

Greenhouse Roof from Inside/Outside



A SOLUTION FOR DESIGN HARVESTS

TEAM

Chloe Cheng (Jiangnan)
Wu Yiting (D&I)
Carolyn Kerchof (ZHdK)

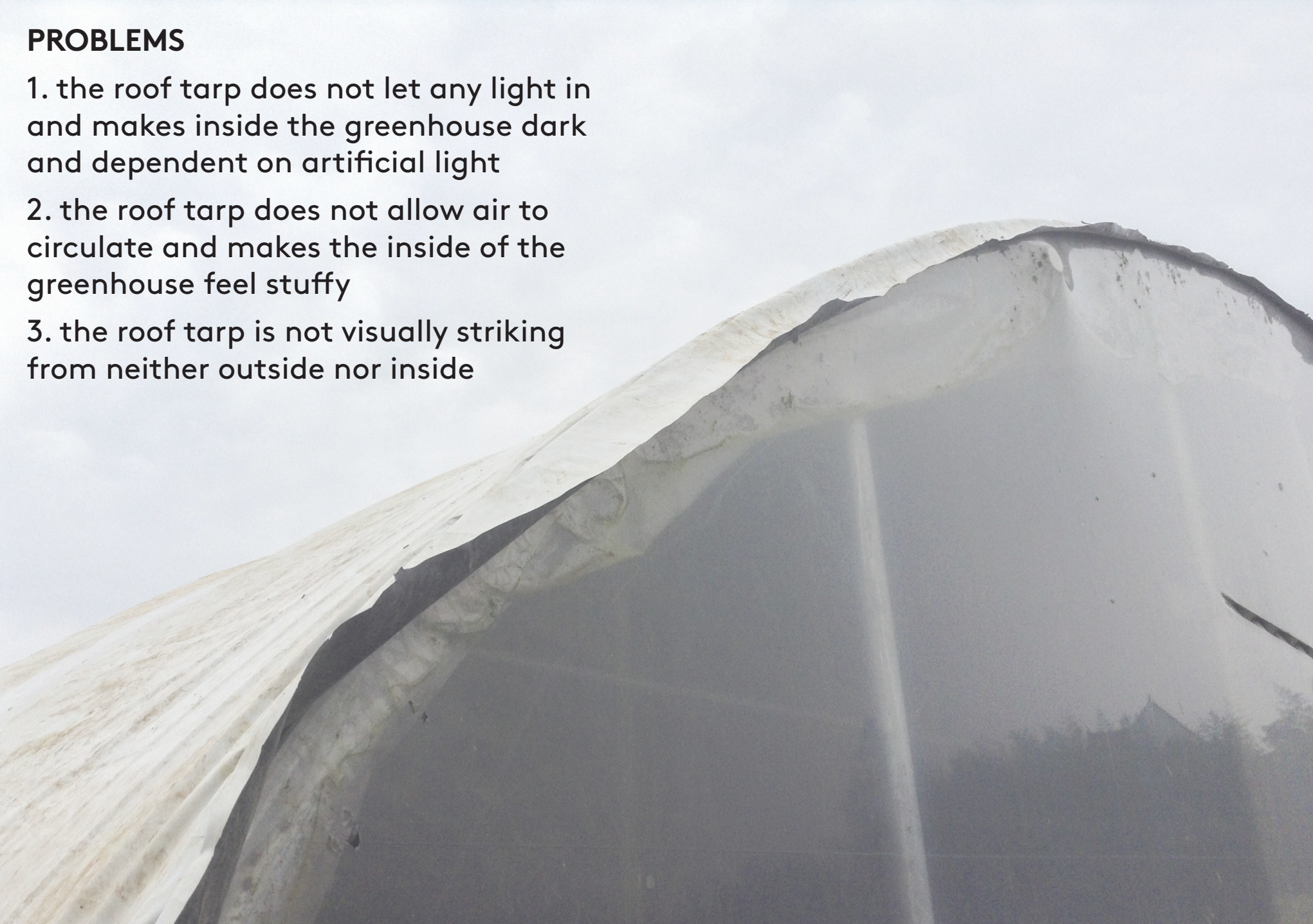


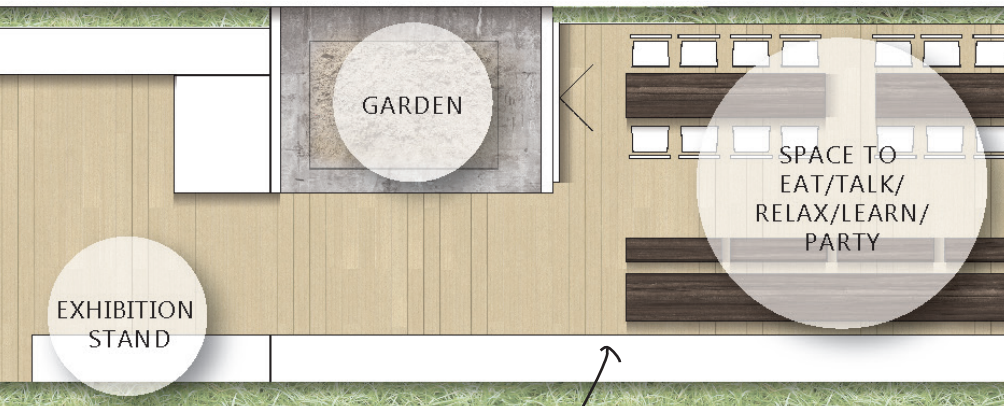
THE SITUATION

The Creative Greenhouse at Design Harvests on Chongming Island is the perfect place to meet, learn, eat and talk late into the night. However, there are three problems with the present roof tarp.

