

# C2C opportunities in policy of (local) government

## ABSTRACT

As first region in the world, Venlo fully embraced Cradle to Cradle (C2C) as strategy for innovation and economic growth. Venlo considers C2C as an innovative economic concept, based on new business models and the (re)use of materials continuously.

Since 2006, the city of Venlo started implementing these principles into policy. By doing so, Venlo wanted to energize the market for sustainable products and services by taking the lead in adopting sustainable policy practices. This case study will describe why and how Venlo implemented the principles of Cradle to Cradle and circular economy within their policy, what can be learned from these experiences and how other (local) governments can anchor C2C principles within their policy.



## STRATEGIC AMBITIONS

The municipality of Venlo has fully embraced the vision of Cradle to Cradle (C2C). The structural emphasis can be summarized in four strategic ambitions for the region of Venlo:

- Achieving economic growth;
- Increasing the average educational level of the (working) population;
- Increasing innovative strength;
- Attracting investment to the region.

To support the practical application of Cradle to Cradle, the Venlo Principles were set in 2006. In a co-creation process with both trailblazers and co-founders of C2C, Braungart and McDonough, these Venlo Principles were developed. The Venlo Principles are context specific for the region of Venlo and meant to focus on doing good rather than less bad.

But it did not stop there. The principles of a circular approach are firmly anchored in the policy of the (local) government in recent years. And the best part: the first effects are already noticeable! Subsequently on the Venlo Principles, the C2C approach is translated in many more policy documents of Venlo.

There are many C2C-opportunities in the policy of (local) governments. Let's take up this challenge together and work step-by-step towards a circular economy.



## AN ECONOMIC PRINCIPLE

As earlier mentioned, the principles of Cradle to Cradle are embraced by Venlo as Economic principle and definitely not only as an environmental or sustainability issue. The circular approach is not only doing good for people and environment, but also about saving and earning money.

Studies by McKinsey and TNO investigated a considerable financial potential when companies and organisations make the transition from a linear approach towards a circular economy.

For example, the potential for Europa is estimated at 350 – 600 billion euro's per year when this transition is made. For the Netherlands, there is a potential of 7,3 billion euro's per year. In other words, it cost money by not doing it.

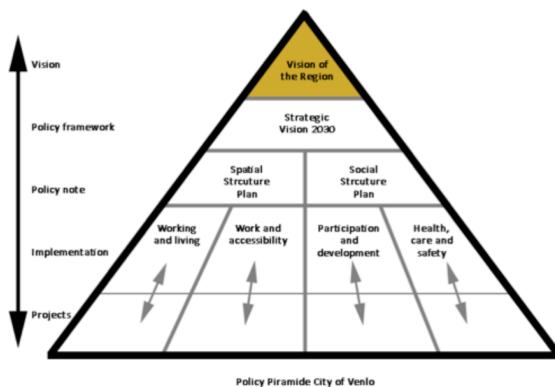
Policy documents, tenders and procurement are important first steps to make this transition possible.

## C2C IN VENLO'S POLICY DOCUMENTS

Following paragraphs will describe the various policy documents in which the city of Venlo has anchored the Cradle to Cradle principles. Each sector will outline what the policy document describes in general and explicitly describe how the Cradle to Cradle principles are embedded. Per document will be visualized how the policy documents are interrelated with each other.

### Master Plan C2C (2009)

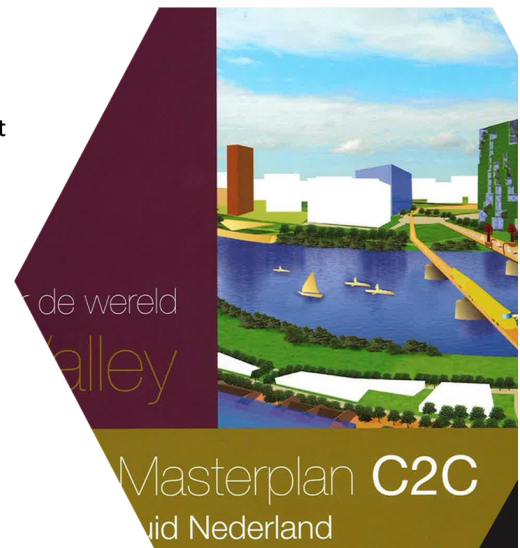
As first step in the embedment of Cradle to Cradle in policy of Venlo, an overall C2C vision is developed for the region of Venlo. The Master Plan C2C outlines how the transition towards Cradle to Cradle and circular economy can be made in the region. The Master Plan C2C indicates who, what, when and how Cradle to Cradle can be implemented in practice. The document also outlines what the costs are, how and by whom these are funded and which party is responsible. In other words, the master plan was an important compass for the C2C journey of Venlo. The master plan C2C can be seen as vision document for further C2C developments with binding agreements, but it mainly gives direction for further developments.



