

NORTH HOLLAND CIRCULAR

Design & Development:
Provincie Noord Holland

Year:
ongoing

Location:
Noord Holland, The Netherlands

More info:
www.noord-holland.nl

Scales:
Region

Resources:
Technical Materials, Secondary
Materials, Water, Land and Soil,
Critical Materials

Design Approaches:
Regenerative Design, Design for
Longevity

R-Strategies:
Refuse, Reuse, Refurbish,
Recycle, Recover

Aspects:
Management, Economy,
Stakeholders, Resource flows



In line with the European Green Deal, the Dutch Province of North Holland recognises the importance of transitioning to a competitive circular economy and striving for it. Located in the northern part of the Netherlands, the province of North Holland is adjacent to South Holland, Utrecht and the provinces of Friesland. It is currently the second most populous province in the Netherlands, after South Holland, with a population of 2,607,000. However, the rising population growth and how Dutch society produces, consumes,

and then often destroys raw materials is depleting significant resources and territories. This has major environmental consequences. Not only that, but the entire economic system will halt if action is not taken. Therefore, in 2017, the province of North Holland and 180 other parties agreed that the Netherlands would be fully circular by 2050. The agreement sets the ambition: North Holland will be converted entirely to a circular economy by 2050, and by 2030, there will be a 50% reduction in primary raw materials. The plan foresaw

the development of intelligent strategies and policies to increase the reuse of resources within company conglomerates and consequently decrease the demand for virgin raw materials, while saving energy and generating new types of jobs.

1. Conceptualization of Circularity

What is the circular idea, theory and approach behind this project? What is the aim and purpose of it?

The Province of North Holland is striving for a circular economy to prepare the province for a sustainable future while creating a healthy economic and liveable climate. By 2030, the province aims to reduce half the mining of new raw materials and apply innovative strategies that help increase the reuse of resources within company conglomerates. At the heart of this ambition is the idea that the circular concept can contribute to the national climate objectives set for 2030 and 2050 and contribute to a liveable and healthy living environment. For instance, secondary raw material use should reduce the anthropocentric pressure on the environment. In addition, making our economy circular significantly contributes to CO2 reduction. On the one hand, keeping raw materials, products and materials in the chain for as long as possible, the CO2 emissions caused by, among other things, mining and production are limited, and on the other hand, a reduction takes place by replacing fossil with non-fossil raw materials. In line with the national vision, the Action Agenda for the Circular Economy 2021-2025 define the following as pillars at the core of their vision:

- The circular economy revolves around value creation and value retention. Therefore, the North Holland province aims to move towards an awareness of alternative values for products and goods that include economic, social and environmental aspects. Understanding alternative importance is related to developing sustainable behaviour to keep products and materials in the chain for as long as possible.
- The use of non-virgin raw materials is essential in the circular economy. Therefore, the province aims to promote the use of secondary raw material, without

compromising the quality. This principle should be cross-sectorial, cross-phase (from the design to development phases) and cross-scale.

- Defining the optimal scale in which to develop circular strategies. Activities are context dependent. Different bottlenecks and opportunities are taken into consideration. A good point of departure is working with what is available locally; as for scale, the aim must be "as small as possible and as large as needed".
- Cooperation among institutions: public authorities, the business community, residents, knowledge institutions and others. Through time and by implementing intersectoral collaboration, the demand for virgin resources will decrease, energy savings will be achieved, and jobs will be created. The province itself is also taking the lead by purchasing and contracting in a circular way as much as possible. For example, circular applications are the starting point in constructing, managing and maintaining provincial infrastructure.

2. The Sectoral Dimension

On which economic areas is the circularity focusing? What kind of system, supply chain, and flows is the project addressing?

