PROJECT 01

A mobile app that uses smart meter data to encourage families with newborn babies to shift time when using energy, thereby reducing peak hour demand

BACKGROUND

The impact of fossil fuel energy use on climate change can now be truly felt, such as extreme weather, melting glaciers and rising sea levels.

The use of smart meters allows users to monitor energy use information such as household electricity consumption in real-time

For households, reducing electricity consumption during peak periods can save household energy bills and balance the power grid's energy flow for energy conservation purposes.

Discover

5Ws & 1H, Secondary Research, COM-B Model, Evaluation Matrix, IBM's Assumptions &Questions

Define

Proto Persona, User Journey Map, Key Insight Statement, User Need Statement

Ideation

UX Vision, Design Principles, Feature Set, Storyboard

Design

User Task Flow, Site Map, Prototype

Test

Experience Prototype

DISCOVER

5Ws & 1H

Make assumptions about household energy use scenarios

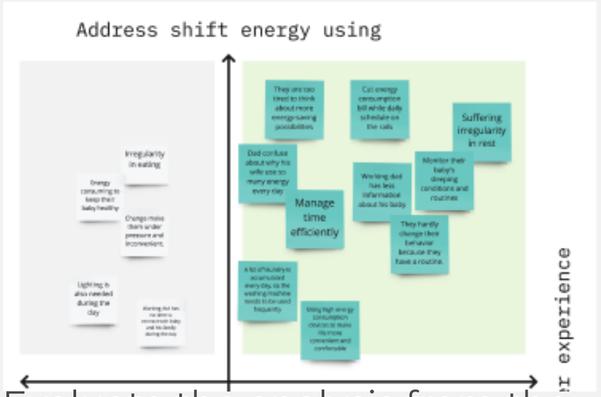
Secondary Research

Conduct secondary research to avoid bias

COM-B Model

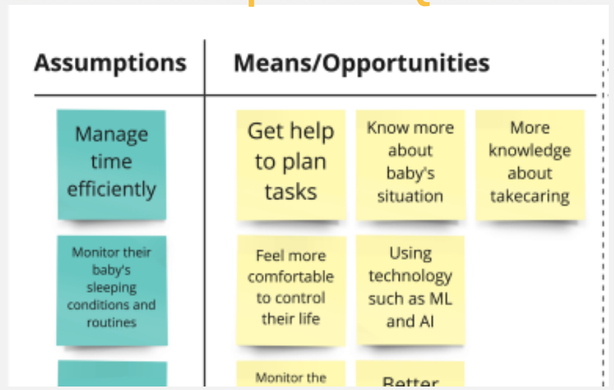
Analyse user motivations, behaviors and opportunities

