

careU

Healthcare & Sustainability

Time: 14 weeks

Role: individual project

careU is a postpartum care kit designed for moms in Zambia's rural areas. It aims to reduce infection caused by poor postpartum care without posing negative impacts on the local environment and society.



The Problem

Insufficient maternal care

Almost

99%

of all maternal deaths occur in developing countries with limited medical resources.

About

1/10

of global maternal deaths are due to bacterial infection when going out to work during puerperium. (6 weeks after giving birth.)

SDG 3.1

"By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births (0.07%)."

*The global maternal mortality rate is currently 211/100,000 (0.21%) according to UN.

Postpartum care

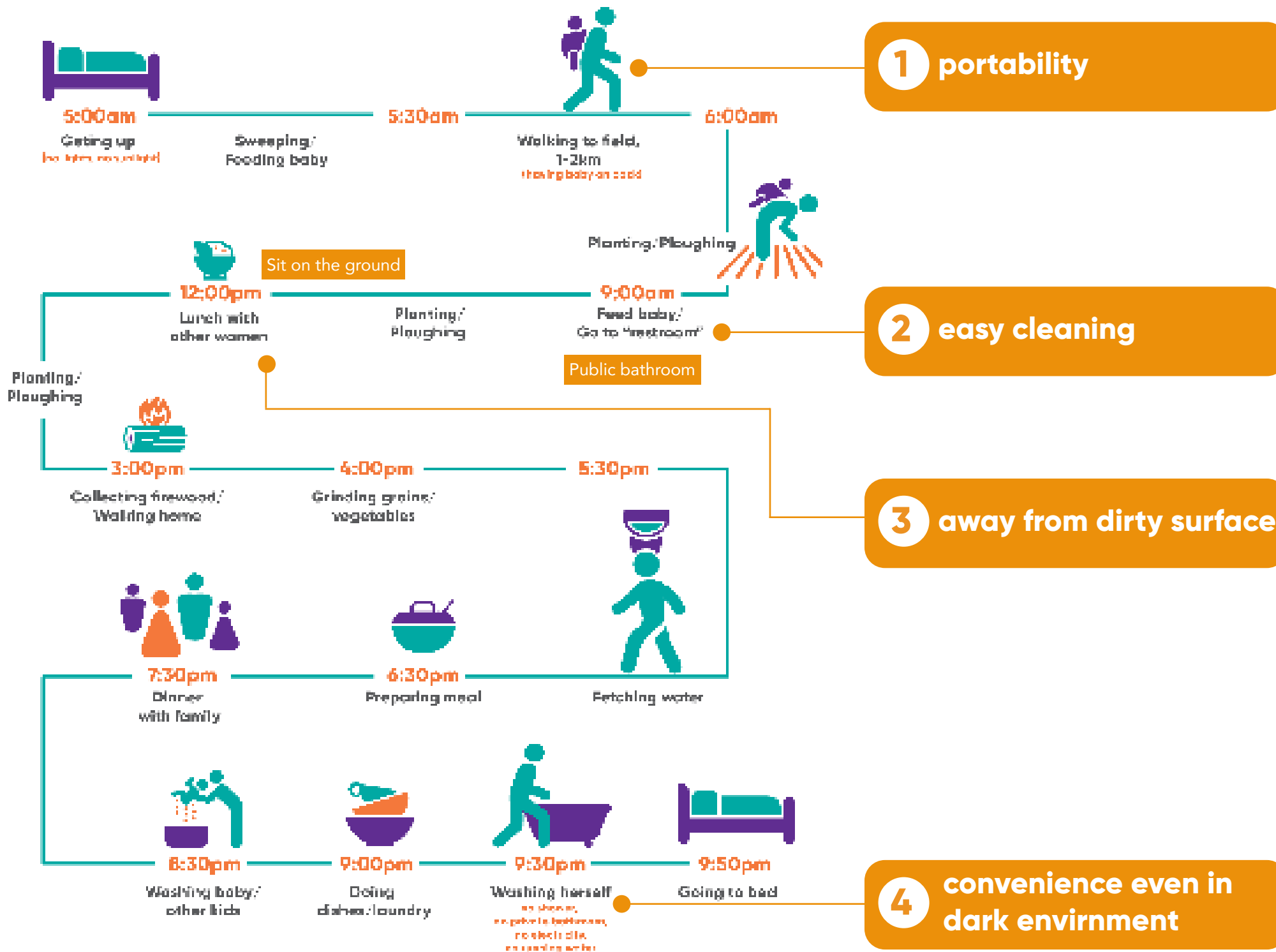
-an overlooked area of reducing global maternal mortality.

