



# **EQUITONE**

Imagine if building materials were truly circular.
Imagine that they did not end up in landfill but
were continually given a new life as part of a new
building, a new street, a new bridge, a new park,
a new façade or revived city. Imagine the resources
that could be saved and the carbon that would
remain naturally stored in plants, oceans, forests,
even buildings. Imagine the benefits for our
climate and the infinite potential for society.
Just imagine the possibilities.
They would be endless.

# itect workshop on sustainability ary 2020 | Kapelle-Op-Den-Bos, Belgium

### Contents

Why this manifesto

Solutions

Our 2030 ambitions

Our 2030 ambitions

Our 2030 ambitions

Circular design

Where we started and where we are going

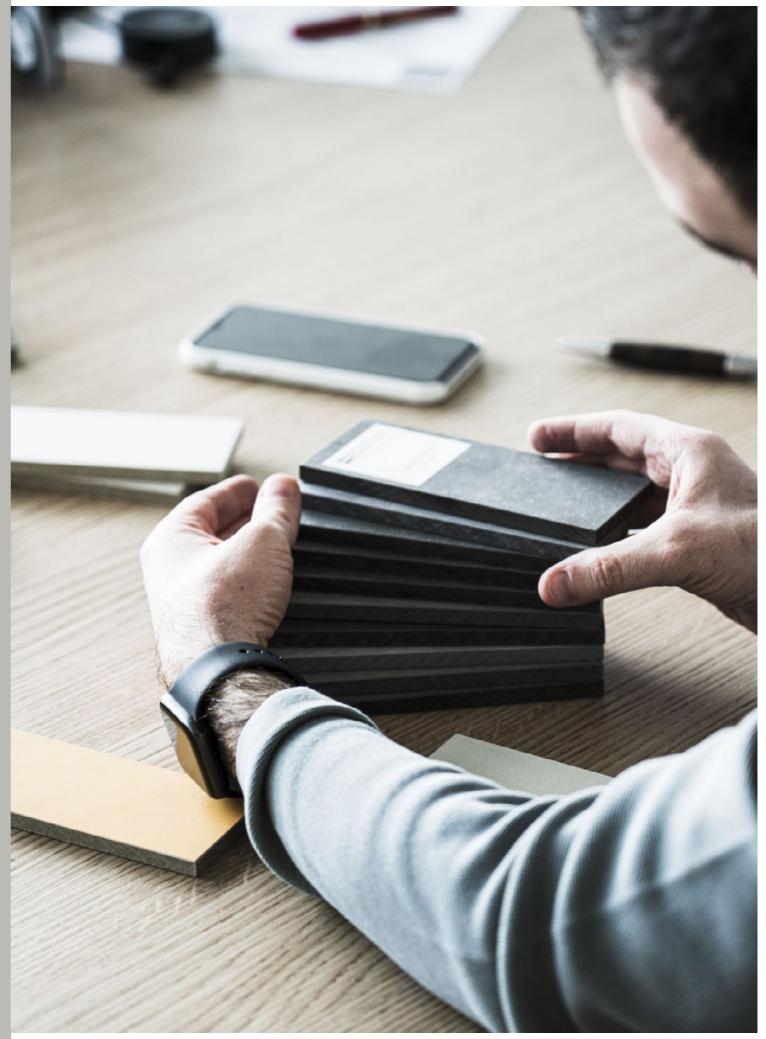
Our 3 areas of focus

Circular design

Our journey to full circularity

Our plan of action

Explore circular building with us



# Why this manifesto

Since 1905, we have been developing, designing and shaping lightweight and long-lasting fibre-cement building solutions. Today, we are exploring What Happens Next – looking for ways, partnerships, processes and services to give our materials a new life. It is a work in progress, a change so fundamental that we cannot achieve it alone. The scale of the challenge and potential opportunities requires commitment across and beyond the entire value chain. By working together with engineers, academics, regulators, suppliers, fabricators, architects and installers, we want to eliminate waste in the industry, starting with our own.