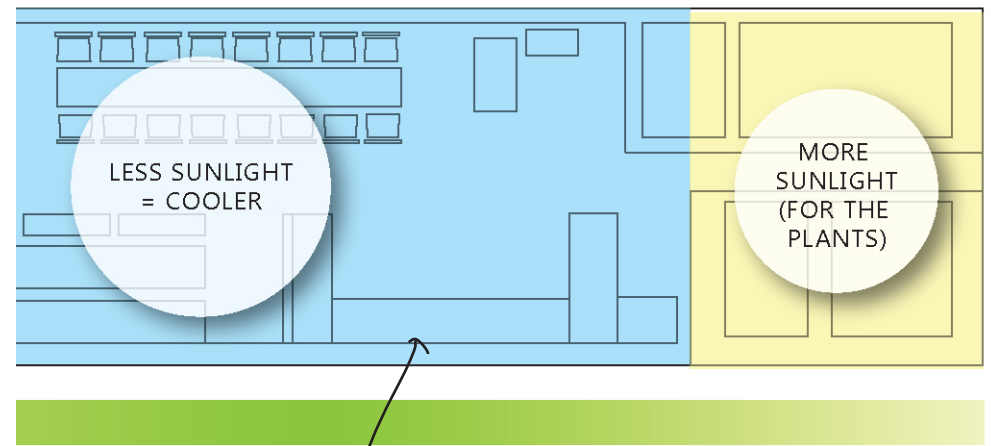
PROBLEMS

1. the roof tarp does not let any light in and makes inside the greenhouse dark and dependent on artificial light
2. the roof tarp does not allow air to circulate and makes the inside of the greenhouse feel stuffy
3. the roof tarp is not visually striking from neither outside nor inside





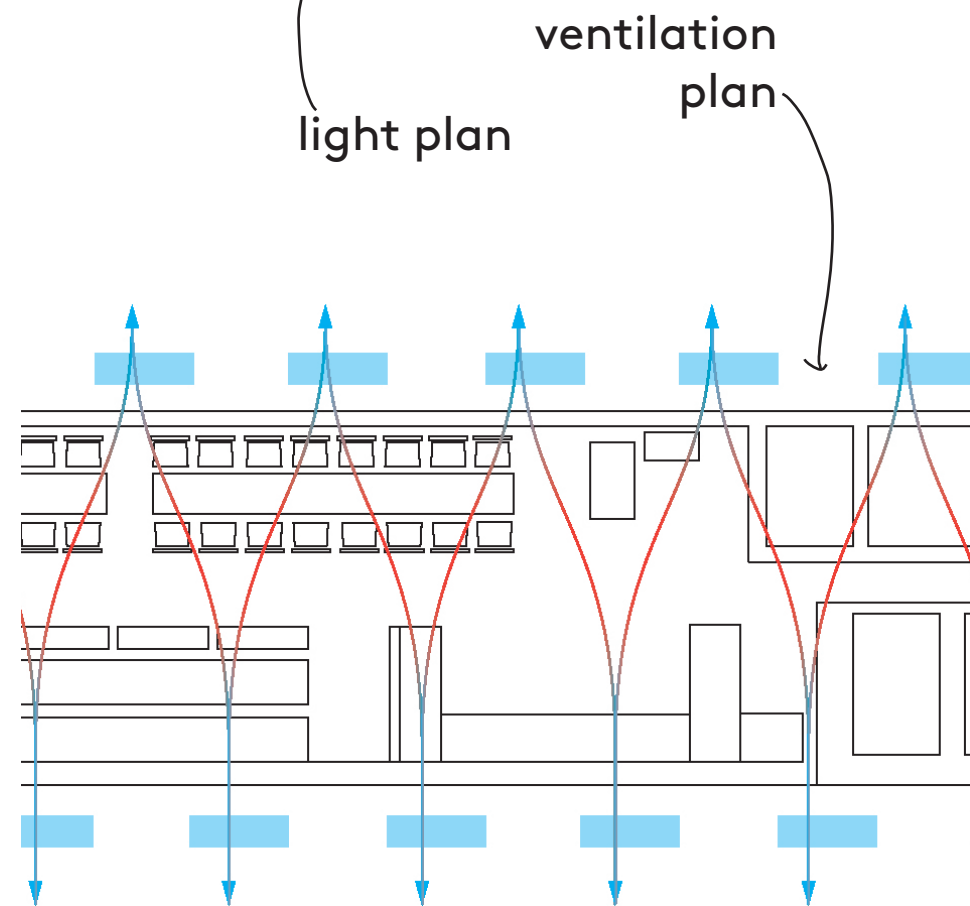
floor plan



light plan

HOW WE SOLVED THE PROBLEMS

1. we have designed a pattern based on a local craft, bamboo weaving, that lets light through
2. we have built windows to improve air flow through the greenhouse
3. the Greenhouse Roof Tarp has a colorful, appealing design from both inside and outside





MATERIALS

The Greenhouse Roof Tarp will be made out of plastic ethylene-vinyl acetate (EVA), a polymer we have chosen for its high durability and transparency. EVA can last for longer than two years, compared to the average 18-month service life of the comparable material polyethylene.

