

OPERATIONAL FRAMEWORK ROADMAP

FROM SUSTAINABILITY TO CRADLE TO CRADLE INSPIRED

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INTRODUCTION

Goal

In 2012 Blue Gate Antwerp NV initiated the creation of an 'operational framework'. They based the content on a charter of preferred focus, as defined by the Board of Blue Gate Antwerp, the Blue Gate Antwerp Strategic Plan, and a workshop. This resulted in the Blue Gate Antwerp Operational Framework (BGA Operational Framework).

The BGA Operational Framework has been developed with the prospect of acceptance by a commercial developer in mind. This means that the products in the BGA Operational Framework have been developed by the market, valued by an external market party or accepted by the market as tested in the workshop.

We can conclude that the BGA Operational Framework is a sustainable operational framework that can be applied to any site. As a result, the framework did not start with Cradle to Cradle principles in mind. Looking from a Cradle to Cradle perspective, the approach should be very different. In this Roadmap we identify the elements and methods in the current framework that can still be of value when working from a Cradle- to-Cradle perspective. We also consider the stepping stones towards a more Cradle to Cradle-inspired

2 Operational Framework.

Approach

First we will define the content of a Cradle to Cradle-inspired Operational Framework and explain the content of the current BGA Operational Framework.

In our analysis, we will then do three things. We will discuss each element of the current BGA Operational Framework and show whether it remains of value (stay or go) and what should be added or changed to create a more Cradle to Cradle-inspired Operational Framework.

We will also discuss each method and see if it fits with the Cradle to Cradle principles.

Finally we will summarise what has been discovered and what could be done to become more eco-effective while using an operational framework.

CRADLE TO CRADLE-INSPIRED OPERATIONAL FRAMEWORK

As described by the concept's developers, designer William McDonough and chemist Dr Michael Braungart in their 2002 book, *Cradle to Cradle: Remaking the Way We Make Things* (North Point Press), Cradle to Cradle encourages us to step back from the routines of daily problem-solving and rethink the framework conditions that shape our designs. Rather than seeking to minimise the harm we inflict, Cradle to Cradle reframes design as a beneficial, regenerative force—one that seeks to create ecological footprints to delight in, not lament. It expands the definition of design quality to include positive effects on economic, ecological and social health.

Cradle to Cradle rejects the idea that growth is detrimental to environmental health; after all, in nature growth is good. Instead, it promotes the idea that good design supports a rich human experience with all that entails—fun, beauty, enjoyment, inspiration and poetry—and still encourages environmental health and abundance.

The Cradle to Cradle framework is fundamentally about constantly improving and moving from simply being “less bad” to becoming “more good.” Conventional eco-efficient demand-side approaches often simply seek to reduce or minimise damage and shrink your “negative footprint”.

Efficiency is simply good business. By adding what we call eco-effective supply-side approaches and integrating positively defined goals based on Cradle to Cradle values and principles, we are able to direct innovation and leadership towards a “positive footprint”.

An Operational Framework based on the Cradle to Cradle principles should be focused on achieving the following elements:

Cradle to Cradle Principles

- **Material Health:** Value materials as nutrients for safe, continuous cycling
- **Material Reutilization:** Maintain continuous flows of biological and technical nutrients
- **Renewable Energy:** Power all operations with 100% renewable energy
- **Water Stewardship:** Regard water as a precious resource
- **Social Fairness:** Celebrate all people and natural systems

Certifying, reporting and planning methods should support activities to become more eco-effective.



BGA OPERATIONAL FRAMEWORK

The BGA Operational Framework is composed of three main elements:

- **BREEAM guidelines:** these apply to both the land and the structures that will be erected on it.
- **GRI guidelines:** these international standards provide a comprehensive framework for sustainability reporting.
- **Blue Gate Antwerp guidelines:** these emphasise a number of areas that have a specific significance for Blue Gate Antwerp and that are either not present or are incompletely formulated in the BREEAM and GRI guidelines.

The BGA Operational Framework is a flexible instrument, applying to both developers and companies that want to set up on the site. For the BREEAM guidelines, companies must receive a score of 'very good', and for the GRI guidelines, they may start off on a basic level but must show yearly improvement in their reporting efforts. For the Blue Gate Antwerp guidelines, the developers and the businesses must lay out their sustainability goals in a five-year development plan.

The guidelines in the BGA Operational Framework vary according to the type of activity: logistics, research and development and production all have their own specificities in the charter.

A BGA Operational Framework/charter commission from Blue Gate Antwerp NV will assess the development plans and adherence to the BGA Operational Framework.

BREEAM Communities Guidelines

We will approach this analysis on Cradle to Cradle elements by presenting an overview of BREEAM Communities categories. We will further explain what should change in order to move towards a Cradle to Cradle-inspired Operational Framework in the third box.

