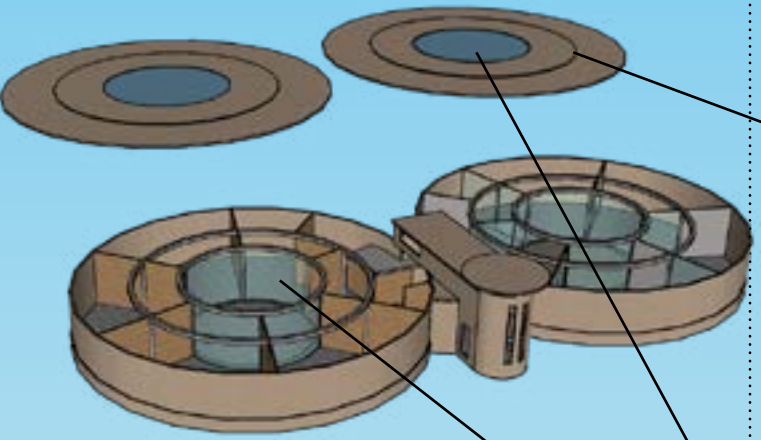
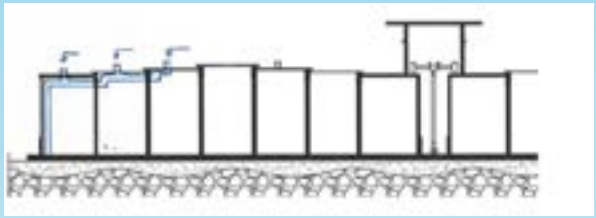
Here is an example of some of the design solutions and best functions for this project. Since the project is in a very early stage, the client will receive design options with pros and cons to make an educated choice when the project enters a new stage.

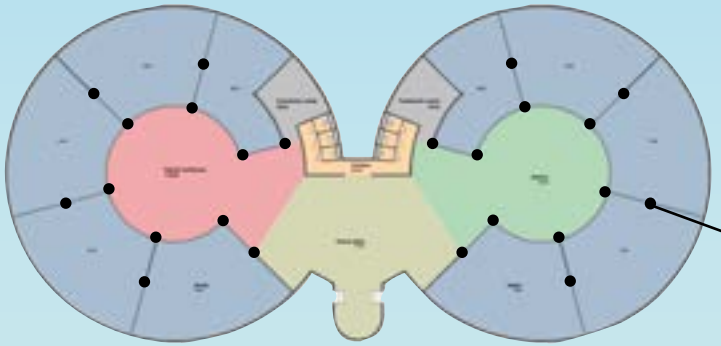


The function shown here is a shared office. A shared office is a flexible workspace for small businesses, starters, flexworkers and people who need an office for a short time. A shared office provides opportunity for experts to work together, to rent a fixed workplace or just a desk for an hour. This function stimulates innovation, knowledge and tech.

The Aruban weather has low frequency in rain showers, but high precipitation per shower. This makes rain water collection difficult because regular pipes will not be sufficient in collecting this amout of water.
The design solution in this concept uses a UV-collectionsystem. The water gets cleared from the roof by suction through openings in the roof.



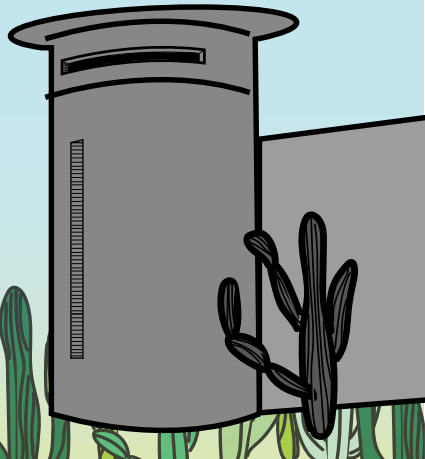
Creating diffused light through a glass roof, with some sun protection in the form of integrated pv-cells. The studio receives indirect light through the glass wall. This creates an indirect, diffused light perfect for creating art, etc.



