**Article title**

Spatial parameters for circular hubs - A case study of the building industry in the Netherlands

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**Content of this document**

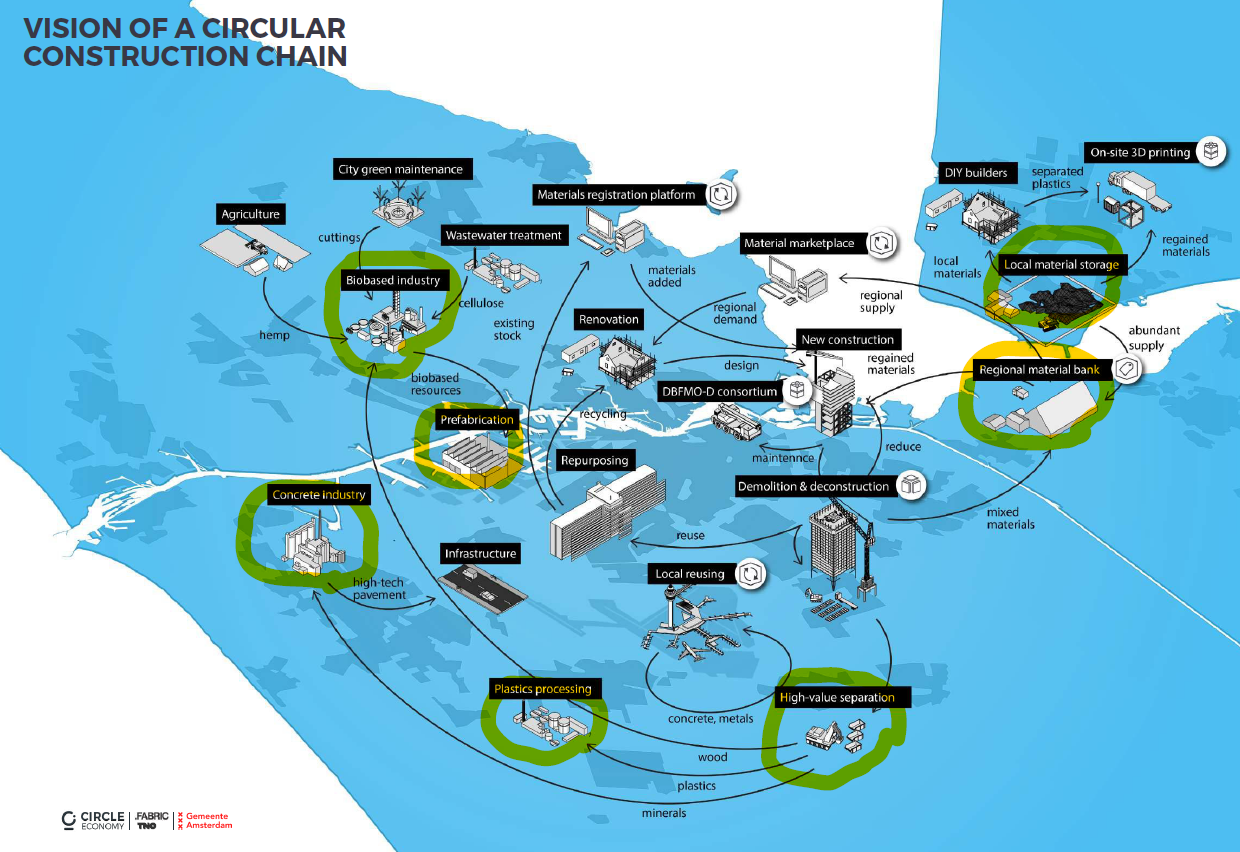
This document contains the interview questions used for the semi-structured interviews with organizations operating circular construction hubs. This document was sent before each interview to the interviewee.

**Location requirements for circular hubs**

Interview with <organization name>

# **Interview introduction**

Thank you for agreeing to participate in this interview. I’m Tanya, a PhD candidate at TU Delft in the department of Urbanism. My research project aims to predict the future locations of circular hubs in the Netherlands for the building industry. Circular hubs are organizations that turn waste into new resources - they can be material banks that collect and store reusable construction waste, logistics hubs that distribute secondary resources to construction sites, or manufacturers that use waste to produce new building products.



Vision of a circular construction chain as shown in the [Circular Amsterdam Report](https://www.circle-economy.com/resources/developing-a-roadmap-for-the-first-circular-city-amsterdam)

by Circular Economy, TNO, and Gemeente Amsterdam

The purpose of this interview is to find out what circular hubs of the future might take into account when choosing a location for a new facility, and the details of these spatial requirements. With these requirements, we can use spatial data analysis to predict future locations of circular hubs. This interview comes in three parts:

* **Introduction**: Here, we will discuss your role in your organization, activities of your organization.
* **Your perspective on picking a facility location**: Here, we will discuss what your organization takes into account when picking a location for a facility.
* **Spatial requirements for facility location**: Here, we will dive deep into factors that your organization could consider when choosing a location, and come up with specific spatial requirements that you would find suitable and realistic.

Before we start, I would like to ask for permission for our interview to be recorded.

# **Questions**

## 

## **Functions, operations**

* How many facilities does your organization have in the Netherlands, and where are they located?
* How much material does your facility process per year (or per month)?
* How big is your facility in square meters?
* Which of the following activities does your organization participate in?
  + Storage
  + (Reverse) logistics
  + Waste collection
  + Waste processing
  + Manufacturing
  + Physical showroom
  + Research and development
  + Match-making
  + Are there any activities of your organizations that haven’t been listed above?

## **Interviewee’s location requirements**

* What do you like and dislike about the current location of your facility?
* If you got a chance to choose a location for your facility again, what requirements would you consider, and why?

## **Operations requirements**

* Suppliers
  + Who are your suppliers and where are they usually located?
  + How far are you willing to travel to suppliers? How far do you travel on average?
* Customers
  + Who are your customers and where are they usually located?
  + How far are you willing to travel to customers ? How far do you travel on average?
* Are there any other partners for your company’s operations that you would like to mention?
* Is it more important for your facility to be closer to suppliers or customers?
* Do you think these requirements could change in the future?

## **Transportation requirements**

* What is the main mode of transportation would you use?
  + Is it road, water, rail, or other?
* What scale of accessibility would you be looking for? Should the location be accessible to most locations in your…
  + Neighborhood
  + City
  + Province
  + Country
  + Continent
  + … or beyond?
* Do you think these requirements could change in the future?

## **Land requirements**

Can you rank the importance of the factors below, and explain why?

* Land price
* Opportunity to expand in the local area
* Environmental permit or land use restrictions
* Other land-related factors you’d like to mention?

Do you think these requirements could change in the future?

## **Business requirements**

Can you rank the importance of the factors below, and explain why?

* Amount of skilled labor in the neighborhood
* Amount of other companies in the neighborhood
* Amount of unskilled labor in the neighborhood
* Other business-related factors you’d like to mention?

Do you think these requirements could change in the future?

## **Ranking the requirements**

* Operations factors - close to suppliers, customers
* Transportation factors - accessibility to road/water/rail network
* Business factors - skilled labor, companies in the neighborhood
* Land factors - land use, price, permits

## **Closing**

* Are there any spatial requirements we haven’t mentioned in this interview?
* Do you know anyone else who could participate in this interview?
* Is there anything else you would like to discuss?