Project by:

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**What is an UCC to us?**

We understood the benefits of having a UCC as changing the way we handle logistics in a city. By creating a common middle hand between heavy vehicles handling waste and deliveries, and the urban fabric, you can create a safer street environment with cleaner air. You also open up the possibility for building a denser city. Another benefit of combining waste handling and delivery of goods is the use of reversed logistics, meaning that the vehicles never travel empty.

We illustrated this situation in the diagrams below, showing the effects of the traffic in the icons. In the traditional way you have noise disturbances, traffic jams, emissions and accidents.

All of these factors can be decreased by adding a UCC in a close relation with the neighbourhood, with a possibility of positive effects like calmer streets, safer for kids to play and a better air quality.

**From UCC to CCC**

The assignment was to create a UCC which we saw as something innovative from a sustainability point of view, since it’s using reversed logistics as a default process. But why not take this will to a new level?

We looked at waste treatment in the city in general and saw this to be a linear process where waste is collected, transported to be handled outside of the city and then burned for energy.

We saw a potential in the continuous streams of materials to push the change towards a more circular economy by looking for ways to create closed loops that tackle the problem of waste and linear economy. Maybe waste materials in Gothenburg can be used for something else besides energy production?

During a study visit to Amsterdam we visited a company called ECOR* that creates an alternative material to wood and paper-based materials by using waste from the paper industry. The products produced can then be used for different purposes ranging from a business card to insulation or structural elements in construction. This visit was a great inspiration for us and gave us the idea to see waste as resource.

It also inspired us to investigate what else can be circular when we started to develop our added program, and made us change the title from Urban Consolidation Centre to Circular Consolidation Centre.

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*Ecor https://ecorglobal.com/
**Program**

We begun by looking at what is in our surroundings in Gothenburg, the diagram above shows what we found.

First we will have a new community in Frihamnen that will deal with the urban challenge of how to live in a more sustainable way within a city. Then we have a world that needs to deal with our waste in new ways in the future. And in Gothenburg, we have an existing network through which people can find ways to share resources, Smarta kartan, which is a collaboration between Göteborgs Stad and Kollaborativ ekonomi. We thought it would be useful for us and for the network to be connected.

These factors became the core for our added program. We had the CCC as a given part, and wanted to work with something that complemented that operation.

**ReGeneroCity**

ReGeneroCity comes from the words Re:generative, Generous, and City. Regenerative since we are working with supporting circular economy thinking. Generous because we want to be in a community where people give and share resources. And City since we are working in the central parts of Gothenburg.

ReGeneroCity is a platform that builds upon the already existing networks of sharing in Gothenburg, and uses the CCC as the heart of the project. It is supported by a research center working with closing the life cycles of materials. A market selling second hand and circular products in different scales. And an extended home containing workshops for repairing things, possibility to borrow spaces for events and spaces for just hanging out. Simply a place for people to share skills, knowledge and enjoy living together.
Site plan

The character of the site today is industrialized with marine features, which we wanted to incorporate and play with in our design. To move the containers from the CCC to the boat in the harbour we decided to go above the board walk by using a traverse. We wanted to strengthen this movement and the activity of the CCC by making the traverse into an important design element. By using an industrial appearance we try to connect to the history of the harbour and the other existing cranes.

Another strong design element is our roof. We see it as a fifth elevation of our project since it is visible from the new bridge. It’s covered by a pattern of photo voltaic cells and skylights. This makes it both aesthetically appealing and with a sustainable use. It is also used for harvesting rain water for flushing toilets in the buildings.

In our project we only use the lots connected to the water front. We propose that the third lot is developed in another project, preferably as a residential building in approximately five stories, and that the water front is kept as a public park.

In the future plans of Frihamnen there is ideas for a “green path”, which we decided to connect to in our site by an urban park going from northeast to southwest on the site.
Section A-A 1:400
A long section showing the journey of a container from the CCC to the waiting boat in the harbour. To ensure safety for the public during this operation there is a possibility to close the board walk under the crane.
Inside the structure of the crane we placed the research facilities and co-working spaces. Over the water the crane becomes a winter garden containing glass boxes for meetings and a café open for the public.

Section B-B 1:300
Cross section showing the relation between the different functions in our project. From left to right: board walk, market, CCC with research and co-working above, filter and the facade of the reception building.
To provide the CCC and the market with proper light without using too much artificial light sources we have a pattern of skylights bringing daylight into the buildings.
Inspiration for the Market

During our research of circularity within Gothenburg we took an interest in places like Alelyckan that sells reused and recycled products such as building components and up cycled jewellery. They also provide two second hand shops on the premises with their products. The possibility of gathering materials that can be resold comes from having a filter that helps private persons sort their bulky waste in a proper way.

We thought this was a great initiative since it reduces waste, creates awareness and generates a sustainable income. Alelyckan has been one of our main sources of inspiration which has influenced our program. The difference between us is that our project has a more central location in close contact with public transportation. This enables the stores to be a strong alternative to regular shopping done in the city centre close to the site.

To run a market requires a lot of things to sell and a continuous flow of these products. Below is a graph showing the amount of materials handed in to different municipalities all over Sweden. The trend we can see is that more and more people are giving away textiles and "loppis"-utensils such as home decor, kitchen appliances etc.

What is not following the trend is the handing in of building materials. Since the building industry is one of the major waste producers in the world we think this category should be addressed more on in the future.

That’s why we chose to focus on building materials in our project, and have a part of the proposed market displaying reused building materials. Due to the projects central location in the city we imagine costumers to order the material they need directly from the shop. The products ordered we then deliver using either the CCC reversed logistics or a common delivery system depending on where the costumer lives.

Where do our products come from?

We imagine that a major part of our collected products will be these kind of things. To collect them we rely on private persons handing in their unwanted, but functioning things. We also imagine a network of CCC’s in every district of Gothenburg. These will partly have the same functions as our CCC, but have a stronger focus on collecting rather than selling. Their surplus of products can then be sent to our CCC, which will work as the central node in the network.