

Exploring circular housing

Embassy of Circularity



Embassy of Circularity is a collaboration between ABN AMRO, DEMEEUW, Dutch Design Foundation, CIRCO, New Horizon and Urban Mining Collective

Curator: DIG - Design Innovation Group.

Design: Overtreders-W.

Graphic design: Sanne Vos.

Project management / Production: De Projectstudio.

Commissioned by World Design Event.

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Our earth is changing, both visibly and invisibly. We exploit the earth, exhausting it in the process. We need to adopt a different approach to natural resources, using what we extract again and again. Materials should be constantly reused, always in a new form.

The aim is circular solutions, which means using raw materials for longer periods and reusing them more frequently. To accomplish this, we must summon up the full power of design.

The path towards a circular society is adventurous. Circularity begins with the sound circular design of products, systems, processes, behaviour, collaborations. Circularity never ends and changes the way we start with a design.

Pioneers are now presenting the first solutions. But we still know very little about what's possible. Let's examine what already exists and what we still need to discover.

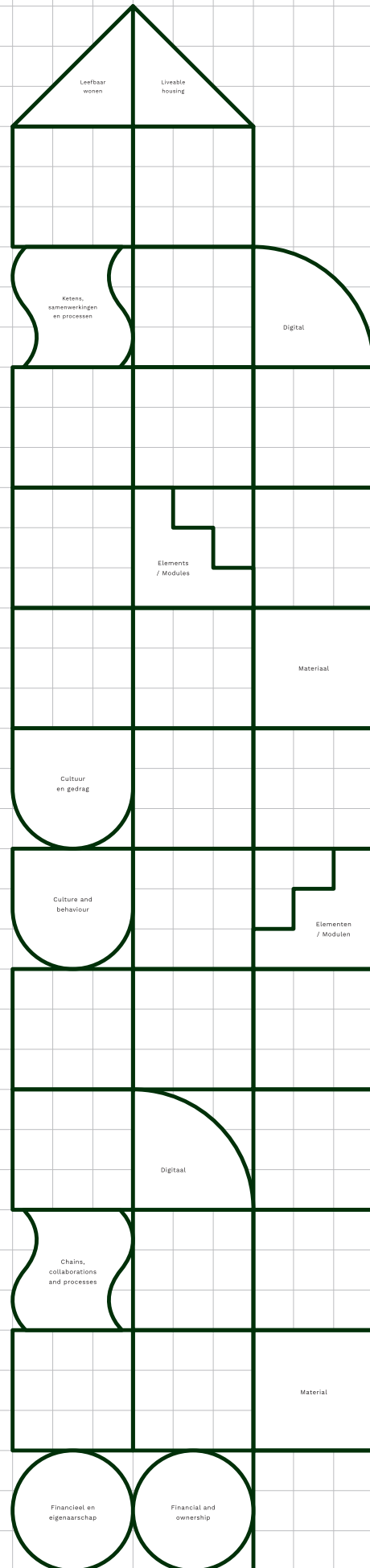
In this exhibition we celebrate the power of design, which is facilitating our transition to a circular world. The designs featured in this exhibition explore the possibility of 2020 liveable, affordable and circular shared-entrance apartment buildings in the year 2020.

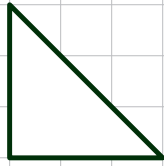
What design questions do today's pioneers encounter? And what challenges face them as they shape our future?

In this exhibition, seven themes show the transition to a circular design practice for the typical Dutch apartment. For each of these themes, we will travel from A to B or much further.

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Liveable housing

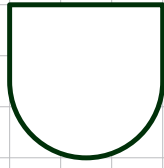
From finished product to intermediate product

Designers largely determine what people can do with a product. They design for attachment and sustainability, for standardization and compatibility, for maintenance and ease of repair, for adaptability, and for disassembly and re-assembly.

Pioneers are already integrating all these principles. Their ultimate aim is not one-off use but unlimited use in an affordable manner. What does this unlimitedness mean for the convenience and daily behaviour of residents? What do we do with what's left when a product really is used up or no longer necessary? How much waste are we then left with?

Liveable housing





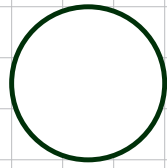
Culture and behaviour

From
awareness to
obviousness

Rethinking from a linear to a circular world where nothing is wasted any more calls for a huge change in culture and behaviour. We honour the natural resources. Children at school are already learning to choose for sustainability. We raise awareness among adults through campaigns. Policy-makers everywhere design incentives to encourage circular behaviour. But how do we behave all day? How does circular behaviour become obvious for everybody, especially the residents of shared-entrance apartment buildings?