More postpartum care needs to be provided for women living in developing countries, especially in rural areas where hygiene and healthcare situations are not as desirable.



More about the users

A-day-in-life



User profile

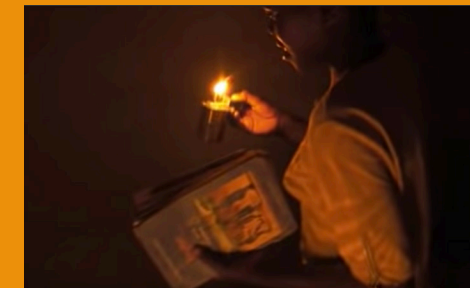


-Zambia postpartum moms in rural areas (within 6 weeks of giving birth)

-Age 16 to 22

-Go out to the field to work due to social and family responsibility within 6 weeks of giving birth

Living conditions



Lack of stable access to electricity



Usually public bathrooms



No tap water. Women fetch water.



Limited housing space.

Design goals

It is a multi-faceted problem to solve.



User-centered goal

Design a postpartum care product that is portable, and convenient both when the users are out in the field or in the household environment at different times of a day.

Environmental goal

Bring better postpartum maternal care without negatively impacting the local natural environment.

UN SDG Goal

Ultimately to reduce the global maternal mortality ratio to less than 70 per 100,000 live births.

Social Goal

Bring better postpartum maternal care without negatively impacting the local social dynamics.