The more than 60-page document entirely focused on the benefits and challenges of Cradle to Cradle for the region and how these can be translated into projects, education and businesses. The document is also specifically written as overall vision for further developments and indicated several projects, such as the new City Hall Venlo. Based on the Master Plan C2C, projects are thereafter developed according to the C2C Principles.

### Venlo Principles

The Venlo Principles are established as part of the Master Plan C2C. Together with the co-founders of Cradle to Cradle, a framework is developed for the further implementation of Cradle to Cradle into practice. The mission is to use the Cradle to Cradle framework as an engine for innovation and economic growth. Therefore, the Venlo Principles are defined as context specific principles for new developments within the region of Venlo. The Venlo Principles are embedded in the Master Plan C2C. To support the implementation of Cradle to Cradle in the region, the following principles are defined:





## VENLO PRINCIPLES

### Innovate, Innovate, Innovate

We see the district of Venlo as a pilot project in which experimentation leads to the development of a new order comprised of man, the economy and ecology, side by side and hand in hand. Our focus is on developing and sharing knowledge, creating economic innovations, stimulating free spirit and cultivating new paths.

### Link location and context

In order to link the city and the district, we secure the authentic values in our identity and anchor our past in the future. Located on the Muese and sleeping in her bed, we take our cue from her unstoppable strength. We are proud of our identity, celebrate our future with passion, and work energetically to realise the future that we envision.

### Manage and appreciate food

We use and process our raw materials in such a way that they are never wasted. We produce in perpetual cycles.

### Enjoy mobility

We design and develop mobility systems that contribute to our economic, ecologic and social well-being – to realise access for everyone.

### Let the sun shine

We enjoy being creative, and just like nature, we use the sun as a perpetual source of energy and inspiration.

### Create clean air, water and soil

We design systems focused on purifying and maintaining our living environment.

### Design with future generations in mind

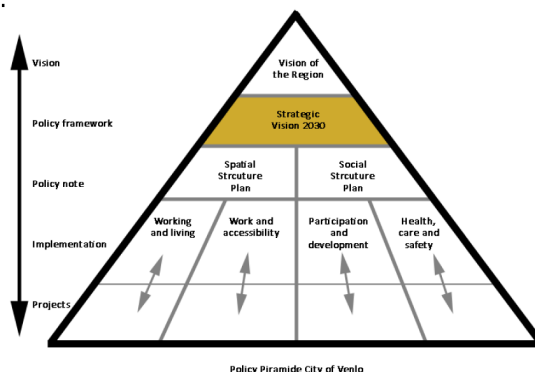
We will not burden our children and grandchildren with responsibility for maintaining or monitoring thoughtlessly designed objects or processes. Our designs have their enjoyment in mind and give colour to their future.

## Strategic Vision 2030 (2010)

The strategic vision outlines the policy framework towards 2030. With the Strategic Vision 2030 a policy framework is given, to enable the municipality of Venlo to weigh future decisions and place new developments within a broader perspective. The Strategic Vision is a further translation of Venlo's vision for new developments. Beside, this document gives direction for decision-making.

The question is how Cradle to Cradle is anchored in the Strategic Vision 2030. Totally in line with Venlo's Vision is C2C and circular thinking an important element of the Strategic Vision 2030. Not only an entire chapter is dedicated on this topic, but C2C is also the thread that links elements such as city branding, the international position of Venlo and the design of the (green) environment.

The C2C approach is explicitly used as an innovative economic concept and Venlo also binds the innovative strength in this field to the region. This policy document is established in 2010.



Policy Piramide City of Venlo

### *Innovative and Excellent City*

The Strategic Vision outlines five theme's that are recognized and identified, which could give a coherent and projected answer on future developments and trends. As already discussed, Cradle to Cradle is seen as one of the important themes for future developments.

Traditionally, the Venlo region is strong in manufacturing, logistics and agribusiness. In addition, industrial activities are remarkable knowledge intensive. The city of Venlo opts for growth, that matches the capabilities and which the citizens will wholeheartedly support to achieve. Venlo considers C2C as an innovative economic concept, based on new business models and the (re)use of materials continuously.

Therefore, Venlo's aims in the Strategic Vision 2030 to take a leading position in the field of Cradle to Cradle of North West Europe in 2030 and expand its frontrunner position. The Strategic Vision 2030 submits focus on: knowledge, innovation and quality.