'For generations, our materials have helped build the homes and cities we live in. The challenge of our generation is to build with a lighter impact. Knowing that the building industry is key to tackling climate change, we want to do more than just transform our materials. We want to work with you to change the system.'





'EQUITONE has a rich history, but I believe our most exciting years lie ahead. Today, we're investing in strengthening the bridge between science and industry to pioneer new material technologies and business models that will help us accelerate a circular future. And we're hoping to get you engaged in the process by being open and honest every step of the way.'





MAARTEN MILIS
ETEX EXTERIORS
Sustainability Product Manager





## Facing the facts

The buildings and construction sector is responsible for...



38%

of all energy-related carbon emissions



> 35%

of the EU's total waste generation ec.europa.eu



50%

of all extracted materials

ec.europa.eu

Today, our sector depends heavily on virgin materials and production processes, depleting our natural resources and throwing natural systems off balance. To stay on track for climate neutrality by 2050, the European Commission is increasingly pushing for circular practices. Both the European Green Deal and the upcoming 'EU Strategy for a Sustainable Built Environment' seek to increase material efficiency and reduce climate impacts by introducing or promoting:

- · recycled content requirements
- · measures that improve the durability and adaptability of buildings
- · renovation waves and (possibly) building renovation passports
- · more stringent legislation on the energy performance of buildings
- extended producer responsibility policies for the treatment or disposal of post-consumer products

At the same time, green building certification systems like <u>BREEAM</u> (Building Research Establishment Environmental Assessment Method) and LEED (Leadership in Energy and Environmental Design) are gaining ground worldwide.

#### Only to say:

The construction industry is a big part of the problem, but that also means we can be an important part of the solution. We prefer to be the latter.

## Our 2030 ambitions

At EQUITONE, we dedicate ourselves every day to reuse and recycle our materials, giving them a second life. With your help, we want to take it one step further and eliminate waste altogether. Our ambitions for 2030:



# Light-impact materials



minimising their environmental footprint throughout their entire life cycle

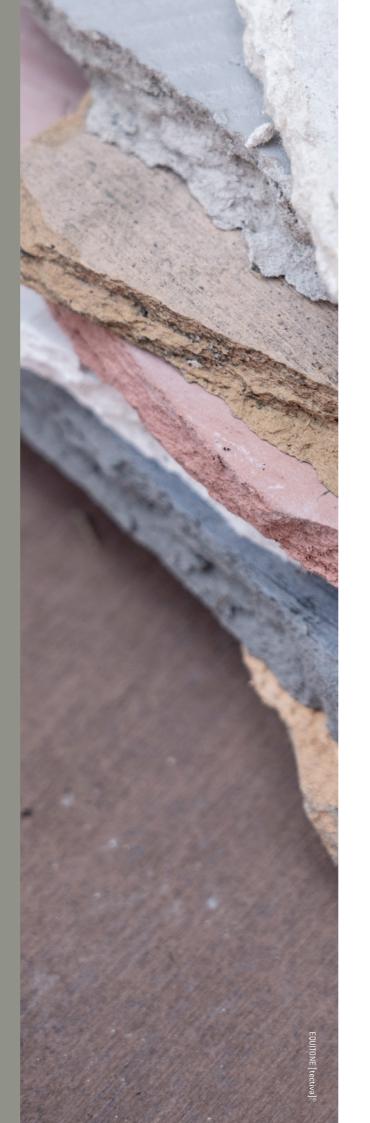


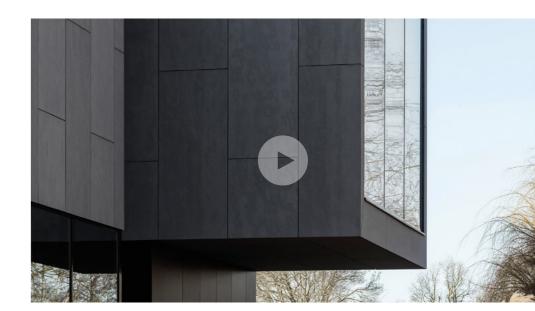
# Zero waste to landfill



keeping our materials in use within and beyond our factories

We want to use our unique position as a global material supplier to help **transform the industry from within**. Working with industry experts across the value chain, we want to develop a regenerative approach to materials and inspire new ways of living.