Seeking solutions

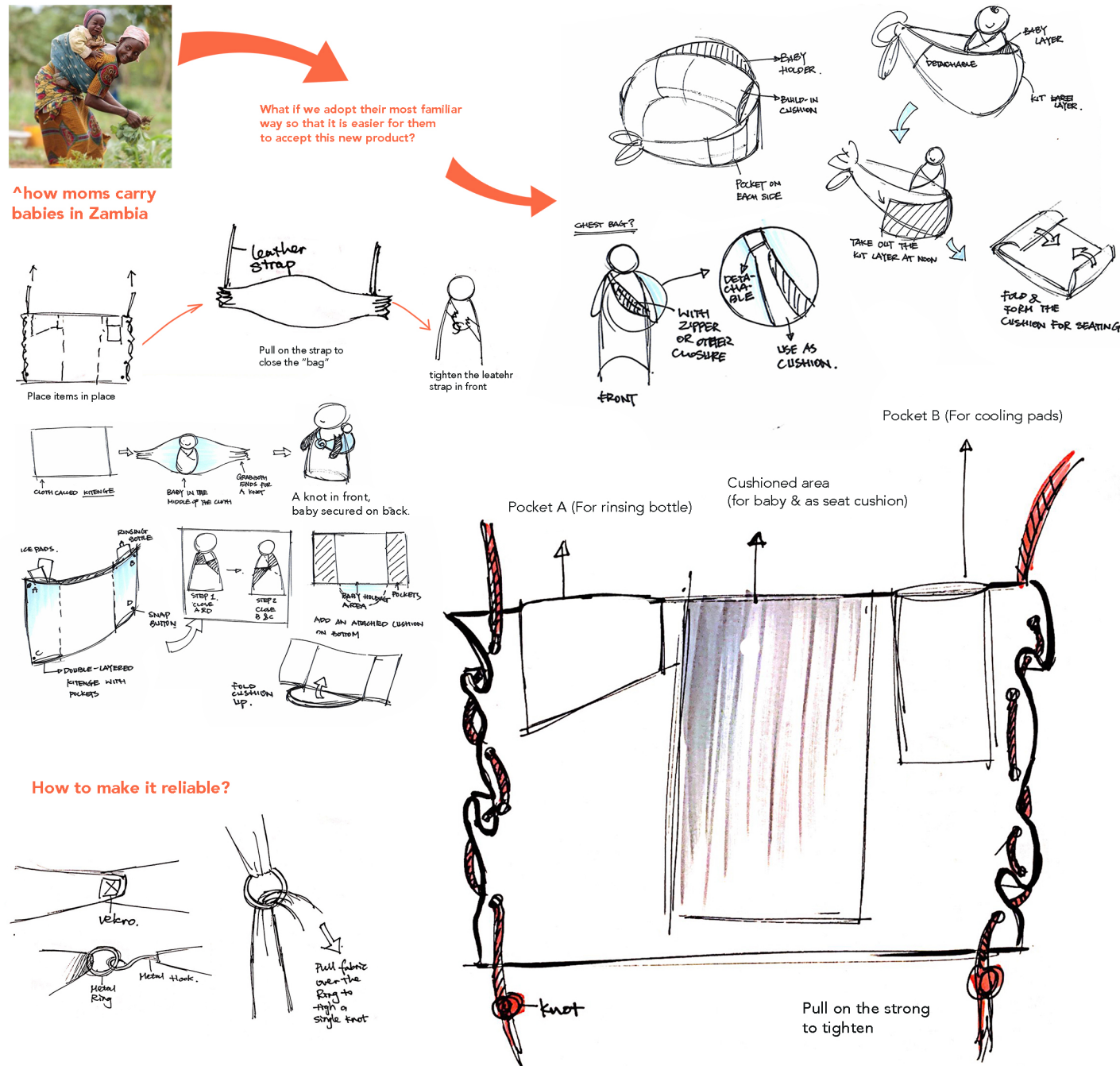
Concept 1

Learning from local methods of carrying, we have the opportunity to make the product easier to adopt for the users.



