

The circular ambitions and projects of housing organisation Eigen Haard

The Dutch elaboration of the [Paris climate agreement](#) includes more than 600 agreements to combat greenhouse gas emissions (CO2). The construction sector in the Netherlands is also very much needed to reach the goals. By 2050, 7 million homes and 1 million buildings must be natural gas-free. So, a lot has to be done. As a first step, the first 1.5 million existing homes in the Netherlands must be made more sustainable by 2030. Social housing associations are an important partner for the Dutch government to achieve this objective. In the Netherlands, approximately 30% of the total housing stock is owned by housing organisations.

Social housing organisation [Eigen Haard](#) in Amsterdam is one of the largest housing organisations in the Netherlands. Eigen Haard owns around 55,850 homes, of which 51,500 social rental homes. The organisation sees a future for circular renovation, construction and management. Using a circular approach, the chain will be closed. In that way, construct and renovate buildings are CO2 neutral, and materials and natural resources are not seen as waste, but reused over and over again. Eigen Haard has therefore set up a 'working group Circular'. Ilse van Andel is a senior strategy consultant at Eigen Haard and one of the members of this working group. Ilse tells us about how Eigen Haard tackles the subject organisationally and she explains how the whole organisation learns from various pilots in the field of circular construction and renovation.

How did Eigen Haard start working circularly?

When working on and drawing up our *Plan of Approach* to be CO2-neutral in 2050, we were not only focusing on energy. We directly included materials and natural resources. Because the topic and future approach was more or the less a new playground, we decided to follow the concept of 'learning by doing' in this process. The board also decided that the circular pilots were going to be carried out in the normal decision-making process, and within the existing budgets. Just as most of the housing organisations in the Netherlands, we still rely on a traditional way of building and renovating. That means roughly: making a plan; arranging financing; independently engaging a contractor, architect and – if necessary – a demolition company; building or renovating; and delivering. The switch to a circular approach requires a different view and mind set. So, we had a couple of challenges to tackle.

What do you mean by that?

It is essential, that from the beginning of a circular project, all parties - who normally follow each other in the traditional, more linear process – are already involved and cooperating. This means, that the demolition company, the contractor and the architect are already involved from the very start of the process. By involving these parties immediately, they can discuss and think during the entire construction process. So, working closely together, instead of involving various parties in separated parts of the process. As a result, this approach will deliver a smarter design and a better and well-thought-out use of material and natural resources. Optimising the value of the materials and natural resources of a building is key in the circular approach. For example, materials that were previously marked as demolition material and thus removed and seen as waste, are now being reused. They have value. We also use this broader, holistic view of circularity within our organisation.

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A broader, holistic view of circularity?

Yes, indeed. We share the experience we gain in the circular pilots within the organisation, and also with all our construction and renovation partners. Plus, we are *not* using defined definitions or special work processes for the circular projects. As mentioned, all projects are following our existing decision-making process. We simply add and use the extra knowledge we gain. The project leaders of the circular projects are therefore participating in the 'Circular working group'. Which is – if you give it a thought – very logical, isn't it?

Can you give a concrete example?

Take the 'SaVe project'. In this project, around 1,500 homes per year will get an intervention to become more comfortable and more economical for our tenants. Our residents can get a package of sustainable measures and will make a house more comfortable and economical. There are various materials in the package that we want to use in a circular manner. We are looking sharply at how we can reuse the insulation materials for future renovation and thus: after demolition. By doing so, we close the material cycle. Those materials will be reused and will last for many decades. By thinking and acting *now*, we lay the foundation for future use. Take, for example, natural materials and chemical products, which are still very common to combine in the construction sector. By not contaminating natural materials with chemical substances, such as PUR foam, wooden frames can be reused after dismantling. It also means that you have to find an alternative to the harmful PUR foam.

The point is, that you consciously deal with materials and natural resources that are finite because of their origin. By extending their usage, you will not only save on materials, but also contribute to the environment. With the 'SaVe project', we specifically address the energetic measures. Our other circular pilots are dealing with a broader circular approach.

Why does Eigen Haard take on this pioneering role?

We are inspired by challenge and social awareness. Plus, we also see stricter legislation coming upon us. So, we anticipate and take action on this new upcoming reality.