Categories	To keep or To go	Cradle to Cradle-inspired approach
<p>Governance</p>	<p>Aims to ensure community involvement and leadership in running the development.</p> <p>The assessment issues in this category can be considered Cradle to Cradle-inspired. They are not in conflict with the Cradle to Cradle principles.</p>	<p>The category needs additional stepping stones addressing:</p> <ul style="list-style-type: none"> ■ Celebrating human diversity on and around the site. ■ Celebrating a mix of functions on the site, in line with the researched needs of the community. ■ Celebrating a mix of social activities in compliance with the needs of the community on site and off site. ■ Valuing the opportunities of park management to have a matchmaking function, leading to a more Cradle to Cradle-inspired site.
<p>Social and economic wellbeing</p>	<p>Aims to create a healthy economy and a socially cohesive community. Addresses minimising the impact of environmental conditions on the health and wellbeing of the occupants.</p> <p>The assessment issues aiming to create a healthy economy and a socially cohesive community are not in conflict with the Cradle to Cradle principles.</p> <p>The assessment issues aiming to minimise the impact of environmental conditions on the health and wellbeing of the occupants are in contradiction with the Cradle to Cradle principles.</p>	<p>The category needs additional stepping stones addressing:</p> <ul style="list-style-type: none"> ■ Celebrate diversity by improving the environmental conditions on site and have a positive impact on the health and wellbeing of the community.

Resources and energy

Aims to reduce carbon emissions and ensure wise use of natural resources.

The assessment issues aiming to create an energy plan and water strategy and to aim for resource efficiency are in line with the Cradle to Cradle principles. It should be noted that being smart with the use of energy and materials is not incompatible, but that minimising and reducing use are inconsistent with the Cradle to Cradle approach.

The assessment issues aiming to reduce carbon emissions are in conflict with the Cradle to Cradle principles.

The assessment issues aiming to reduce use of energy and use of water and work with low-impact materials are not in line with the Cradle to Cradle principles.

The category needs additional stepping stones addressing:

- Valuing all materials (including air, water and building material) as nutrients for safe, continuous cycling.
- Considering design of services and products to enhance the ability to bring the resource back into the cycle.
- Aiming to power all operations with 100% renewable energy.
- Aiming to bring material when used back into the cycle with a positive footprint (cleaner or more applicable for the continuation of the technical or biological cycle).

Land use and ecology

Aims to improve ecological biodiversity.

The assessment issues in this category can be considered Cradle to Cradle-inspired. They are not in conflict with the Cradle to Cradle principles.

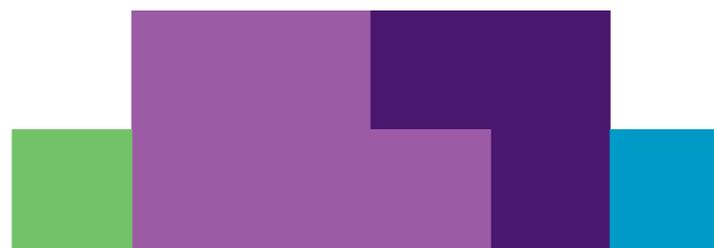
Transport and movement

Aims to create an efficient and safe system for movement.

The assessment issues in this category can be considered Cradle to Cradle-inspired. They are not in conflict with the Cradle to Cradle principles.

The category needs additional stepping stones addressing:

- Aiming to provide public transport and transportation of products on site powered with 100% renewable energy.



GRI Reporting Guidelines

Content of a GRI report

Every year, the companies on the Blue Gate Antwerp site have to deliver an annual sustainability report as developed by the Global Reporting Initiative, an NGO. GRI works towards a sustainable global economy through sustainability reporting guidance. The aim of GRI reporting is to create company transparency and accountability by offering:

Benchmarking – Demonstrating – Comparing on the following levels:

- Economic
- Social
- Environmental
- Input: material, energy, water
- Output: emissions, effluents, resources/material
- The impact of products and services on the environment

Fit with the Cradle to Cradle-inspired approach

Being transparent and offering your community insight into your economic, social and environmental activities is not in conflict with the Cradle to Cradle-inspired approach. The same is true of benchmarking, demonstrating and comparing. They can be inspiring.

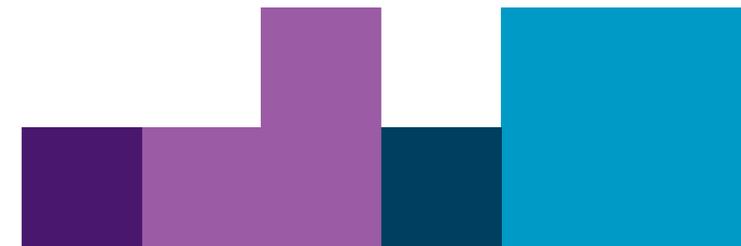
However, GRI also asks companies to report on their negative economic, social and environmental impact. This is not in line with the Cradle to Cradle approach.

Companies should celebrate economic innovation and new business models supporting this, celebrate diversity and report on positive technological and ecological footprint solutions they have applied. You could say that the focus should be different.