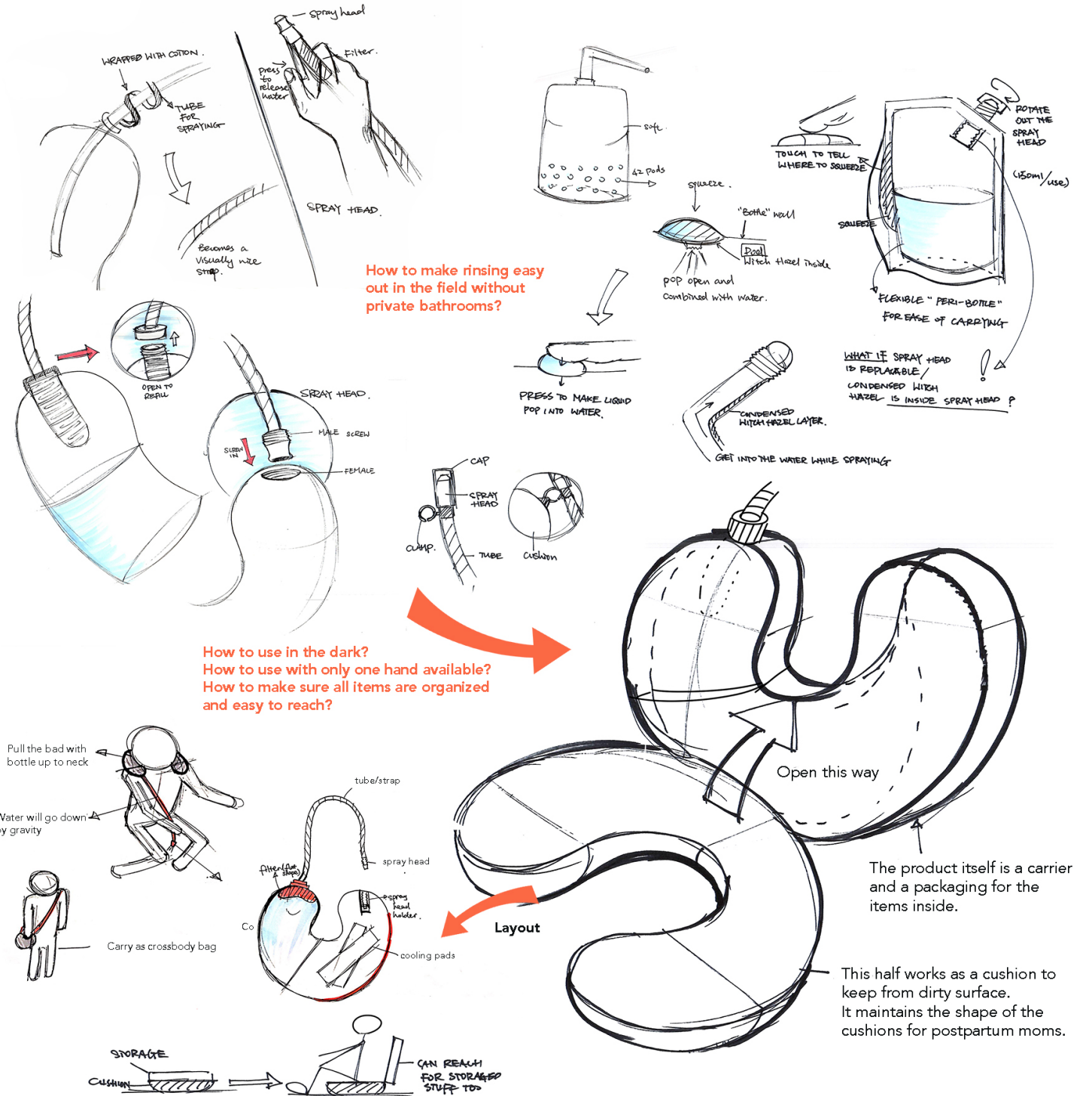
^how moms carry babies in Zambia

What if we adopt their most familiar way so that it is easier for them to accept this new product?



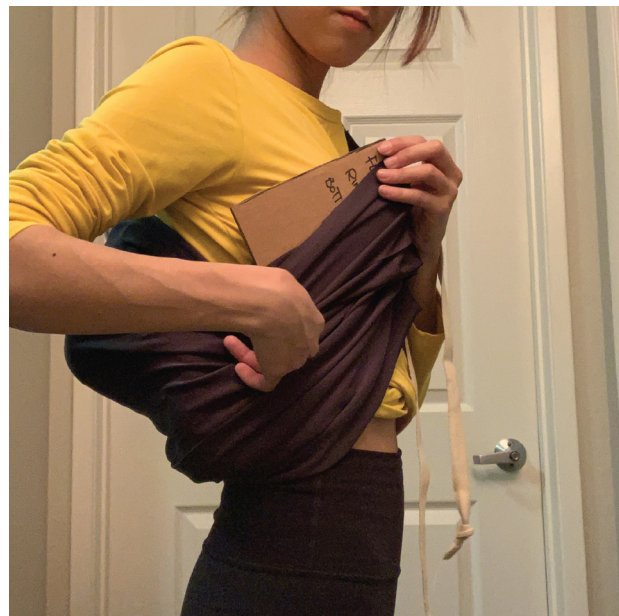
Concept 2

Providing users a convenient way to access a rinsing system throughout the day in different locations.



Prototyping & making decisions

Concept 1



- The placement of the components makes it not very comfortable for the users.
- The use process feels hectic because she needs to pay good attention to the baby while trying to do other actions.

Concept 2



- The carrier stays stable on her back when using the rinsing bottle.
- The tube being the strap is not very logical and may cause the tube to break easier.

