

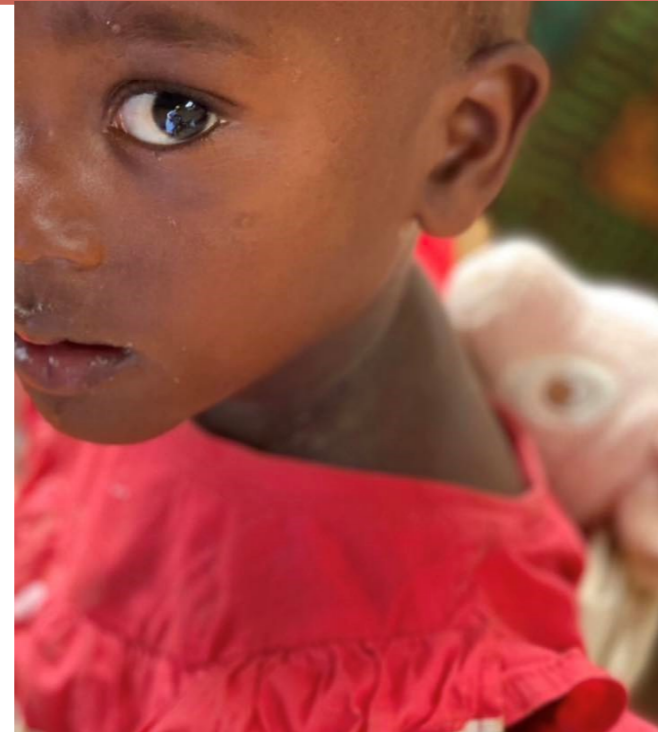


**IDEA**

Nyumba Mpya means "new home" in the local Swahili language. For us, the entire project is not limited to the walls and roof, but above all, it is a visual description of a way of transferring the idea of a safe and joyful childhood into the spatial fabric.

As with most projects in the Global South, economic and ecological considerations were the priority in the design. The investment had to be as cheap as possible to build, ensure **self-sufficiency** in the future, and at the same time be neutral to **natural environment**. For these reasons, it was decided to choose a structure made of bamboo - a renewable material, that recently started to be available and promoted in the region. Quite obvious choices were not given up either - a full **photovoltaic** power supply, reuse of **bio-waste** and **rainwater** were also designed. But it didn't end there. Two of the foundation's founders are experienced psychologists, so it was decided that the project should also refer to mental support for children who have had a difficult experiences in a past. The design of the building's architecture was based on research in the field of neuroarchitecture, organizing the space in a way that facilitates establishing social bonds and gives a sense of security and **empowerment**.





**HOW IT STARTED**

It is estimated that there are currently over 2.5 millions of orphaned children in Uganda alone, representing over 5.4% of the country's total population. Unfortunately, many of them have no permanent home, face violence or are exploited for work.