Evaluation Matrix



Evaluate the analysis from the previous step

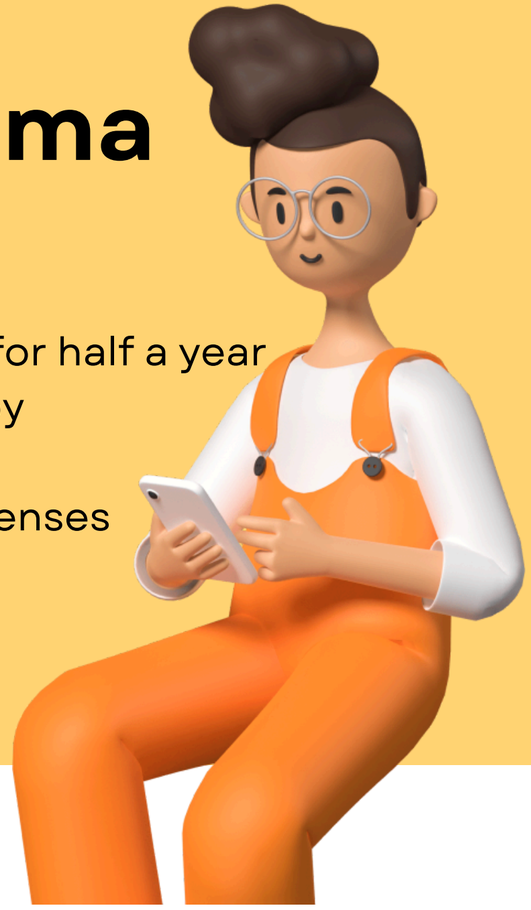
IBM's Assumptions &Questions



Seek design opportunities

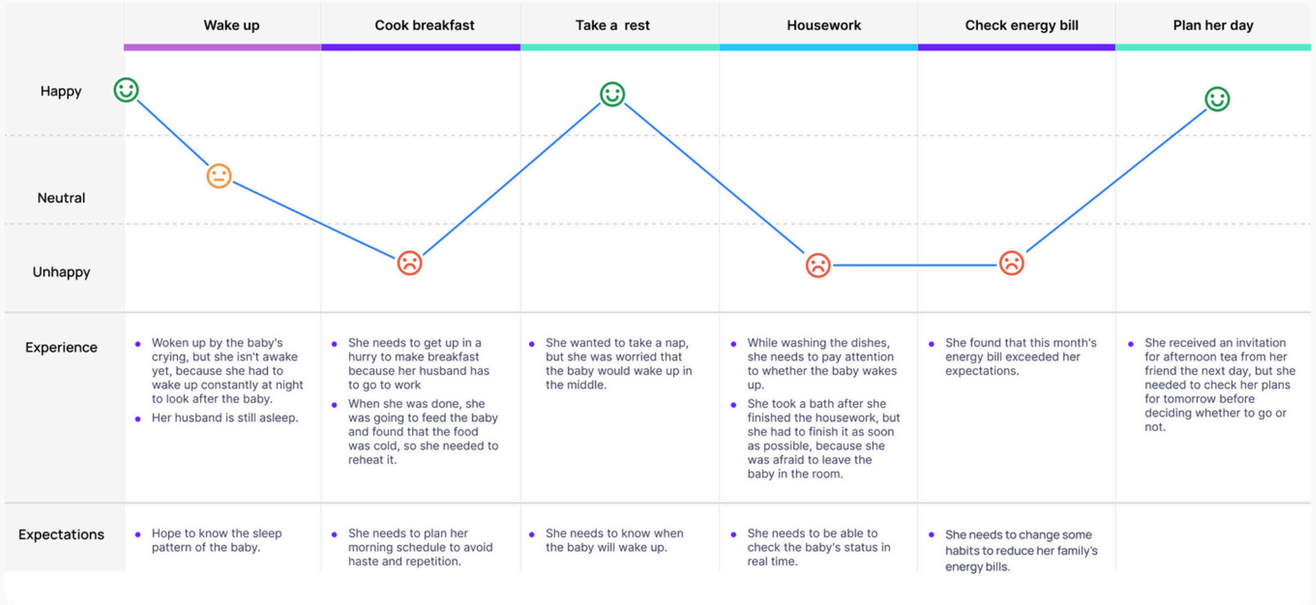
PROTO PERSONA

Mom：Emma



36 years old
Been on parental leave for half a year
With a 3-month-old baby
Financially constrained
Need to plan family expenses

USER JOURNEY MAP



Key insights statement:

Young mom hopes...

- Manage her time better
- Avoid disconnection from social life
- Have sufficient rest time

But...

- Baby care activities are complex and irregular
- She couldn't leave her children at home alone
- Taking care of the children can exhaust her.

USER NEEDS STATEMENT

Pain points

- Lack of time.
- Lack of experience in babysitting.
- Lack of opportunities to communicate with other family members.
- Worry about her baby's condition.

Needs

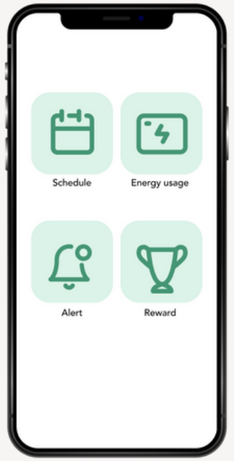
- Enough time to relax
- Understand early education knowledge
- Understand the baby's condition
- Achieve herself value
- Trying to find a baby's sleep pattern

Goals

- Let her children grow up healthily.
- Keep her children safe.
- Keep the family balanced.
- Know how to reduce expenses.

