

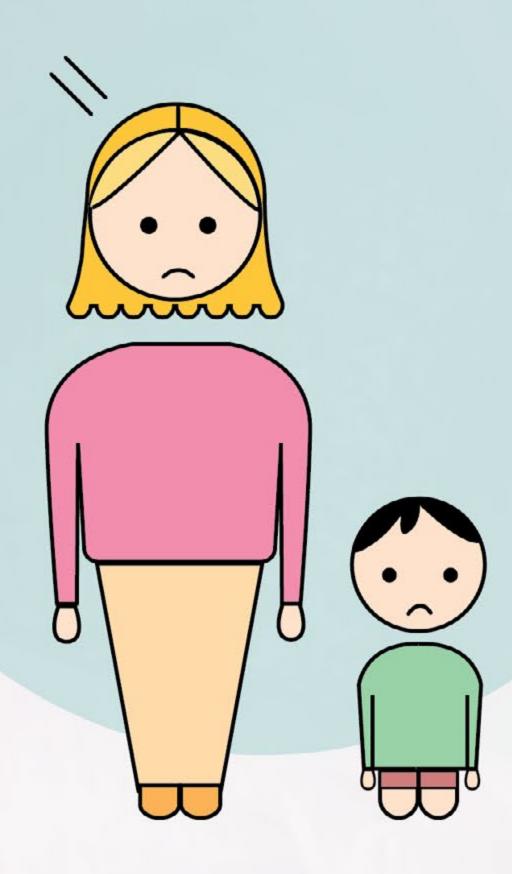
# SNASK Empowering the child to make his own food choices





## PROBLEM STATEMENT Empowering children with diabetes to make their own food choices





## TODAY

Parents are always worried Child feels overwhelmed by their parents Child gradually learns how to control his diabetes Parents feel more relaxed



## TOMORROW





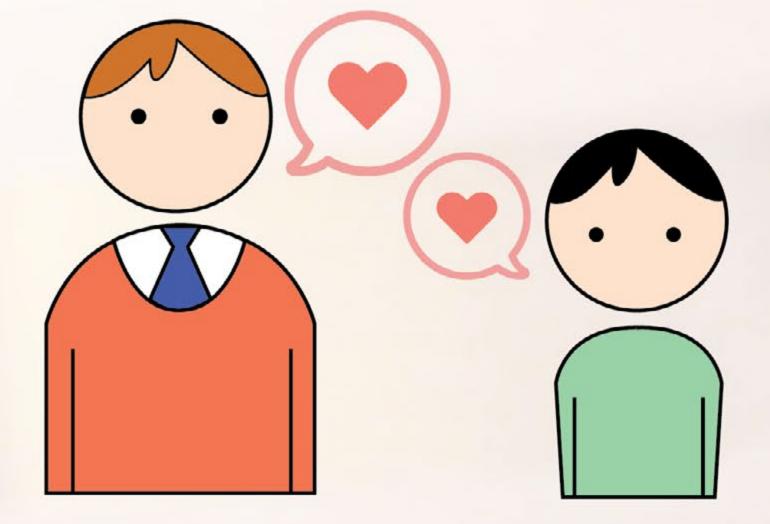
## EMPOWERING

Supporting the child to take control of his disease



## MONITORING

Keeping parents informed about their child's health, providing recommendations about insulin dose