The Strategic Vision describes that citizens and visitors should be able to recognize and experience the added value of Cradle to Cradle in Venlo. And also, that when C2C is applied in practical examples, this should mean that it is pleasant, healthy and safe to be in Venlo, with a green environment, accessible and with a wide range of Cradle to Cradle best practices.

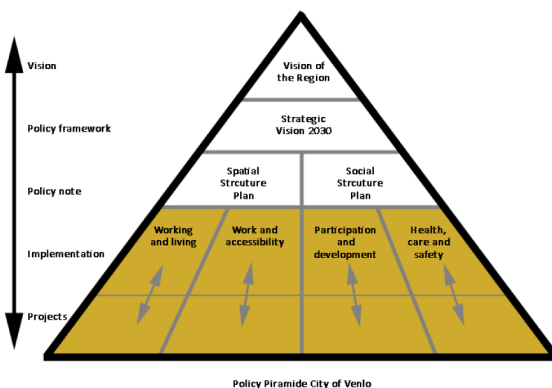
The Cradle to Cradle approach is not a goal on itself in the Strategic Vision 2030, but a distinctive quality aspect of the new and existing businesses. Thereby, innovation (inspired by Cradle to Cradle) is the driver to qualitatively improve existing activities, logistics, agribusiness and ICT.

The Strategic Vision outlines an important framework for further translation of the Cradle to Cradle approach in the municipal organisation, further policies, projects, businesses and education.

### **Purchasing and procurement (2013)**

In 2013, Venlo updated its framework for purchase and procurement. The new framework contributes to the further professionalization of the procurement function of the local government. This policy document describes the framework in which the city of Venlo performs its purchasing activities. Hereby, this document contributes to the ambitions from the strategic vision 2030, in particular the ambitions for sustainable development and Cradle to Cradle. This framework will (in)direct encourage new innovations by (local) suppliers and increase the education level of the population.

The strategic procurement framework is an update and refinement of the Strategic Procurement Framework of 2011. This update is in line with national policy. Procurement and purchasing are the link to the implementation and projects. Based on tenders and procedures, external partners are selected for services or products. The framework for purchase and procurement contains binding elements.



The framework includes Cradle to Cradle and Sustainability. This means, that the principles of C2C should be part of all purchasing and procurements in Venlo. Thus, companies and organizations that demonstrate how their product or service contributes





to the C2C ambitions of the city have an advantage. In other words, by asking the right questions to the market, Venlo encourages innovation in line with a circular economy.

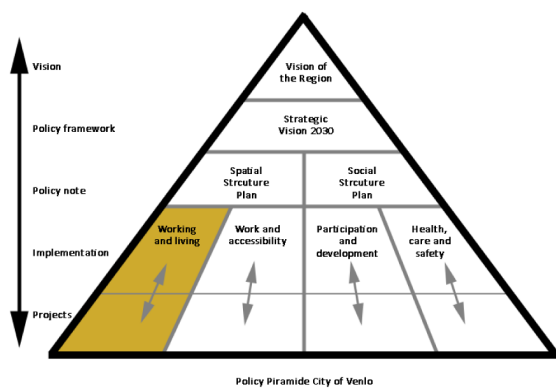
The strategic procurement framework makes clear that in recent years the attention to sustainable procurement and the encouragement of innovation is growing. Venlo wants to play a role model towards residents and businesses. Local governments strive to apply sustainability in 100% of their procurements and tenders. Totally in line with the strategic vision 2030, sustainability and C2C is part of procurement and purchasing. In a growing number of tenders, a Cradle to Cradle specialist is part of the assessment Committee.

Because of this policy, Venlo encourages a growing number of organisations and companies to innovate. For every project is investigated to what extend the C2C principles can be asked to the market in the tender. Anchoring Cradle to Cradle principles in tenders resulted not only in benefits for people and the environment, but also in economic benefits. The last paragraphs of this document will outline the results.

**Notice of External Appearance (2013)**

The notice of external appearance assesses the quality and external appearance of buildings. Every new initiative has to fulfil the requirements of this notice. In other words, the development will not take place if it does not fulfil the requirements of external appearance. This document contains binding criteria.

The notice ensures that there is no proliferation of architecture and also tests whether buildings meet the prevailing criteria at a particular location. This prevents that building initiatives does not fit within its surroundings or does not meet the applicable quality criteria.



Totally in line with the Strategic Vision and Spatial Structure Plan of Venlo, Cradle to Cradle is an important component in the assessment of the quality and external appearance of buildings in Venlo. This notice is an update of the former policy document.