We will print our pattern on the clear EVA tarp with a UV printer. The advantages of UV printing include high gloss levels and protective qualities. UV inks cure instantly on nonabsorbent materials.

The Greenhouse Roof Tarp can be used on any repurposed greenhouse (that is, any greenhouse for people, not plants).

people, not plants





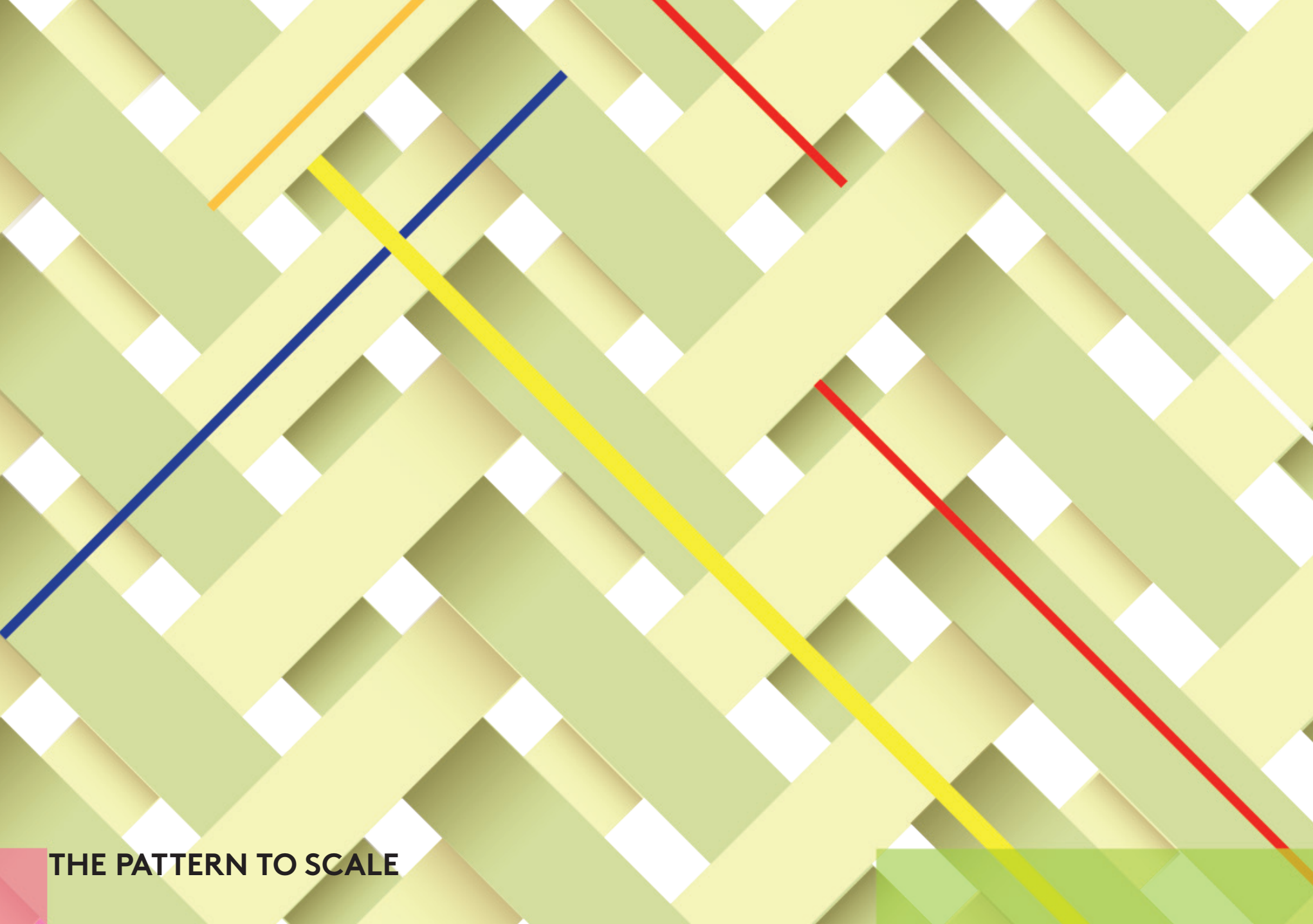
DIMENSIONS

Our to-scale model represents the actual dimensions of the tarp needed for Design Harvests's Creative Greenhouse: 8m x 40m x 3.2m



COST

We estimate material costs at around 576 RMB (EVA costs 1.8 RMB per square meter).



THE PATTERN TO SCALE



Thanks.