CO_2 impact our designs have and we rank them and we tell our clients, look, this is how your project is doing and this is how that project is doing. And of course we can have discussions about if this is the right way to calculate but it's super nice to have these discussions, and to talk about it, and to create awareness about it. Because I think that the biggest change that we have to go through is not only this technical change but it is also a cultural change, a change of habits and a change of way of working. And that's what we're working on even more than working on these technical issues.