As said, the notice outlines a framework to assess the quality and appearance of buildings. All initiatives should fulfil the ‘reasonable demands’. A commission decides if a building meets the reasonable demands, and takes the decision whether or not an initiative grant a licence. The assessment is carried out on the basis of the following reasonable demands:

- Relation between shape, function and construction;
- Relation between building and environment;
- Meaning of shapes in the socio-cultural context;
- Balance between brightness and complexity;
- Scale and size ratio;
- Responsible use of materials, details, colour and light;

The first six demands are binding criteria and can be complemented with taking the Cradle to Cradle principles into account. Concepts that may be important for Cradle to Cradle in relation to the notice of external appearance are:

- Demountable, adaptable and flexible;
- Healthy materials;

- Other dimensions and proportions in facades and roofs;
- Optimal orientation of roofs and facades;
- Added value for people and the environment;
- The contribution to the Cradle to Cradle ambitions of Venlo.

All above-mentioned themes are aspects that will be assessed. The additional features and qualities of the project increasingly dominate design. Think for example of the user of solar panels, green facades and –roofs and Cradle to Cradle certified materials. This requires another design approach for both designers as assessor.

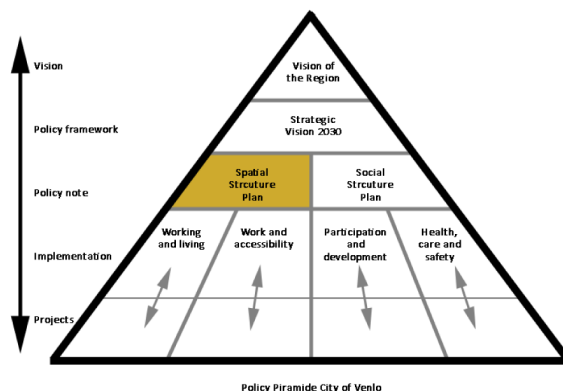


Relation C2C and reasonable demands	Reasonable demands					
C2C theme's	Relation between shape, function and construction;	Relation between building and environment;	Meaning of shapes in the socio-cultural context	Balance between brightness and complexity	Scale and size ratio	Responsible use of materials, details, colour and light
Demountable, adaptable and flexible	X			X	X	
Healthy materials						X
Other dimensions and proportions in facades and roofs	X			X	X	
Optimal orientation of roofs and facades	X					
Added value for people and the environment	X	X			X	
The contribution to the Cradle to Cradle ambitions of Venlo	X	X	X	X	X	X



### Spatial Structure Plans (2014)

Subsequently is Cradle to Cradle included in the spatial structure plans. The spatial structure plans outlines the spatial policy for the entire municipality of Venlo, for both urban and rural areas. It describes broadly how Venlo will organize, build and use its environment in the coming years. In other words, this document forms the basis for spatial decision making in the Venlo region. The spatial structure plan can be seen as boundaries and guidelines that help to reach the future point on the horizon. In short, the structural spatial plan is an invitation to citizens and entrepreneurs with good ideas. The ambitions and objectives are the starting point, rather than rules and boundaries. The core task of the city: *'Venlo as a versatile city with characteristic villages in a green landscape'*.



# REGIO VENLO C2C in Venlo

Subsequently, the spatial structure plan starts with three basic principles. These principles are points of interest, which apply for each spatial initiative. The principles are simple and always and everywhere applicable. They apply to everyone, including the municipal organisation itself. If a new initiative takes the following principles into account, this means that a spatial initiative is considered as more likely when:

- It uses the principles of Cradle to Cradle as a starting point;
- The questions is asked what the involvement of (German) regional municipalities can do;
- It enjoys self-organized support.

#### *Cradle to Cradle as starting point:*

Raw materials and fossil fuels become scarce and expensive. Switching to new (sustainable) economic models is therefore essential. Venlo underlines spatial quality as future value. Besides, Venlo emphasizes the Cradle to Cradle principles as an innovative economic concept that is based on the continuous reuse of materials, the use of clean energy, -air, -water and -soil. Venlo decided to invest to maintain a leading position in C2C. The municipality itself wants to give the good example, and thus also the task of a (local) government to encourage the local citizens and businesses of the added value for people, planet and profit. Not only by the practical application of these principles, but also by the development of incentive instruments. The ultimate goal is Cradle to Cradle on the scale of a region. Not only for new developments, but also for renovations and rehabilitations. If a spatial initiative considers the Cradle to Cradle principles, then the initiative will be considered as more likely.