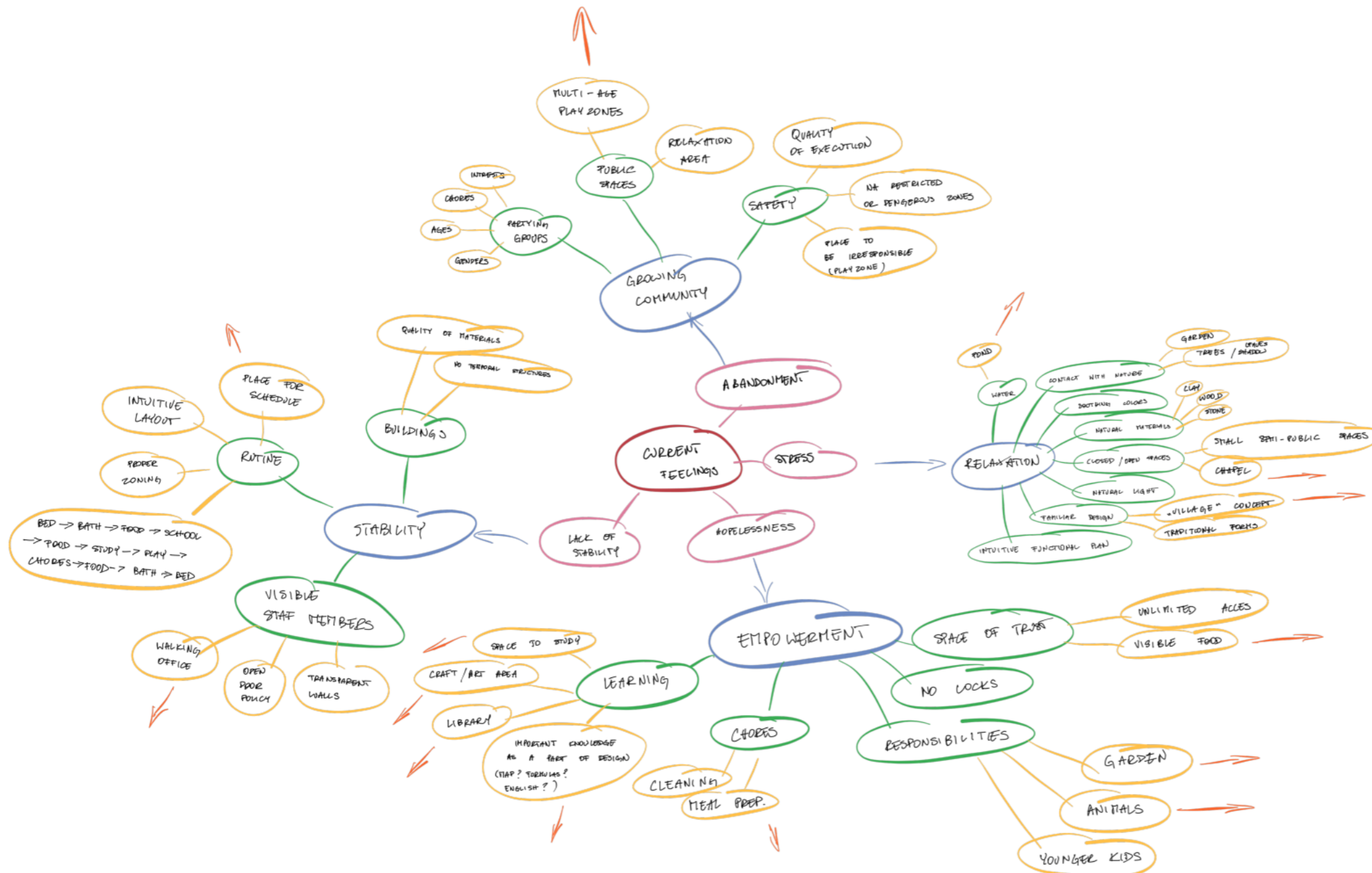
Until 2023, there was an orphanage in Ruhiji where **120 children** were deliberately kept in poor conditions. Tourists visiting the surrounding Bwindi Impenetrable National Park when they were passing through the village, often saw the condition of the orphanage and, moved by compassion, made substantial donations to the owners. Unfortunately, most of their contribution weren't used to improve the situation of residents. This began to change when three tourists from Poland - later founders of the "**Zdrowi My - I Give a Hand Foundation**" - became interested in children. They provided constant care to kids, collecting and directly giving them food, sleeping mattresses, all needed things and toys. However, to ensure their ultimate safety and good conditions for development, In 2023 Foundation finally decided to build a completely new orphanage and employ new caregivers.