DESIGN CONCEPT & PRINCIPLES

"We believe in the opportunity to design a mobile app for inexperienced parents to encourage them to take better care of their lives while helping them take care of their children more efficiently by shifting their energy-using habits. Alleviate their financial and time difficulties. As a new parent, they will feel a strong sense of purpose as new parents that others will value."



AI powered daily scheduling application

+

IoT things and wearable devices

Empowering

Helping users plan their schedules while giving users freedom

Humane

Personalized virtual assistant experience

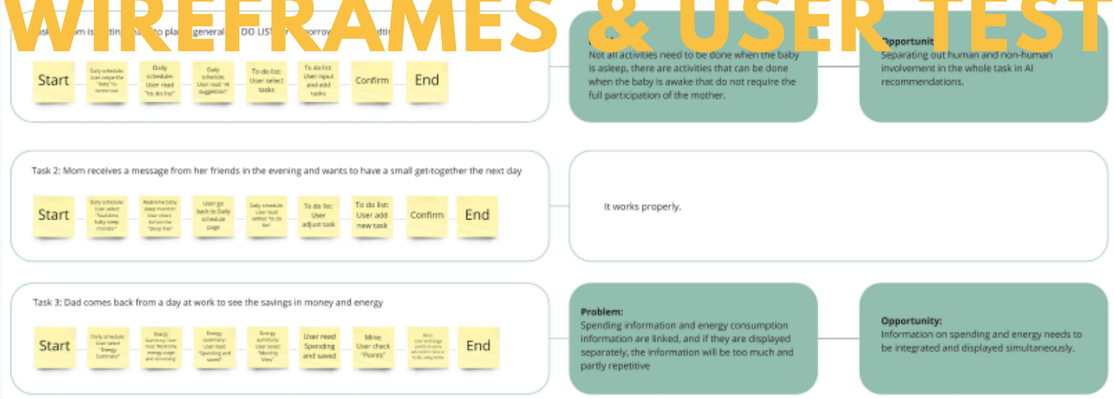
Smart

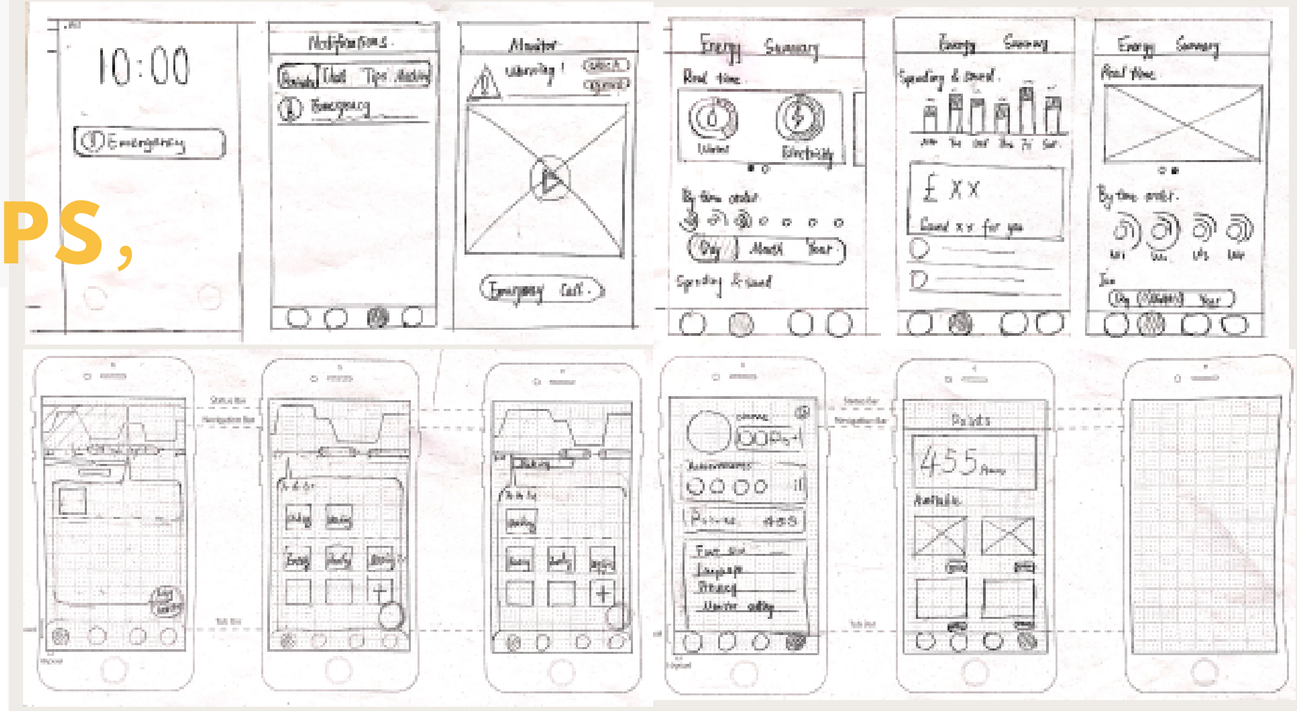
Learn user habits and daily arrangements