Culture and behaviour





Financial and ownership

From possession
to use: new
revenue models

Circularity calls for new forms of financing. If paying for use replaces paying for possession, new questions arise. What if we rent, lease or share an apartment – just like a car or bike? If we make homes circular, who pays for the investment and how do you determine the residual value? Who decides when it comes to damage and maintenance? Designers discover new issues through changing revenue models.

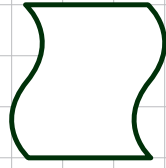
Financial and ownership



Financieel en eigenaarschap

Van bezit naar
gebruik: nieuw
verdienmodel

Circulariteit vraagt om nieuwe
financieringsvormen. Als beta-
len verandert in betalen voor
gebruik, komen nieuwe vragen op. Wat
de portiekwoning – met als voorbeeld
een fiets – huren, leasen en
we huizen circular maken, wat
de investering en hoe bepaal-
de restwaarde? Wie betaalt voor
en onderhoud? Ontwerpers
nieuwe vraagstukken door
verdienmodellen.



Chains, collaborations and processes

From linear
to resilient

Natural resources and materials no longer go from a to b and then to c. Processes change with them. And new alliances – preferably very local – are also forged. All parties to circular collaborations take responsibility for the conservation of raw materials. What does this mean? How can we design resilient, versatile collaborations that boost circularity in and around the home? How do we redesign the demolition and construction processes of homes from a to z and everything in-between?

Chains, collaborations and processes





Material

From experiment
to scaling-up
of new material
use

Developing and prototyping new materials or reusing old materials requires plenty of scope for experimentation. Scope that speculative designers seize: what sort of materials can you possibly make from sewage sludge? What if we reuse clothing fibres for walls?

These experiments also make widespread reuse possible for private individuals. The certainty of large quantities of demolition waste results in new processing methods. Old concrete becomes new concrete. Old bitumen becomes new bitumen. The shared-entrance apartment building thus provides new material on a large scale. What else is being devised in this area?

Material

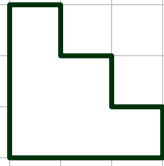


Materiaal

Van experiment naar opschalen van nieuw materiaalgebruik

Het ontwikkelen en prototypen van nieuwe materialen of het hergebruiken van oude maakt veel experimenteerplekken. Ruimte die speculatief ontwerp mogelijk uitnodigt van aan de vooraf bepaalde hergebruiken voor muren?

Grootschalig hergebruik is ook voor particulieren mogelijk door die experimenten. Door de zekerheid van grote hergebruiken (loop) materiaal om nieuwe verwerkingsmethoden. Oud beton wordt nieuw beton. Oude bitumen wordt nieuwe bitumen. De portiekoning levert zo nieuw materiaal, op grote schaal. Wat wordt hiervoor nog meer bedacht?



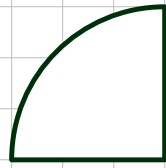
Elements / Modules

From assemblage
to disassemblage

If not only individual products but also whole homes are composed of modules and elements, the process of replacing and dismantling changes. The crux is to figure out in advance how an entire apartment has to be put together if you want to be able to take it apart again later. The cost of construction, occupation and renovation changes if the constituent parts can be replaced or moved.

Elements / Modules





Digital

From supporting
to inspiring

Technology supports every change and drives circularity in many ways. Sensors allows us to analyse the use of a product or building. What does the data tell us? When should a module be replaced? And where is material superfluous? Big databases offer useful insights. The circular economy receives a boost with the deployment of technology. How can we strengthen this further?

Digital



Hal 3: Naturally circular

In 2016 they fitted out the Klokgebouw without producing any waste. In 2017 they teamed up with Bureau SLA and used borrowed materials to build a pavilion on Ketelhuisplein. For this exhibition, Exploring Circular Housing, Overtreders W also made this pavilion fully circular. Taking on the role of art director for the third time, they not only show circularity but also let visitors experience it at DDW.

This year, all the materials tell their own story. Concrete blocks (borrowed from Rutte groep) are made of cement recovered from old buildings. Citumen, a circular roofing material made from recycled bitumen, is supplied by ZND/Icopal. PVC tubes from Wavin, wood from Stihl, no drilling or sawing whatsoever. And so all materials can be returned after use.

All other materials will be recycled or reused after DDW. They include the felt from Metisse on the benches, which is made from pairs of old jeans. And suspended ceilings from an old office building in Hoofddorp, supplied by New Horizon for the construction of the pavilion. Even parts of an old exhibition from the Stedelijk Museum has been used to create this exhibition.