## CONNECTING

Helping parent and child to communicate in more meaningful way

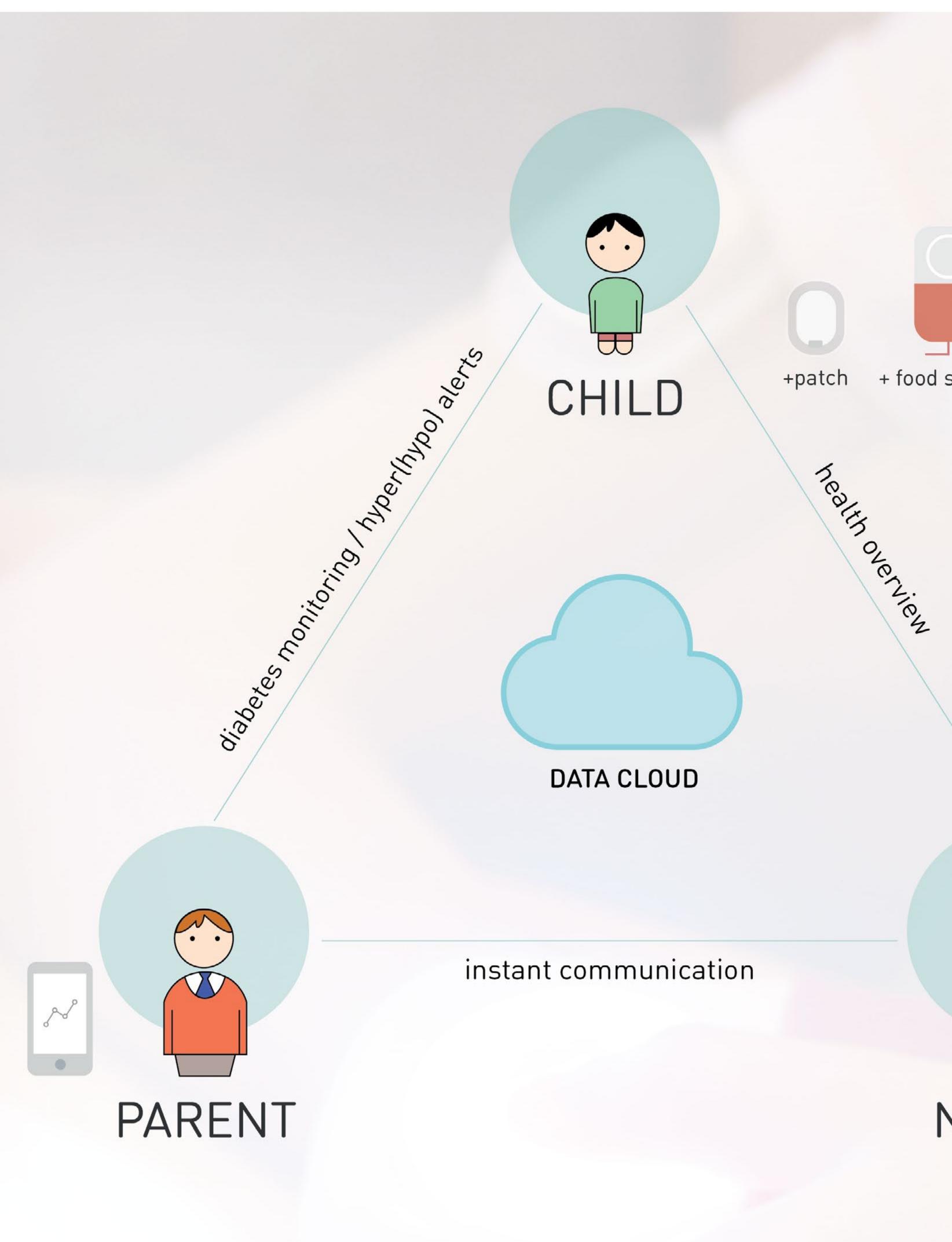






## SYSTEM MODEL

+ scanner sends food data + app