**OUR APPROACH**

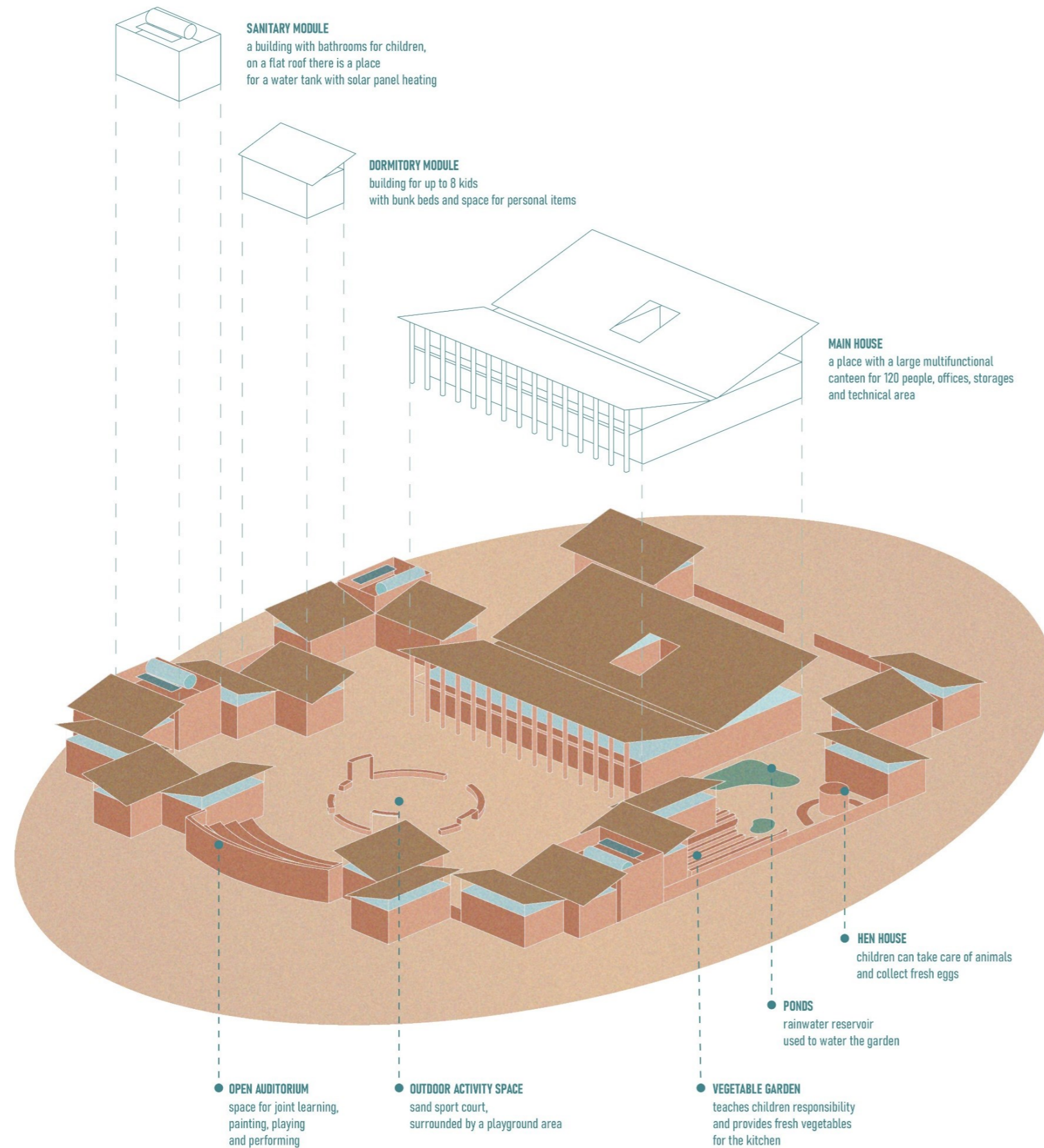
The orphanage, like the entire organization, is supposed to operate holistically. Children will get a place to develop safely, where they will be able to play and enjoy themselves, but also take care of their future.