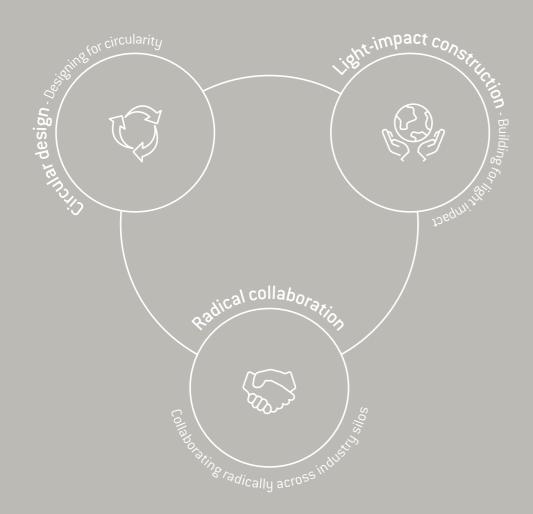


Where we started and where we are going

Our 3 areas of focus

How we want to go from long life and lightweight

To light impact and circular by design





## Circular design

At EQUITONE, we believe good architecture makes a difference. The difference between comfort and inconvenience. Between waste and efficiency. Between harmony and imbalance. We believe that waste and pollution can be designed out; that circular construction starts at the design stage – by looking beyond individual components and developing durable, adaptive and resource-efficient systems.

### Our starting point

Our façade materials are designed as a modular system – easy to add, remove, adapt or dismantle for reuse or recycling. They meet the basic principles of circular construction:



Modular



Easy to dismantle





Durable +50 years

Lightweight

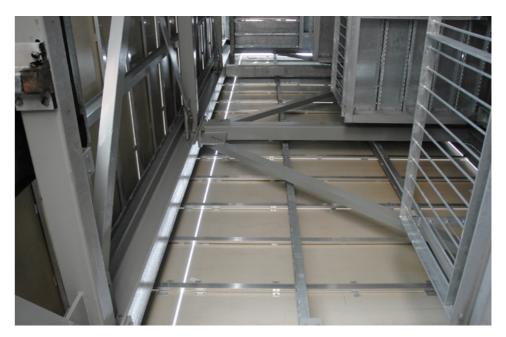
### Our target

By 2030, we want to collect and valorise EQUITONE waste across the value chain, and enable and promote the reuse of previously owned EQUITONE panels. Our goal is to continue supporting architects in their efforts to design circular buildings – buildings that are 1. modular, 2. minimal waste, and 3. designed with reused building components.

Here is how







MODULAR INNOVA Tower, Venlo



RELATED CASES

Office tower by Jo Coenen c.s., JCAU. Designed as the entrance of the 2012 Floriade and built using modular construction techniques, creating an adaptive building that flexes to new needs and uses.

What makes it unique: Intermediate floors can be added if and wherever required.



10-storey building complex with



Museum of Art, Hong Kong Reclad with EQUITONE modular revitalise the Hong Kong Museum of Art











Museum of Arts, Vivien Fung Hong Kong | EQUITONE [tectiva]

#### MINIMAL WASTE

Museum of Art, Hong Kong

Part of a 4-year renovation project by the Hong Kong Architectural Services Department to increase the museum's exhibition space by 40%.

What makes it unique: Each 3D module making up the façade of the building was designed to be made out of one and the same panel, resulting in minimal wastage from the offcuts.

#### RELATED CASE



Military airbase, Niederstetten, Germany minimalistic design with only 1.6% cut-off waste









The panels were salvaged from a former youth centre...



 $\dots$  and reused for the cladding of a (90% recycled) home.

#### REUSE

View case

Recyclinghaus Hannover

What makes it unique: 90% of the building is made out of recycled structural components, including fibre-cement panels which were recoloured in ebony black and visibly fixed to a wooden structure for less environmental impact.