Eigen Haard employs more than 500 professionals who are aware of changes in the sector, the environment and the finiteness of materials and natural resources. That is why we started and experimented with the project [Co-Green](#) a few years ago. This demolition and newly built construction project in Amsterdam's district 'New West' had the ambition to prove that the reduction of CO2 in combination with a high quality of living can be realised on a budget-neutral manner and through a whole new form of co-creation within the housing sector. Sustainable demolition, construction and living. And guess what: it worked. Now, we have moved on with this knowledge and expertise because Eigen Haard realises that the materials and natural resources contained in the houses and buildings represent a certain value. By handling this wisely during the design and application of the materials, the value will soon be higher. Simply, because it will get more scarce in time.

How did Eigen Haard embed this?

We have formulated leading principles, which are in line with our long-term goals. At the end of 2017, the *Circular and CO2 neutral approach in 2050* was approved by the board and therefore it became part of the policy. This approach of 'circular working' has a focus on: materials and energy. After all, as a housing association we have influence on the use of materials and consumption of energy. We didn't do this alone. [Metabolic](#) helped and provided us with a practical structure to get started. This structure has been worked out in a step-by-step plan. We also use models, such as the 7S model, for extra support to make well-thought-out decisions. The 7S model, for example, helps us to determine whether a circular design is worthy to implement. Also, this model gives an informative insight of the building on: reuse, dismountable parts or the use of a new material. The model is therefore an useful tool for assessment and making a good decision. Obviously, there are more models and working methods that can be used for support on assessment and decision making.

Social housing organisation [Woonbedrijf](#) works with [The Natural Step](#). Woonbedrijf realises circular houses in Eindhoven (the Netherlands), which will be completed in 2020. They involve their future tenants very closely in the whole process. So, their tenants are going to rent a house that meets their housing requirements to the fullest.

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The organisational way of dealing with this new way of thinking and handling is actually not different than any other new innovation or solution we have pursued in the past. Simply said, it starts with a clear picture of the future reality and the wish of the board and management to fulfil a pioneering role. Then we roll up the sleeves and get to work, using the commitment, knowledge and skills of our colleagues. And this we do successfully. We naturally work together with other parties: our construction partners and knowledge institutes, such as: TU Delft. So, it is important that you as an organisation speak out your ambitions and open up. Let go of the traditional working method and dare yourself. In our case, this mind set and way of working led to new insights that extended beyond what we initially thought.

Can you give an example of a new insight?

It is necessary to approach the financial part of the projects differently as well. Circular construction and renovation projects changes the business model, because the value of a building are changing due to the reuse of materials in the future. And therefore, you might also be purchasing and applying other and better materials and natural resources. The value chain is being extended, so an extra value arise. Another example: you also have to start thinking about where you store materials – temporarily – which you will use again during demolition or renovation projects. To this end, various initiatives are already emerging in the market, mainly initiated by demolition companies. You also need to know where all materials are available: now and in the future. So, a digital location is needed to purchase materials. This can be a platform, which acts as a public, online library of materials in the built environment. Thirdly, as an organisation, you can also train your staff and prepare your vacancies in such a way that you recruit people, who are well educated and skilled in circularity. We also expect an open attitude from our partners, so that we can learn together. Sharing knowledge is part of this. That is why we regularly work closely together with other (housing) organisations.

TU Delft not only has theoretical knowledge, but also builds products such as: [the circular kitchen](#). TU Delft is also the leading partner of an European project, called [CHARM](#). Project CHARM focuses on circular renovation and construction in the social housing sector. The emphasis is on optimising the (re)use of materials and natural resources. And preventing downcycling.

Do you have practical tips for organisations with circular ambitions?

For sure! There are many initiatives and events in the Dutch social housing sector. Take a look at fellow corporations, who are already working circularly. And then: just get started! Think it through and start with small steps in the right pace of your organisation. And realise: it doesn't have to be 100% perfect directly.

A lot of information about circularity can be found on the internet. Or join a knowledge platform, such as the [European Federation for Living \(EFL\)](#). Like TU Delft, EFL is partner of project [CHARM](#), funded by [Interreg NWE](#)