One of the elements that received attention is the mental health and social development of children. Knowledge in the field of **neuroarchitecture** was used to create spaces supporting the development of social bonds, but also additional functions such as:

- a vegetable garden and a hen house where children can learn **responsibility**
- spaces near formitories that children will be able to change and create themselves, which will make them **feel empowered**
- spaces for group work where children will be able to **learn from each other**
- an audytorium where local professionals will teach them **crafts and farming**, thanks to which they will be able to earn money for themselves as adults
- open, multisensory spaces for play and sports that enhance **creativity**
- architecture that takes into account local traditions and forms, strengthening the **sense of identity**





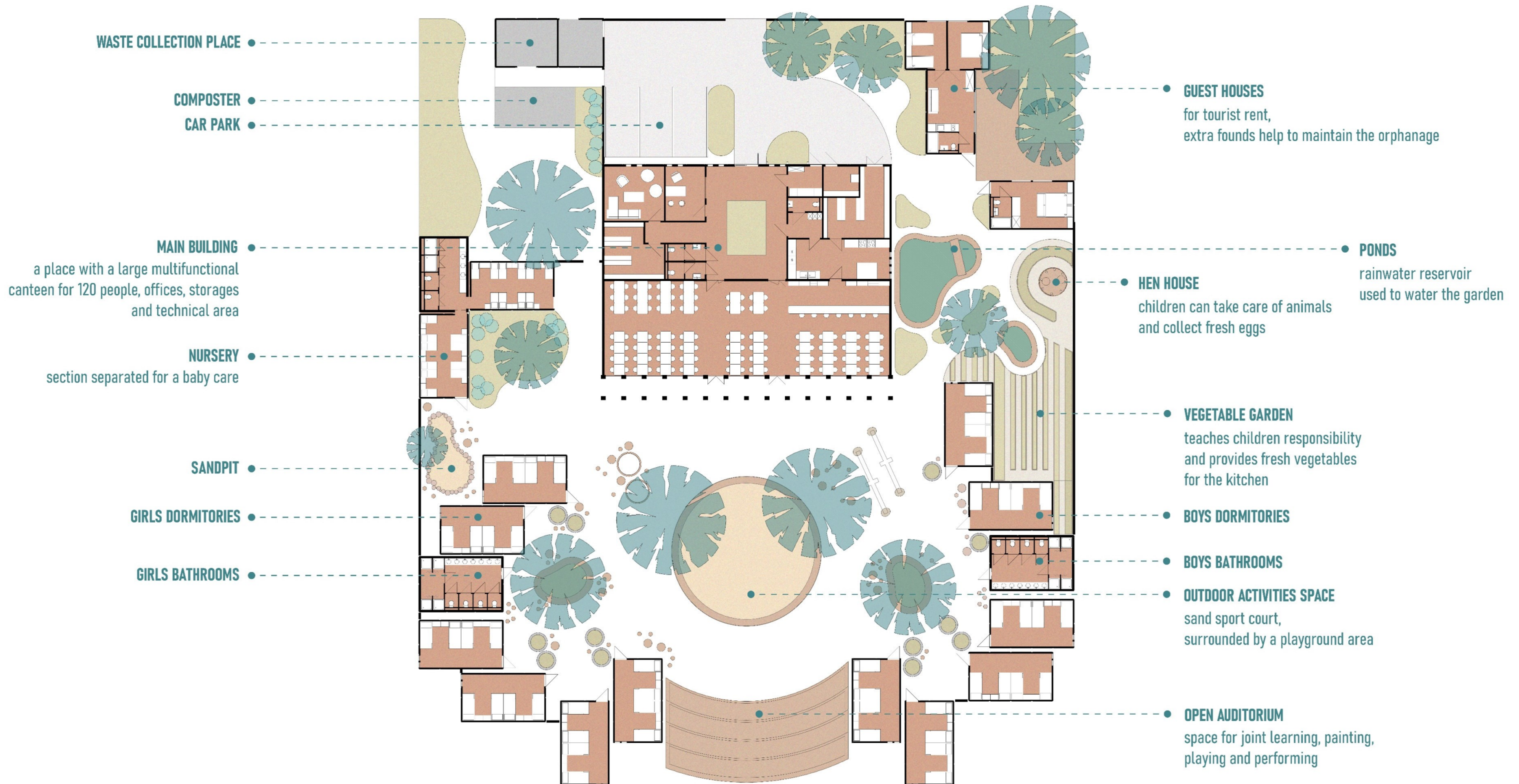


**SPATIAL PLAN**

It started with creating a spatial layout based on the rural structure of Ugandan villages. Thanks to this, the place does not differ much from the architecture already familiar to children, and it also teaches how to function in a **similar spatial and social structure** in the future. The central main building houses a multifunctional canteen, which is also a place for meetings, playing games and learning for 120 children living in the orphanage.