Fully recyclable and decomposable house, designed by Cityförster and awarded with the Sustainability Prize at the

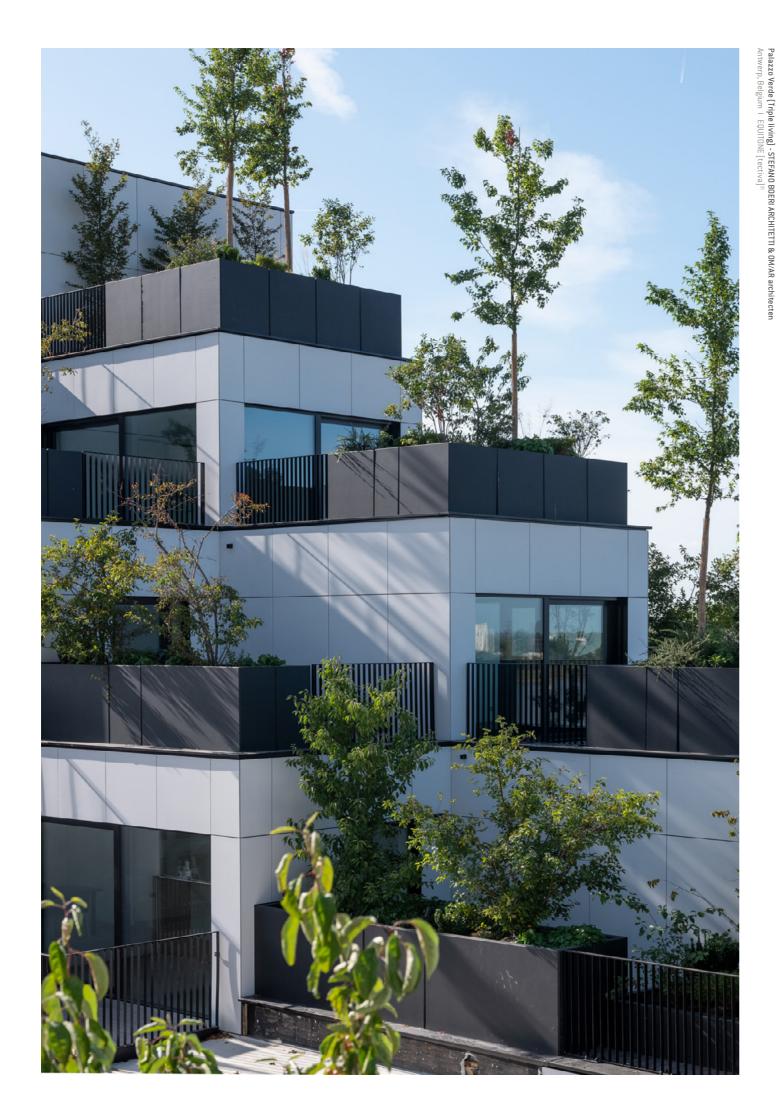
2020 Façade Awards for Rear-Ventilated Curtain Façades.

#### RELATED CASE



Nij Smellinghe, Drachten, NL Hospital renovation with reused façade panels from 1996





# Light-impact construction

Designing regenerative solutions is one thing, building with a low environmental impact is yet another. It means avoiding non-renewable resources and using (and preserving) renewable ones. It means recovering waste streams, recovering water, recovering energy. It means applying manufacturing techniques that do not harm but

instead help restore the environment. It means engaging with universities, start-ups and spin-offs to develop materials that are both low carbon and highly resource efficient. Guided by scientific research and inspired by experts in the field, we are working towards light-impact materials and production processes.

#### Light-impact materials

#### Our starting point

A material which is **resource efficient by nature**. EQUITONE panels are thin and lightweight and can be cut to size to clad virtually any building façade with a minimum of material use per square metre. Made of water, Portland cement, cellulose and natural minerals, they are also perfectly recyclable.