calculates insulin dose + parent confirms





+patch + food scanner



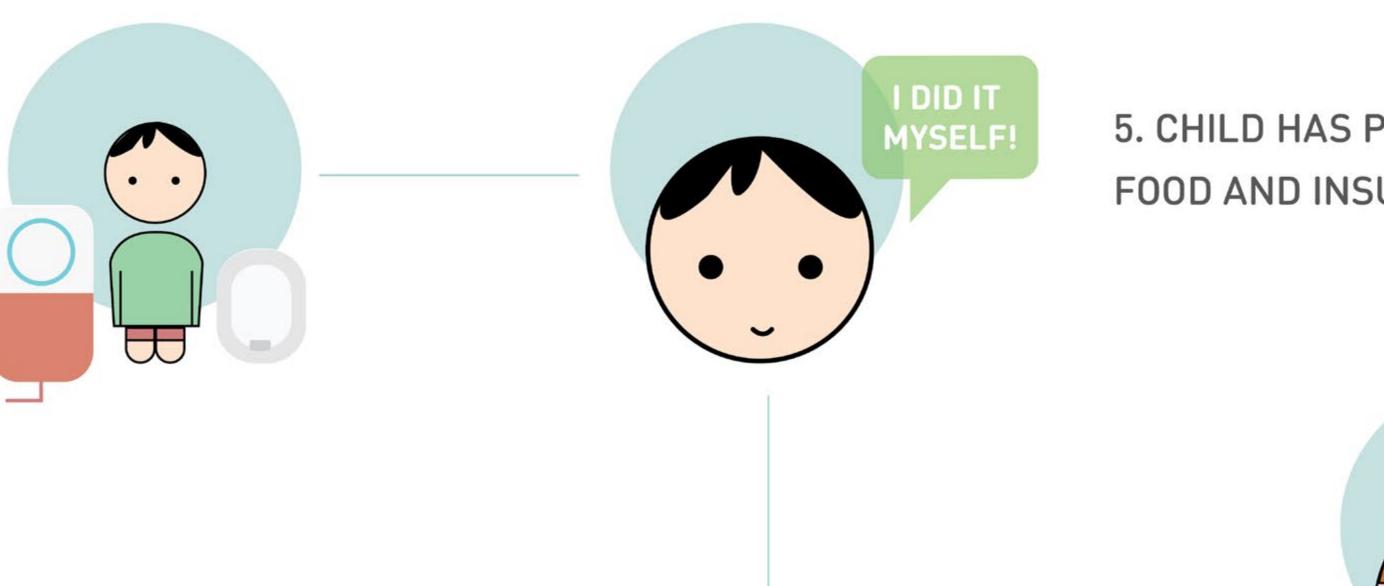
- + monitors childs health
- + nutrition diary
- + sends dietary advice