The Province of North Holland focuses mainly on the increase in the circular use of raw materials and reducing the use of non-renewable raw materials in chains in textiles, biomass & food, plastics, water and construction sectors. A particular focus is reserved for the construction sector because of an increasing housing demand. Therefore, three strategies have been promoted to achieve circularity in the construction sector. The activation of a circular market through circular tenders. By setting circular products or using raw materials circularly as a condition, companies are challenged to develop circular applications and solutions. This increases the market demand for circular products

and processes. Due to this increased demand, companies can grow faster, making circular solutions profitable. Secondly, the North Holland province stimulates the transition to a circular economy by opting for circular products and applications and opting for circular

To learn more about the six dimensions framework visit www.circularityforeducators.com

alternatives. Lastly, the Province contributes to the transition by making and managing its provincial infrastructure in a circular way. Connecting with the ambition of developing a circular construction sector is the ambition to develop the wastewater chain as circular as possible, partly because it benefits the water quality and increases the possibilities for reuse of the WWTP effluent. Moreover, there is a link with the EU regulation on minimum requirements for water reuse. This regulation was published in 2020 and entered into force in 2023. The Province of North Holland promotes the reuse of (treated) urban wastewater for agricultural applications. In addition, it focuses on the harmonization of requirements with a view on the internal market for the sale of products grown with recycled water. During the planning period of the Action Agenda for Circular Economy (2021-2025), the Province subsidizes integrated third-party projects that link water quality objectives to other policy objectives, including those for the circular economy.

In parallel to reducing non-renewable raw materials and circular wastewater strategies, the Province of North Holland also focuses on biobased materials for products and buildings. This concerns both the use and the production of biobased raw materials. Increasing knowledge about usage stimulates better production. This should also lead to a decrease in the demand for linear alternatives. The local production of sustainable biobased materials is necessary for developing new materials and products and their application on a larger scale. Local production also contributes to reducing CO2 emissions by limiting transport. Knowledge is needed to achieve application on a larger scale.

The government's commitment to the provincial area focuses on connecting municipalities by sharing knowledge, promoting cooperation and establishing a connection between national efforts and regional practice. The province joins the government, among other things, by collaborating with the "Versnellingshuis Nederland circulair!" (Accelerator Netherlands Circular) and by joining the Circular Building City Deal.

3. Sustainability Framework & Transition Concepts

What is the context of the project? What is the socio-economic, legal, and political structure established to develop the project?

To accelerate the transition in the short term and to stimulate system change in the long term, the province of North Holland adopted various roles and instruments such as: 'North Holland Environmental Vision 2050 balance between economic growth and quality of life'. This framework was developed in 2017 and confirmed with the new 'Action Agenda for Circular Economy' of the province for the years 2021-2025, as well as the North Sea Commission Task Force 'Towards a Circular Economy'. In particular, the 'Action Agenda for Circular Economy' indicates North Holland's strategy and route to realize its ambitions for 2030 and 2050. The Action Agenda runs from 2021 to 2025. Setting out a plan for these five years provides partners, such as companies and local authorities, with clarity and certainty for a more extended period about the direction and possibilities offered by the province. To contribute to the circular transition, the province defines specific actions:

- Increasing knowledge and supporting SMEs and companies in capitalizing on the opportunities of the circular economy by providing companies with expertise and information, networking activities and offering training courses such as *Circular Business Design Tracks (CIRCO tracks)*, in which companies develop a strategy to transition to circular business operations and by participating at national and international events like *Circular Construction City Deal*.
- Developing spatial exploration of circular work locations, which will also include the spatial possibilities for resource hubs and enabling circular entrepreneurship, in collaboration with other programmes, such as the North Sea Canal Area.
- Developing a subsidy scheme to encourage the implementation of projects in which several companies work together on a regional or supra-regional scale to form circular raw materials or production chains.
- Increasing knowledge about waste flows in North Holland and understanding

bottlenecks for closing loops of resources, from a research perspective and not only from a policy one.

4. The Social Dimension

Is this project bottom-up or top-down in its approach, and what role do local inhabitants, stakeholders, and circular innovators play? Does it have a flagship / pioneering character for others? Does this project view people as consumers, users, or pro-sumers in the context of a circular economy? Does it have a pioneering role, with impact beyond its region?

