LAGI 2020 FLY RANCH

\_Métamorphe

Le Métamorphe is a series of six autonomous "life supporting" units, scattered through the land and available for anyone to use on their journey.

\_Function follows form

Each unit is conceived as a separate and independent power source, that can be placed virtually anywhere in the world.

Their main purpose is to provide sustainable energy and drinking water in remote and wild areas using proven technologies such as solar panels, rainwater recovery, fog harvesting, aboveground planting...

This technical gear is integrated in a modular design, continuously adapting to the various and changing needs of its users: wooden panels on the facades may rotate and support different kinds of shelter structures, allowing users to build temporary homes or infrastructures for instance. The aboveground farming garden beds may be planted with food supplies for future produce. The units may also be enhanced by additional devices such as wind turbines.

The need for versatile uses in different time frames, combined with our main focus on sustainability and efficiency, led us to imagine a futuristic design that not only makes "Fly Ranch" a technical facility, but a striking and evolving architectural apparatus.

Its "tower" shape and extended rooftops achieve a careful balance between minimal footprint and maximal rainwater harvesting / solar panels surface, all the while protecting the ground and providing precious shade, especially in harsh climates.

\_Life support

Through its seemingly intricate silhouette, each unit of "The Flying Ranch" relies on proven and reliable technologies. Askar solar panels, rainwater recovery and distillation, pumping, fog harvesting and aboveground planting are chosen in order to require minimum maintenance while being easily accessible to any user of the structures.

They are expected to provide 28 800 kw and 15000 liters of water a year, which allows full autonomy for each structure.

Waste (used water, compost) is reintegrated into the life supporting system though plants and gardens. However, users will be responsible for their own plastic waste, which should be recycled or reused.

\_Sustainable building and living

Designed to fit in wild and remote environments, Le Métamorphe is undeniably made from durable materials that will require minimum maintenance. Building the structures should also require minimal energy supplies.

In fact, the bold and contemporary architectural visual aspect of the device is achieved through a simple system of wooden frames and panels, pre-cut and assembled on site.

This allows for the whole units to be put together or dismantled easily, leaving no trace on the natural landscape but it's minimal floor print. If a structure was to be damaged, the wooden parts can easily be replaced by spare ones without compromising the whole installation.

In our case, this particular sustainable design and building strategy also proves to be cost-saving.

Wooden essences may vary according to local supplies -Fremont Cottonwood in our case. Plus, simple techniques are involved in preparing the spare pieces.

Overall, we estimate a Le Métamorphe prototype to cost around 45 000 $.

The flexibility of its building techniques allow the wooden structure to be built and assembled almost anywhere in the world, supporting local workers, craftsmen and resources.

\_What we leave behind

As an open, free of use, life supporting system in remote natural spaces, Le Métamorphe invites us to reflect on our impact on wilderness.

Once completely dismantled, the units leave nothing behind but their print on the floor, and the memory of a graceful architectural silhouette.

The wooden structure is completely biodegradable and/or may be recycled.

The way passengers choose to inhabit, operate, and maintain Le Métamorphe, as well as the projects and visions to be developed in there, will truly define the environmental impact of the project.