BLUE GATE ANTWERP Guidelines

The Blue Gate Antwerp Guidelines aim to set a standard for companies that will be located on the site with regard to factors such as sustainable economic activity and waterbound and sustainable mobility. They also aim to address the eco-effectiveness and (open) innovation activity of a company. In the next overview we will address the elements of the guidelines and how they fit with the Cradle to Cradle principles.

Elements	To keep or To go	Cradle to Cradle-inspired approach
<p>Sustainable economic activity</p>	<p>Aims to ensure community involvement and leadership in running the development.</p> <p>The assessment issues in this category can be considered Cradle to Cradle-inspired. They are not in conflict with the Cradle to Cradle principles.</p>	<p>The category needs additional stepping stones addressing:</p> <ul style="list-style-type: none"> ■ Celebrating human diversity on and around the site. ■ Celebrating a mix of functions on the site, in line with the researched needs of the community. ■ Celebrating a mix of social activities in compliance with the needs of the community on site and off site. ■ Valuing the opportunities of park management to have a matchmaking function, leading to a more Cradle to Cradle-inspired site.
<p>Waterbound and sustainable mobility</p>	<p>Aims to create waterbound and sustainable mobility</p> <p>This element is not in conflict with the Cradle to Cradle principles – but only if sustainable mobility is powered by 100% renewable energy.</p>	



Eco-effectiveness

■ Chain management and chain design

The company initiates involvement in every necessary level of chain management and chain design of their product or service to create eco-effectiveness.

■ Producer responsibility

The company initiates responsibility for every phase of the product life cycle to create eco-effectiveness.

■ Product recovery unit

The company has or develops a plan to have an active product-recovery unit to create eco-effectiveness.

■ Product degradability

The company develops an active product degradability policy to create eco-effectiveness.

■ Product return management

The company initiates a product return management system to create eco-effectiveness.

■ Business model innovation

The company researches or initiates business model innovation to create eco-effectiveness.

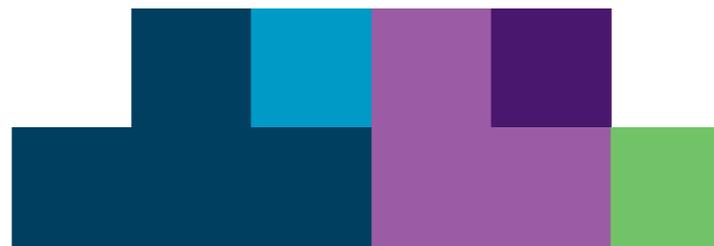
■ (Open) innovation

The company actively searches for open innovation opportunities.

These elements are not in conflict with the Cradle to Cradle principles; however, aspects such as 'product life cycles' should be consistent with the technological or biological cycle in order to continue.

The category needs additional stepping stones addressing:

- Redesign of products to achieve eco-effectiveness.



Method Analyses

BREEAM Communities Guidelines

BREEAM Communities is a scheme for area development design. Accreditation is given for the planning phase. In general, this method has no fit with the Cradle to Cradle principles, as it gives no space to newfound opportunities during the process of development or to the Cradle to Cradle approach of continually innovating to create more eco-effectiveness.

However, accreditation at project level would be an optional approach to deliver accreditation for area development.

GRI Guidelines

The C2C BIZZ partners have been clear on the issue of GRI Reporting. They consider annual reporting of value, but not on the issues addressed by GRI.

Annual reporting could be of value if it celebrates the Cradle to Cradle results and also if it addresses opportunities for cooperation to continue the cycles, strengthen use of renewable energy and enhance water stewardship and social fairness. In this way it would become a tool for the Park management and the community.

Blue Gate Antwerp Guidelines

A five-year strategic plan defines the direction in which a company aims to go. It improves focus and gives an opportunity to define intentions, goals and expected added value. Defined in this way, such a strategic plan would be consistent with the Cradle to Cradle principles.

CONCLUSION

When working with the Blue Gate Antwerp operational framework it is clear that the methods are not really fit for a Cradle to Cradle based approach. The stepping stones can be undertaken as an additional or alternative step on top of the existing framework. However the change of mindset needed to become a Cradle to Cradle business site instead of a sustainable business site is not supported in the methods of the BGA Operational Framework.

This will require a transformation achieved through:

- Changing the certification of the planning phase towards certification of eco-effective projects and products
- Changing the reporting on People, Planet, Profit towards celebration of success and call for cooperation opportunities
- Changing the current assignment for a strategic plan on eco-effectiveness, towards a plan that includes redesign thinking and using the method of formulating intentions, goals and expected added value.

The BREEAM Communities Guidelines could lose the “being less bad” aspects and should challenge companies to be “more good”, as should the GRI guidelines.



Having fun

Any form of encouragement to move towards more eco-effective area development and business practice should not be impose punitive amounts of paperwork, but it should fuel the participants to enjoy the process and give them the inspiration to continue.

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