Lightweight

Low material usage/m<sup>2</sup>

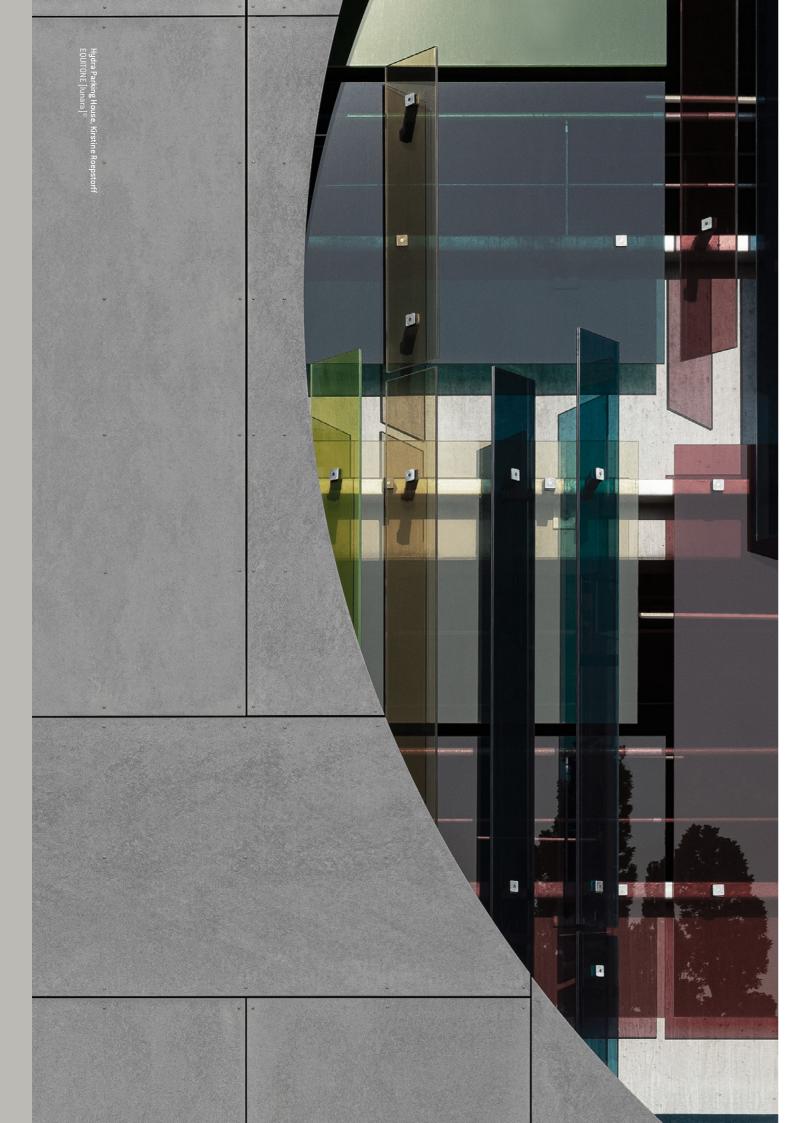
Ready to be recycled

#### Our target

By 2030, we want to go beyond resource efficiency and experiment with innovative techniques, green technologies and alternative raw materials to substantially decarbonise our materials.

Here is how





## Light-impact construction

#### **Light-impact production**

### Our starting point

We are actively working to reduce the energy, water and carbon footprint of both our production facilities in Belgium and Germany:



100% of the electricity we use in both our production facilities comes from certified renewable sources.

A significant part of our energy mix (about 40%) is generated locally by our own solar farms and cogeneration units.



We use 0 potable water in industrial processes.

We recycle and reuse wastewater and treat it before releasing it back into the environment and we continuously invest in improved treatment techniques.



Over 65%\* of our materials are sourced from local suppliers within a radius of 150 kilometres from our factories\*.

More than 65%\* of supplies to the Belgian factory are transported over water\*, preventing noise and air pollution from nearly 3,000 trucks every year.

\* See <u>Material Sustainability Datasheets</u> for exact and up-to-date figures.

### Our targets

We want to create a new generation of fibre cement with minimal impact and maximum durability, without compromising on technical performance. Think in terms of reduced water use, zero landfill and reduced carbon emissions from operations.

Here is how



We don't just want to be make bold commitments for the future – we want to drive fact-based conversations. Which is why we have developed Material Sustainability Datasheets, to openly share the factual environmental performance of our materials.