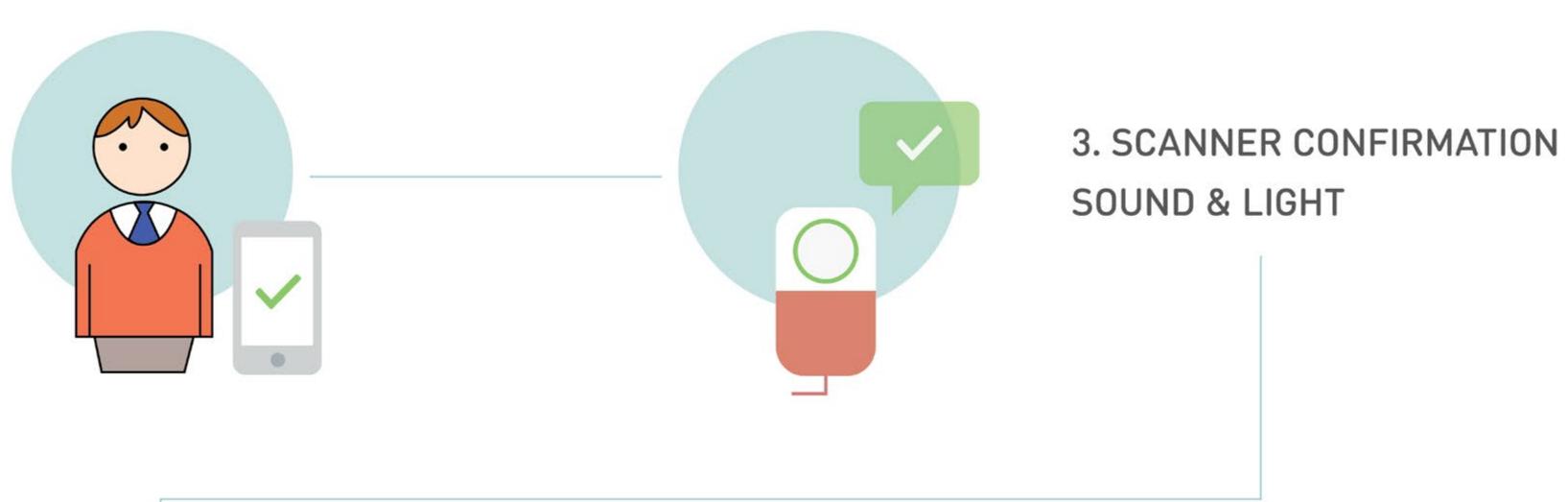


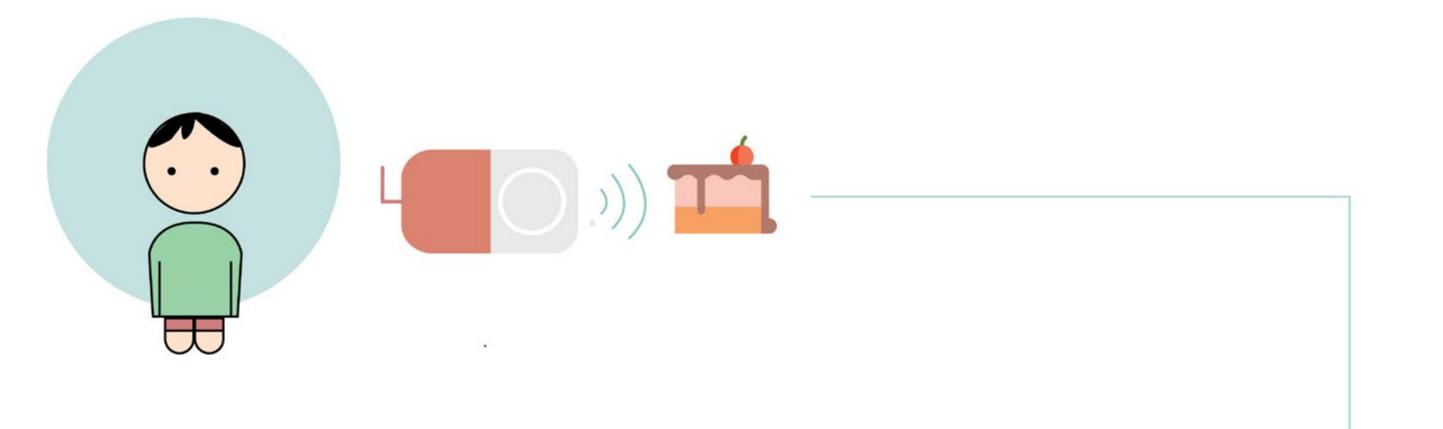
## 1. CHILD SCANS HIS FOOD WITH THE HELP OF THE SCANNER

## 2. PARENT RECEIVES FOOD **INFORMATION & CONFIRMS**

## 4. CHILD INJECTS INSULIN DOSE APPROVED BY PARENT









6. PARENT IS RELAXED AND CAN **KEEP TRACK OF CHILD'S HEALTH** 

5. CHILD HAS POWER OVER HIS FOOD AND INSULIN INJECTIONS

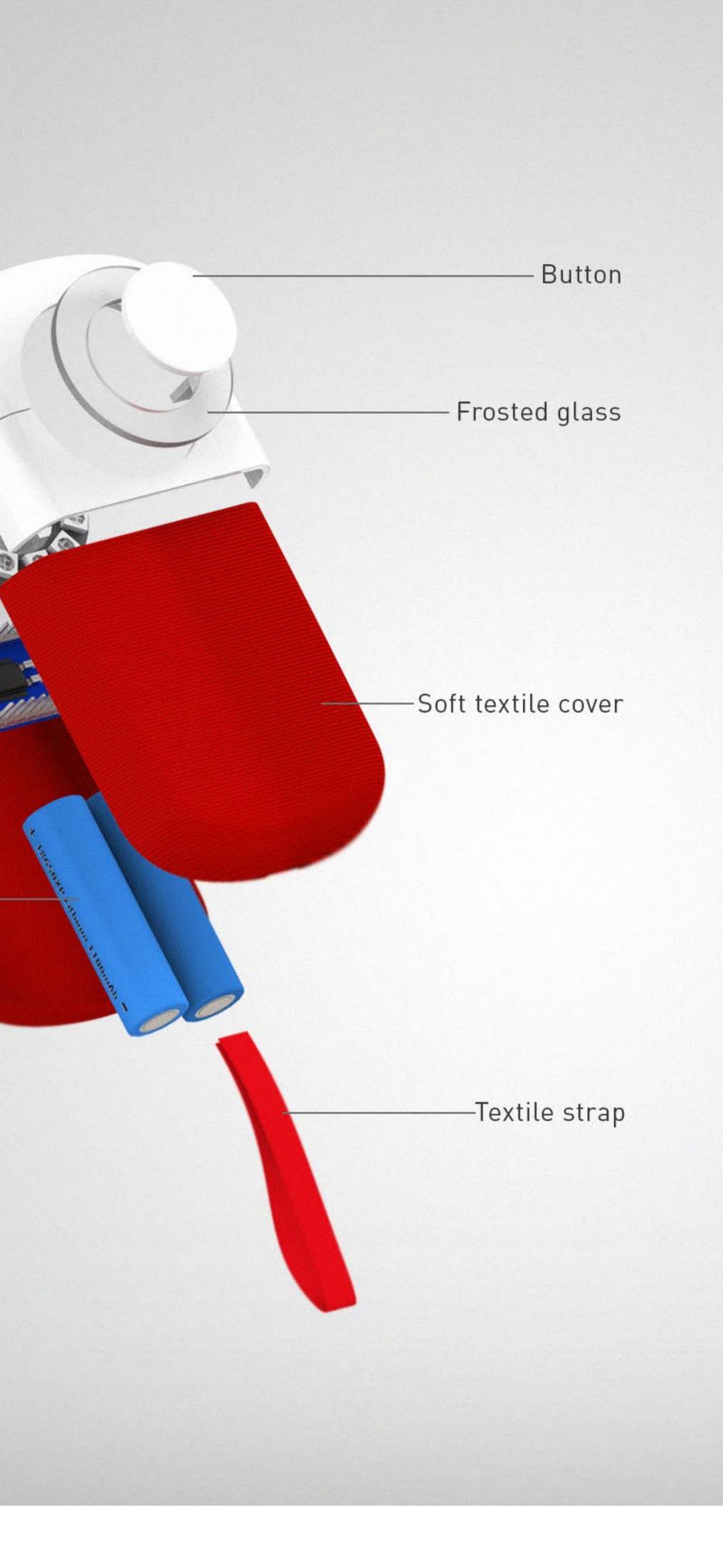
## **EXPLOSION VIEW**

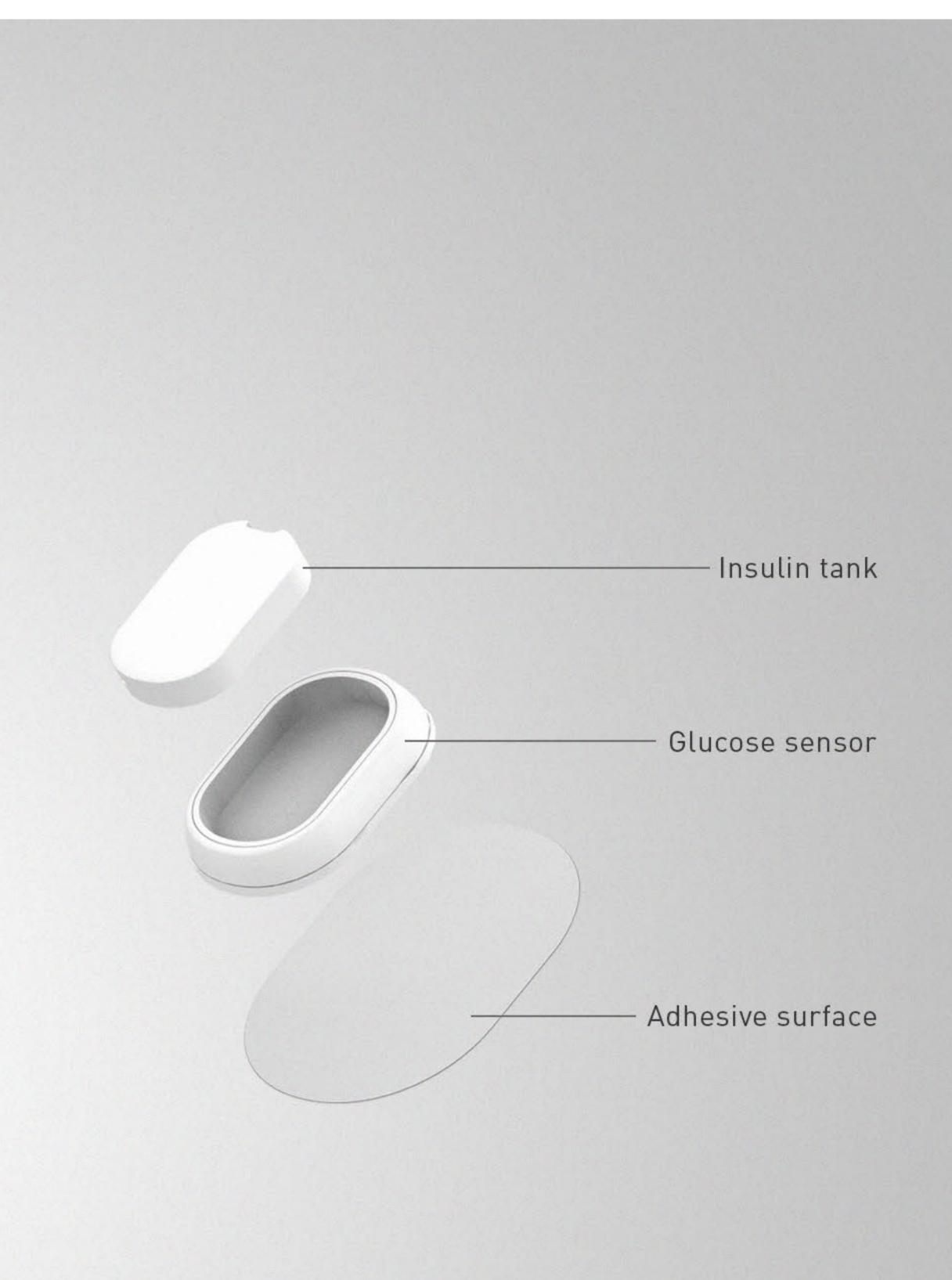
Infrared Sensor-

Neopixel Ring 12x -