In addition, it contains all the necessary storages, utility spaces and offices. Directly behind it, there is a courtyard with zones for various activities for children - a sandy playground, swings, hammocks and an open auditorium. On both sides of it there are dormitory areas containing modular buildings with bedrooms and bathrooms for children, as well as dedicated semi-public spaces intended for joint socialization and play.

**MASTERPLAN**





### **MATERIALS AND TECHNOLOGY**

All buildings are designed in low-processed **bamboo** construction. It is a renewable and most ecological material available in the region. Bamboo grows extremely quickly, stores water, regulates the ambient temperature and significantly purifies the air. It is also for this reason that its cultivation is now promoted and supported by the Ugandan government. It was designed that parts of the plant trunks with a diameter of min. 12 cm will be used for supporting structure elements, and narrower fragments of the same trunks will be used to make joinery, furniture and filling elements. Bamboo leaves and stems will be used to create filling for walls. Using the entire plant will reduce the costs of its acquisition and the amount of waste.

**Natural plasters** made of a mixture of local mud, clay and lime are planned to finish the walls. Due to the fact that the roofs will partly constitute a substructure for photovoltaics and will be most exposed to monsoon rains, it was decided to retain the steel sheet structure. To avoid overheating of the metal, the sheet will be additionally covered with palm and bamboo leaves, which will also act as a seal at its joints.







### MAIN BUILDING

The main building has a canteen for over 120 people, with an open kitchen area. Children will be able to help prepare meals and prepare their own snacks. The main part of the kitchen remained closed for use under adult supervision. The canteen also serves many other functions outside meal times - it is a place for fun, common learning and meetings. An openwork wall connects this room with the external space of the courtyard. The entire area is open and accessible to children, but at the same time allows for easy supervision of the entire area by caregivers.

In the main building there is also an office and meeting space, that can be used to plan a meeting between kid and potential adoptive. There are also a laundry, storages and technical spaces.