Click the tiles below to see the current environmental impact of each of our materials.







MATERIAL SUSTAINABILITY DATASHEET EQUITONE [lunara]®









MATERIAL SUSTAINABILITY DATASHEET EQUITONE [linea]®







MATERIAL SUSTAINABILITY DATASHEET EQUITONE [pictura]®





Peynsaert Architecten Aalst, Belgium | EQUITONE [tectiva]

Owners and designers are beginning to take a much more active role in selecting sustainable materials and looking towards sustainable practices such as circular building practices and circular designs. It feels like the building supply industry just isn't quite ready yet. Circular materials are either too expensive or there's little information available on sustainable alternatives and how to use them, which holds us back from using them more.

#### - STEVEN FRANKEL

DATTNER ARCHITECTS (NY, USA)

Radical collaboration for lasting change

Circularity calls for collaboration. In order to eliminate the total footprint of our materials – not just in production, but throughout their life cycle – we are shifting our mindsets from individual action to shared solutions.

#### Our starting point

We are engaged in several partnership programmes and support international green building standards and certification systems:



We are experimenting with new, circular business models with the support of the Flemish government, bringing partners together from across the value chain, from cement producers to installers. The focus here is on service, recyclability and material recovery.



In France, we are involved in the VALOBAT initiative. Together with 28 industrial partners, we collect eco-contributions – annual fees as a result of the new legislation on Extended Producers Responsibility (EPR) – and invest in waste recycling, the promotion of reuse and eco-design, and waste valorisation.



We are also collaborating closely with VITO, an independent research organization aiming at accelerating the transition towards a sustainable future. Through the exchange of science-based expertise, we seek to minimize our water usage in the production process and systematically reduce our carbon footprint.

#### Our target

By the end of this decade, we want to forge new and innovative partnershi trailblaze transparency across the value chain and establish a sustainabili council of external experts to stay on track to full circularity.

Here is how





# Closing the loop on cladding Our plan of action

#### Sustainable innovations

Eric Bertrand — Chief Innovation Officer
The last few years, we have radically changed the way we innovate, focusing on two main challenges.

#### Discover our improvements so f

#### Transparency across the value chain

Eva Angeli — Corporate Social Responsibility Specialist As a group, we are involved in a programme to challenge our suppliers to improve on 21 different criteria.

Together, we want to create environmental value and strive for the highest level of transparency.



#### Brave leadership

#### Michael Fenlon — Head of ETEX Exteriors

As a building materials producer, we have to acknowledge that a challenge exists and embrace it. Together with people across and outside of the organisation, we want to follow through and really make a difference.



#### Zero-waste factories

#### Michael Orlowski — Continuous Improvement Manager

Every single employee is key to achieving our mission. During a no-rejects programme in our German plant, we have seen teammates spontaneously take new initiatives and set things in motion to ultimately eliminate waste across the factory.



#### Scaling up circularity

#### ${\tt Maarten\ Milis-ETEX\ Exteriors\ Sustainability\ Product\ Manager}$

We want to accelerate circularity in the industry by being open and honest about our own journey to it. We also see creativity as a key driver for achieving a circular system that benefits everyone in the value chain.

#### Discover our collabs

#### Connecting across the globe

Rolf Haberlah — Country Manager Germany
Susanne Ingemann — Country Manager Nordics
Cedric Pinto — Senior Specification Manager Australia
We are currently exploring the boundaries of circular
construction, sharing our insights with and learning
from many different stakeholders around us.

Zoom in on the projec

# Explore circular building with us

Subscribe to our mailing list to receive our 6-month progress report and stay updated about our new partnerships, projects, plans and circular action.

Stay in the loop

#### Contact us

www.equitone.con

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Exploring Circularity

For more information on our sustainability efforts in general, read the our Group sustainability report.



ETEX GROUP SUSTAINABILITY REPORT









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Euro Panels Overseas N.V.
Kuiermansstraat 1
1880 Kapelle-op-den-Bos - BELGIUM
info.europanels@etexgroup.com
www.equitone.com