Arduino Nano-

Rechargeable lithium batteries -

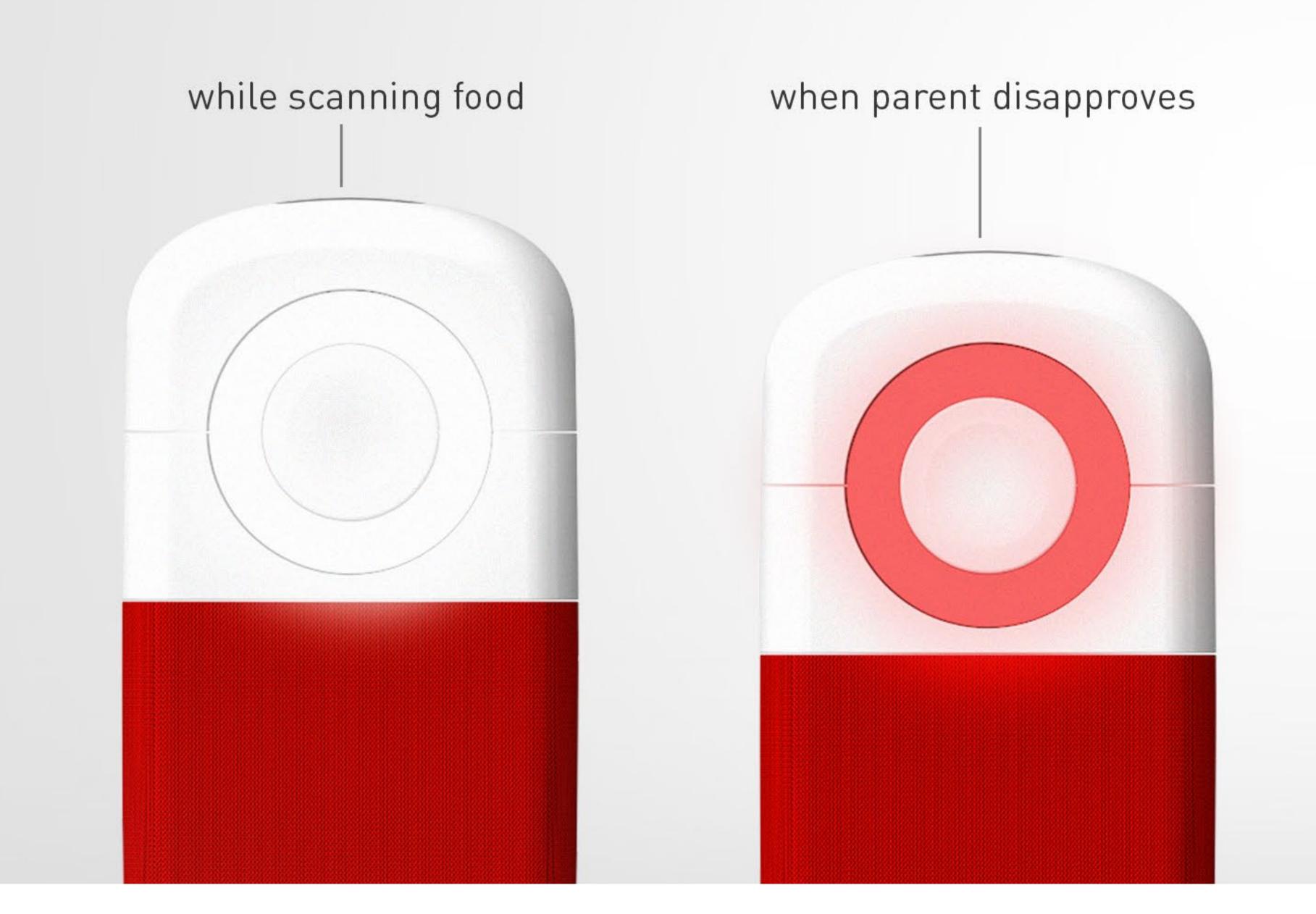








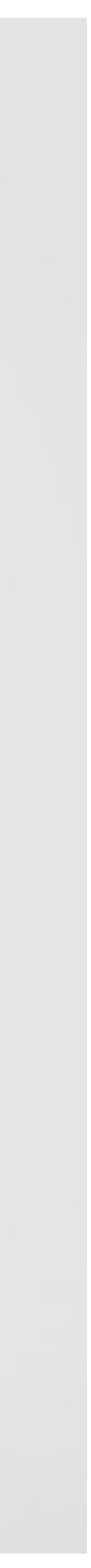
# light & audio feedback



when parent approves

insulin injection





Play process video https://vimeo.com/207528219

AT

# he process



## - How could we empathise with the childs daily life with diabetes?



# <image>

## EMPATHIZING

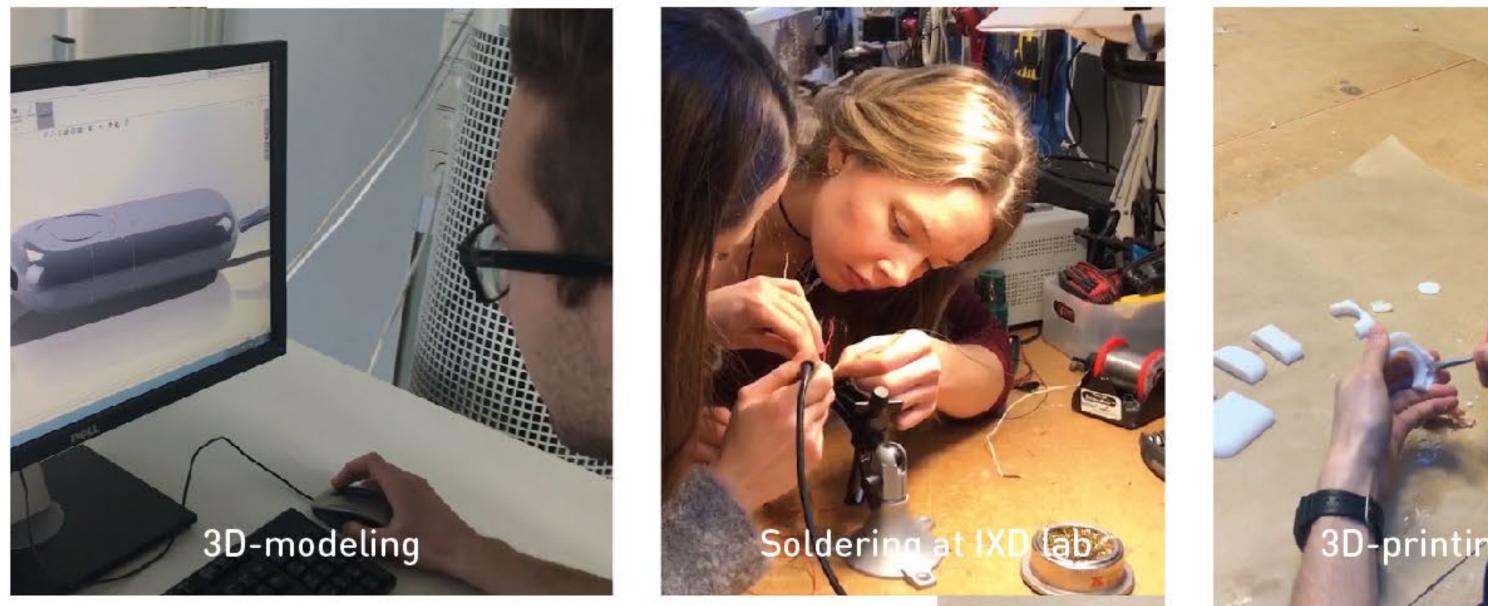
During phase one, we mapped out the complexity of the disease. We found that the connection between the parent and the child is put at major stress when parent tries to constantly monitor the child's disease. As a result, the child feels disempowered.



## RESEARCH

Existing products in the field are solemnly aimed towards an adult audience. We wanted something portable for children who do not have smartphones around 6-9 years old. It would be something he could be proud of and show to friends. We explored and acted out sketched scenarios on the topic of blood sugar monitoring in combination with a food scanner.





## **TESTING WITH** NURSES

We conducted close interviews and iterations for our concept with nurses and specialists at Umeå University Hospital. The scanner should give encouraging feedback.

Next step was exploring sound desig following Wizard of Os-testing. We built 3D-printed models, programmed the interactions choosing colorful light feedback for the sounds. Finally, we animated the interface for the application that would show data to the parent.

## PROTOTYPING

## **EXPERT FEEDBACK**

The most valuable feedback while showing our final concept film and prototype for nurses, dietists, children and parents at Umeå University Hospital Diabetic Unit. The feedback we got was that the product would indeed be very useful for the child and parent.

Nurs HYPER "The most importan factor is learning curve and how to make his own injections. This tool provides that!



This project was a two week collaboration between two Master programs at the Umeå Institute of Design; MFA Interaction Design and MFA Advanced Product Design.