Reduction from 32 to 12 supporting columns (per tank). A relatively low cost adjustment to create a more open plan design giving this function more space as well as flexibility for other (more relevant) functions in the future

Four historic watertanks in Kibaima, Aruba

These four watertanks were build to influence the waterpressure in the water supply system on Aruba. Now, almost a hundred years later, this building will represent a circular Aruba. These magnificent tanks symbolize the connection between the history and future of Aruba.



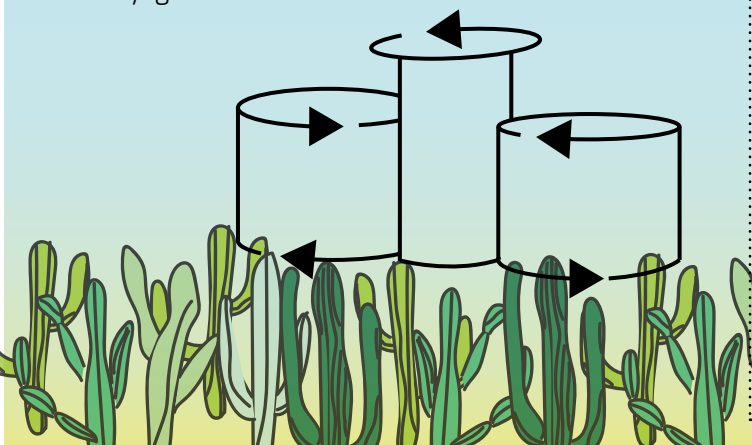
What makes this project circular?

Repurposing a hundred-year-old building is an aqusition to the island and the climate:
- it creates new space for new initiatives on the island
- there is no need to build a new building, which saves time, money and negative impact on the environment
- a piece of Aruban history is preserved and maintained

In this transformation project there are a few important notes:
- maintaining the culture and history of the building (the monument regulation of Aruba)
- finding the appropriate function which positively affects the future of Aruba
- finding a function that fits the specific building

What makes the building interesting?

Almost a hundred years ago, these four tanks were built on the 50 meter high hill Kibaima in the middle of the island of Aruba. The four tanks are divided in two types of design. The two types are connected by utility buildings. Type 1 has a layered, flat roof whereas type two has a dome roof. The flat roof is supported by 32 columns. The dome roof is selfsupporting. Both types and the utility buildings are fully made of reinforced concrete. In both tanks is little to no daylight.



What is the monument regulation of Aruba?

The building has a monumental status. On the one hand this means that government support is available, on the other hand this means that no visible adjustments may be made to the buildings' original design. From the public road the building must appear in its original state.

What innovative architectural adjustmenst are possible?

Because of the specifics of the building, it will likely not fit most functions. With innovative design solutions, the building will fit more function demands and possibly be able to host more functions. These design solutions are more innovative because they have to be both circular/sustainable and fit the monuments regulation.
These design solutions were made for the aspects daylight, (passive) climate control, construction, water (capture, reuse, storage) and (green) energy. With these building modifications, there is a greater chance that the building will better suit the functional requirement and also comply with the monument regulations. The research into the possible building modifications to the above aspects, was carried out first to determine what the building options are. This provided insights into whether certain functions that demand a view or a free (columnless) space are at all possible with the appropriate building adjustments.

What selection-criteria were used for finding the most fitting function?

The most fitting function is understood to mean useful and relevant for the island. A function that is unuseful and irrelevant, would not be financially viable and in the long term cause for vacancy. Vacancy of the monument will again cause dacay of this piece of history. The usefulness and viability of a collection of functions were determined through interviews with experts on the island and an analysis of the island demand. From the expert-interviews the next missionpoints were concluded:

Stimulating growth of domestic production and trade of (tangible) goods

Stimulating growth of domestic production, trade and consumption of food

Stimulating innovation, knowledge and tech