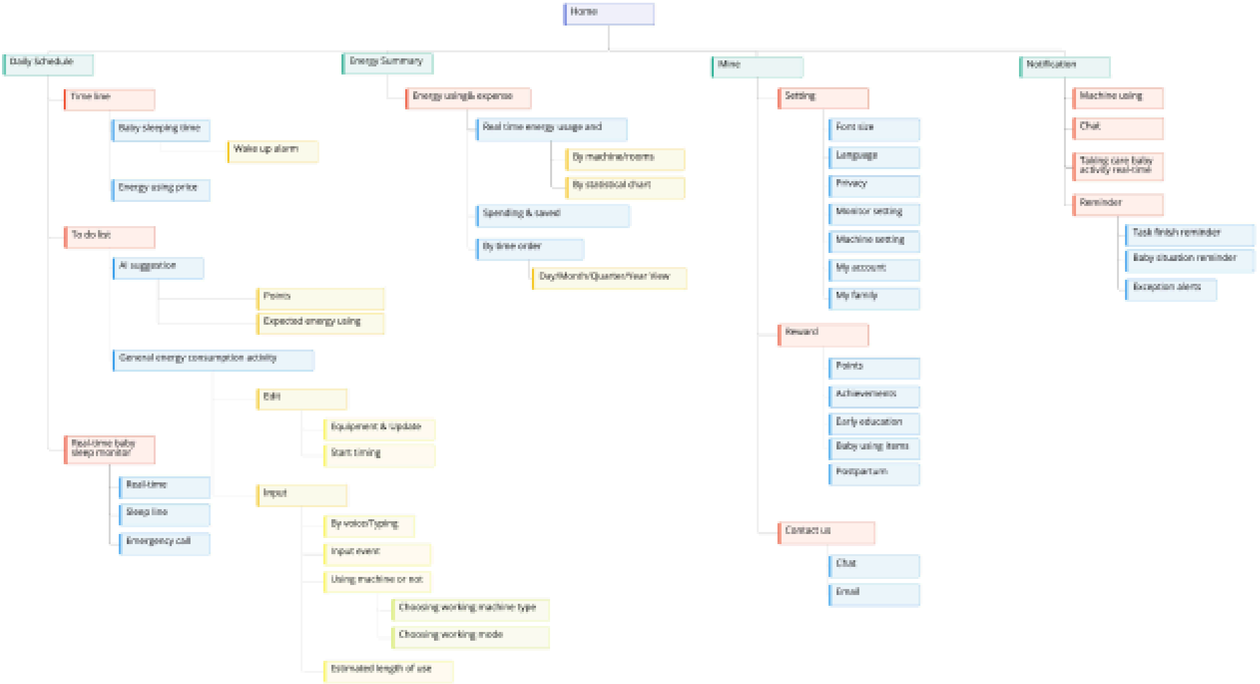
Reliable

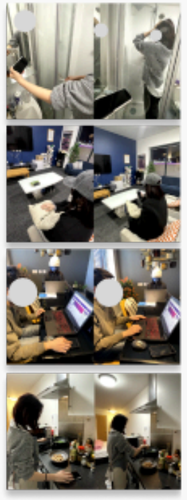
Ensure baby's safety in a variety of ways