#### **Coalition agreement (2014)**

C2C is also explicitly included in the new coalition agreement. In multiparty democracies, a coalition agreement is an agreement between the parties that form the coalition. It codifies the most important goals and objectives for the period of the next 4 years and is written by the party leaders.

The agreement in Venlo is determined in spring 2014. Four political parties have joined forces to form the executive committee of Venlo with a solid majority. Four parties that aspire a steady course. Partly by continuing the course of recent years, otherwise by giving an impulse that justice the election results. Together these parties form a majority of 26 of 39 seats in the city council of Venlo.

C2C and sustainability are the major carriers on which opportunities for Venlo are created. The coalition will strengthen the support within the society. Sustainability and innovation are proven success factors for strong cities. Against this background, the coalition expects many of new developments in the next term. They agreed to do their utmost to facilitate the major step forward.

Cradle to Cradle is part of the portfolio of the aldermen of Finance and Organization. The portfolio also includes two Cradle to Cradle inspired building projects within Venlo, both City Hall Venlo and area development Barrack Site FHK. In addition, the one of aldermen is member of the board of C2C ExpoLAB.

## WHAT'S NEXT?

Above-mentioned policy documents are an important step in the right direction. However, further steps can be made. It is a step-by-step process of improvement. At this moment, the municipality of Venlo considers which opportunities there are to anchor C2C in other policy domains.

One of these opportunities is the zoning plan. The zoning plan describes the 'destiny' of an area. The zoning plan of Venlo has to be revised in the next years. As one of the few pilot cities in the Netherlands, Venlo started in 2014 with a working group to investigate the possibilities of C2C and circular economy in the zoning plans. Subsequently, the starting point will be presented to the city council. A roadmap towards 2018 has to make clear the possibilities of the circular approach in zoning plans for Venlo, but also for other municipalities in the Netherlands and abroad.

## THE RESULTS

This paragraph will give a rationale to showcase the potential effects that C2C inspired policies can have. According to Venlo's ambitions, this region should be seen as international C2C-Valley of the world in 2030. By anchor the principles of Cradle to Cradle and circular economy in policy, this resulted in the several results such as:

- Anchoring the circular principles in projects results in an positive business case, such as:
  - o Earning 16,8 mln euro's in 40 years with a return on investment of 12,5%;
  - o A guaranteed deposit fee of 18% for purchased office furniture;
  - o 31% saving for the office furniture of C2C ExpoLAB with operational lease, compared to purchasing;
  - o Agreements with suppliers for guaranteed take-back of their own products, including a deposit;
- Cradle to Cradle as part of procurement and tenders, such as the selection of:
  - ...Architect and advisors design team newly built City Hall Venlo;
  - ...Building contractor newly built City Hall Venlo;
  - ...Suppliers of LED-lightning parking lots;
  - ...Suppliers of furniture for several offices;
  - ...Supplier toilet paper for municipal organisation;
  - ...Developers websites;
  - ...Advisor marketing & communication;
  - ...Design team project sport complex Egerbos.
- Cradle to Cradle as binding starting point for several building developments;
- Because of the notice of external appearance projects contribute to the C2C-ambitions of the city of Venlo, e.g. by cleaning air, generating energy of make use of C2C Certified materials;
- A private enterprise initiated a development of 55 C2C inspired houses, encouraged by the C2C principles in the spatial structure plan;
- Cradle to Cradle as part of education;
- By the C2C ambitions in the Strategic Vision 2030, (local) companies started implementing the C2C-principles within their business;
- Companies are founded in the Venlo region, because of the C2C frontrunner position;
- Employees of companies that work with C2C-principles, ware enthusiastic ambassadors of Cradle to Cradle, the company and the region;
- More high educated people are linked to the region of Venlo;

## RECOMMENDATIONS

This case study showcased Venlo's experience and approach. In order to suggest recommendations to other municipalities or countries, this paragraph will give some recommendations. Some key lessons learned in the journey of Venlo are:

- Link policy documents with the overall (inter)national and local policy;
- New policy has to fit in a multiannual strategy;
- Provide insight in the financial benefits;
- Enthuse stakeholders formal and informal;
- Create a good mindset about the principles of Cradle to Cradle and circular economy by important stakeholders;
- Get commitment of the city council, management and staff;
- Create courage and vision on political and organizational level, as both in your organization;
- Involve business and education from the beginning, to level expectations and possibilities upfront;
- Communicate the added value of Cradle to Cradle and circular economy to businesses, education and citizens;

**Please visit the C2C-Centre website for more experiences and knowledge,  
[www.c2c-centre.com](http://www.c2c-centre.com)**