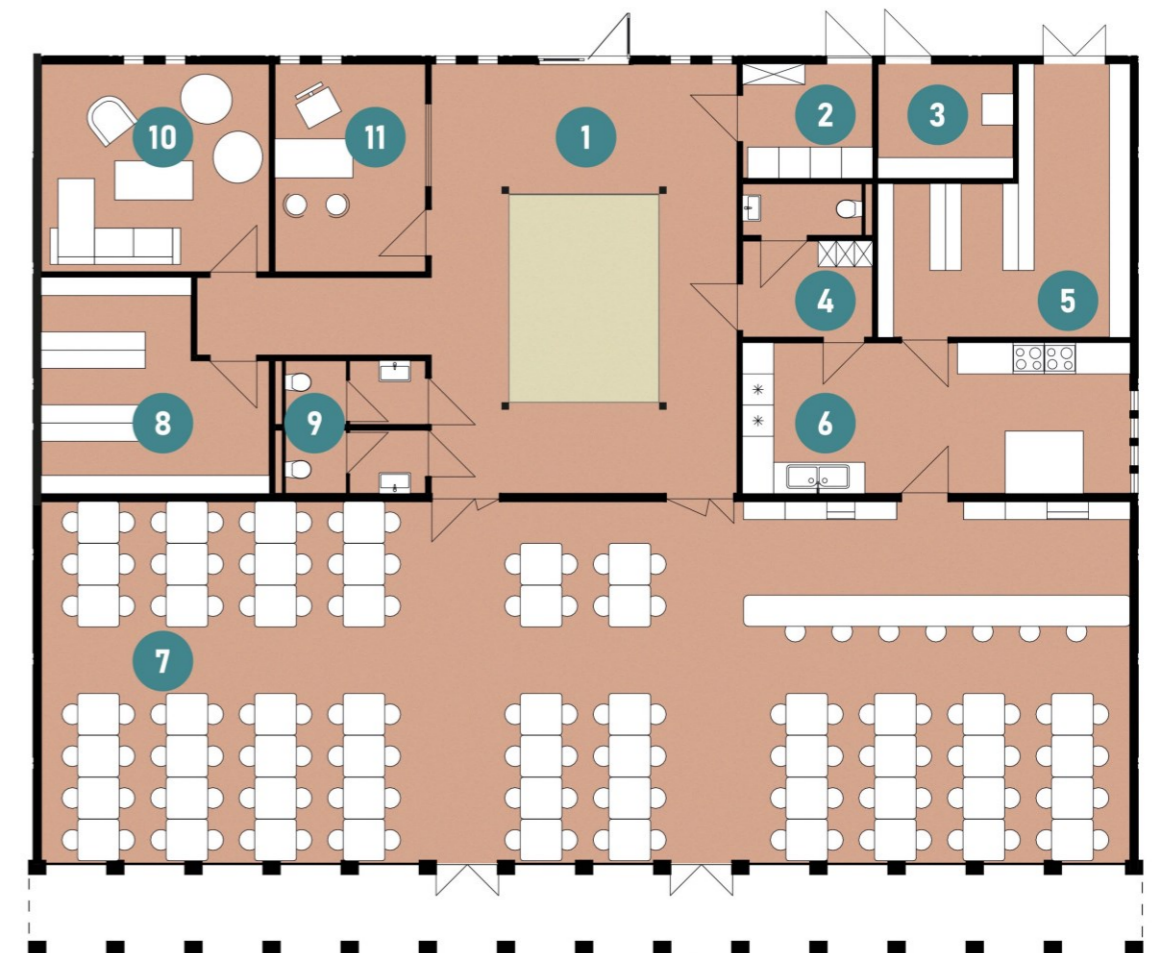
The entrance to the building opens onto a small atrium, which will be a representative place for kids art, drawings, photos and diplomas.





**MAIN BUILDING FLOOR PLAN**

1	Entrance Hall	49,0 m <sup>2</sup>
2	Laundry	5,5 m <sup>2</sup>
3	Tech. and utility room	5,7 m <sup>2</sup>
4	Staff room	7,2 m <sup>2</sup>
5	Storage	19,3 m <sup>2</sup>
6	Kitchen	21,6 m <sup>2</sup>
7	Canteen	145,4 m <sup>2</sup>
8	Storage	16,3 m <sup>2</sup>
9	Bathrooms	6,7 m <sup>2</sup>
10	Lounge room	17,5 m <sup>2</sup>
11	Office	11,6 m <sup>2</sup>



**DORMITORIES**

The orphanage project includes bedrooms for 48 girls and 48 boys, and a nursery for 24 of the smallest children. Each bedroom has 4 bunk beds and cabinets for private belongings. Sanitary facilities with showers, toilets and washbasins adapted for children were placed between the dormitory buildings. Hot water will be provided by tanks heated by solar panels on the roof. The buildings are designed to provide natural ventilation and discharge of warm air to the buffer zone under the roof. Instead of glass, the window joinery was filled with mosquito nets and rattan nets, providing light and fresh air, but also ensuring safety with a large number of children.





### ECOLOGY

The orphanage buildings will be built using natural methods, but with the future in mind - ecology is one of the priorities! Photovoltaic panels will be placed on the roof, and bio-waste will provide compost for use in the vegetable garden. Natural and local materials will minimize the construction's carbon footprint.

The orphanage will also be surrounded by plants, including fruit and vegetable plants. Thanks to this, children will learn to take care of them, but they will also have a constant source of fresh products. The trees will also provide shade in the warmest months and absorb excess water during the monsoon.