Final design



1. Carry like a crossbody bag



2. Use as cushion to avoid dirty surfaces

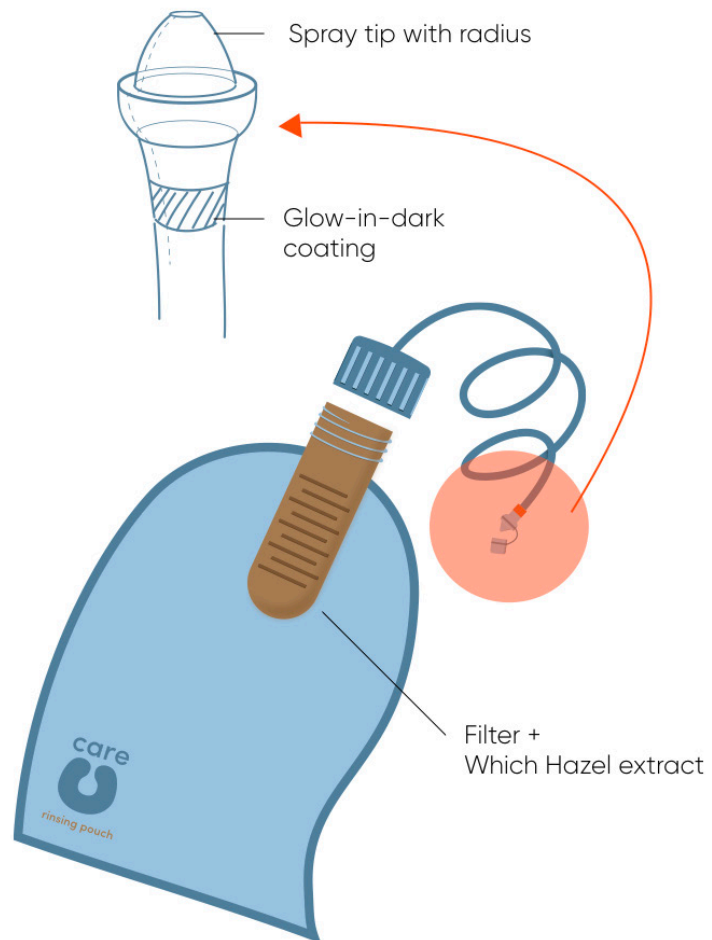


3. Detach and refill easily

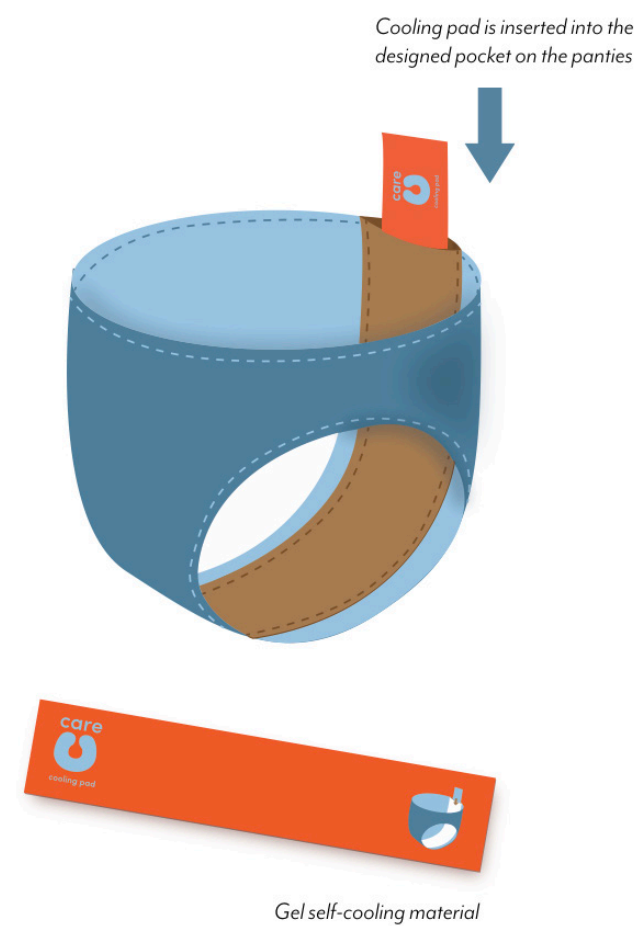


4. Rinse to maintain good hygiene condition

Rinsing Pouch



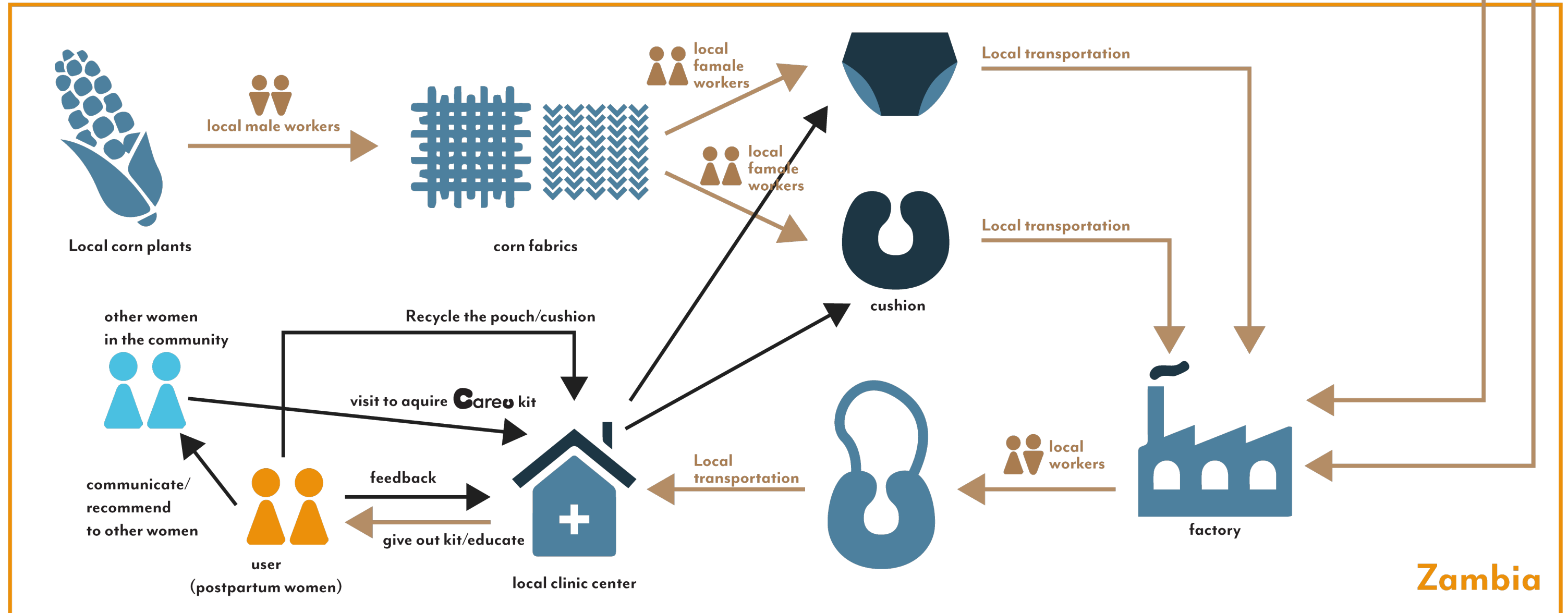
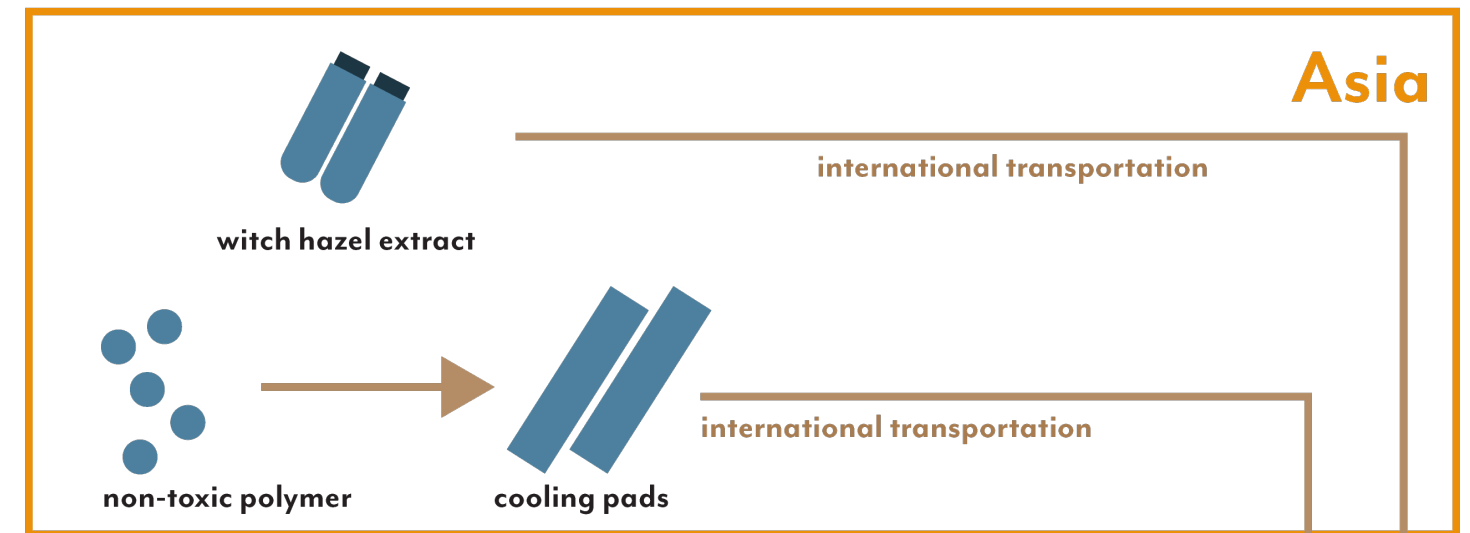
Cooling pads & panties



System diagram

Circular design is a very important part of the solution to achieve the social, human-centered and environmental goals.

The problem requires effort from multiple sources. A well-designed ecosystem of the product is one of the keys to success.





By using careU

the global maternal mortality rate can potentially drop from:

0.21% to **0.19%**

Possibly saving

6000+

lives in the long run.