The Action Agenda of the Province of North Holland focuses on two distinctive social dimensions:

Involvement of business stakeholder and companies. The province is showing what opportunities and possibilities circular entrepreneurship offers. By offering circular leaders and other circular initiatives a platform, the province encourages and inspires companies to take steps themselves. The province aims to reach SMEs and companies that have the ambition to get started with the transition, but do not yet know how. In communication, the province mainly focuses on SMEs and companies, because this is where the greatest impact can be made. The province will show what opportunities circular entrepreneurship offers and how the instruments, such as GO!-NH and the CIRCO tracks, of the province can support this.

To reach the North Holland companies, the province is committed to cooperation with industry associations, local and regional business associations. In their communication, they also connect with these existing networks and platforms, such as *Amsterdam Smart City*.

Residents of North Holland also play an important role in the transition. As consumers, residents can opt for circular facilities, products and services and thus accelerate the transition. Increasing awareness of the importance of the transition is therefore necessary. To support organizations that contribute to the awareness and behavioral change of residents of North Holland, the province has set up the *Implementation Regulation Small-Scale Activities Circular Economy North*

Holland. Foundations and associations can receive a subsidy for organizing activities aimed at raising awareness of the importance of a circular economy.

5. The Territorial & Spatial Dimension

What is the scale of the project? Are urban planning policies design strategies cross scale? If yes, how and which flows are involved? What is the role of space and territory in this circular project?

The province's framework to achieve circularity focuses on the regional scale. Municipalities and regions can play a major role in accelerating the transition by applying circular principles and circular procurement in performing their tasks. However different municipalities and provinces are approximatively active separately. To strengthen cooperation, the province, in its role as partner, has also opted for a regional approach for the whole of North Holland, consisting of:

- Organizing administrative and official dialogue tables.
- Drawing up implementation regulations for regional circular strategies.
- Setting up a knowledge program for all North Holland municipalities. In the knowledge program for municipalities and regions, different local administrative bodies are supported with knowledge and action perspectives to get started with the circular economy.

6. Assessment & Monitoring

How are strategies and policies monitored and evaluated? How is the qualitative and quantitative success of a project evaluated?

The province of North Holland decided to adopt a monitoring system to gain insight into the development of the transition and the achievement of the stated ambition for 2030 and 2050. This system is being developed by the Netherlands Environmental Assessment Agency (PBL) and published in 2021 within the Integrated Circular Economy Report (ICER). The focus of the monitoring system is the different circular actions and topics previously

explored, such as raw material use, waste production, knowledge development, products, and companies. The ICER sets a national standard. Until today, it has mainly assessed data at the national level. A regional translation can also be made, supplemented with specific regional registrations. Parallel to this, the Province of North Holland and the Dutch government are working on elaborating and concretizing the national targets for 2030 and 2050. To assess the effectiveness of implementing the Action Agenda for the Circular Economy 2021-2025, an interim policy evaluation was carried out in 2023, to be published in 2024. The assessment will take on a learning form. The aim is to visualize the results and experiences with the actions carried out, identify learning points, and eventually modify the activities. The evaluation is carried out quantitatively where possible. Parameters are needed to measure circularity to monitor and evaluate the effectiveness of the implemented measures. The platform CB'23 (Circular Construction 2023) has developed the 'Measurement of Circularity' guideline for circular infrastructure for this purpose. This platform connects parties in civil engineering and residential and non-residential construction and strives for national agreements on circular construction before 2023.

The method aligns with instruments such as the environmental life cycle assessment (LCA). This instrument calculates the impact of a product or activity on the environment. LCA looks at the entire life cycle of a product or activity. From the extraction of raw materials through production and (re) use to waste processing. The outcome of an LCA study is an environmental profile: a score list with environmental effects. In addition to the indicators, a report on the adaptive capacity is also part of the method. Adaptive capacity is the extent to which a structure or product can meet changing needs. By applying the above guidelines, the province can show the results achieved. This will be included in the monitoring and evaluation plan to be drawn up.

Colophon

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