USER TASK FLOW, SITE MAPS, WIREFRAMES & USER TEST









Journey Stage	Doing	Thinking	Feeling	Pain Points	Opportunities
Task 1 If mon's showering, how can she notice the reminder? (Feature 1)	1. Mom is in the shower and her mobile phone is outside the bathroom shower 2. The phone alarm goes off 3. Mom stops bathing and picks up the phone to check 4. She finds out something is wrong with the baby and goes to check	1. What's wrong with the baby 2. Does the baby need me? 3. can I continue with the matter at hand?	😕 🙂	**Receiving and checking notifications on time** is a very important thing for Mom, she doesn't want to miss anything.	1. This feature can fit user needs 2. **Voice needs to be on all the time**, for example when the environment is noisy, so you need to turn it on to receive messages.
Task 2 How they know where to get rewards? (Feature 4)	1. Mom checks out "Reward" 2. The reward mechanism in the app rewards mothers with parenting mini-lessons (around 30s) 3. Mom watches these mini-lessons 4. After watching, you can then interact with your baby	What can I get out of it? What parenting tips can I learn?	😐	Viewing and **redeeming rewards** may require user action, so may need to be used in a relatively **relaxing environment.**	This feature provides the content that the user needs.
Task 3 How dad and mom communicate baby's situation in time? (Notification)	1. Dad receives a reminder during a meeting 2. Dad checks the monitor 3. Dad sees the monitor and tells his mother	1. What's wrong with the baby? 2. Is mam looking after the baby? 3. How can I reach mam? 4. What can I do for my baby?	😖	1. When dad is **working**, he **cannot check the monitor** and is **not able to type** easily 2. When an **emergency occurs**, Dad is not sure if Mom will respond 3. Mom may have already dealt with something when she receives a message from Dad and is **not available to reply**	1. Add convenience by adding a **voice reply function** 2. Can use **shortcuts** or set **common sentences to quickly send messages** to mom to ask for information
Task 4 How mom save time to do her own things by reorganize her daily schedule? (Feature 2)	1.Prepare breakfast 2.Before Mother do housework from time to time to check the baby's condition 3. After Mom checks the monitor and alerts her if something is wrong 4. Push suggestions to take care of the baby according to the baby's situation, and then the mother will do her own thing after watching	What is there to know about parenting? What's going to help the baby right now?	😌	Babies **at different stages have different needs and problems**	1. Tips need to **push reminders at the right time** 2. Tips need to be recommended according to the **specific situation of the baby**

DESIGN SYSTEM

Styles

Colours

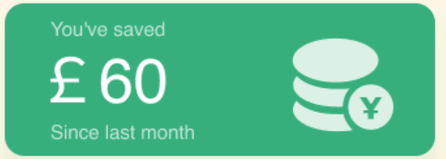
FFFFFF	F6F7FB	D1D1D6	DCF3E9
06D6A0	15BC84	37B37F	459675
FFC9B9	EF6F6C	EB5757	E8B643
58B6C2	3B5AAA	8358A7	FFC43D
D9D9D9	828282	3F3F3F	3D3D3D

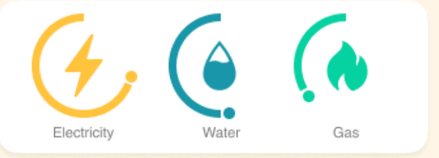
Typography

Headline 1	H1/Helvetica/Bold/34
Headline 2	H2/Helvetica/Bold/24
Headline 3	H3/Helvetica/Bold/20
Subtitle 1	Subtitle 1/Helvetica/Regular/16
Subtitle 2	Subtitle 2/Helvetica/Regular/11
Body 1	Body 1/Helvetica/Regular/20
Body 2	Body 2/Helvetica/Regular/15
Body 3	Body 3/Helvetica/Regular/11
Button	BUTTON/Helvetica/Bold/13

Icons

Card

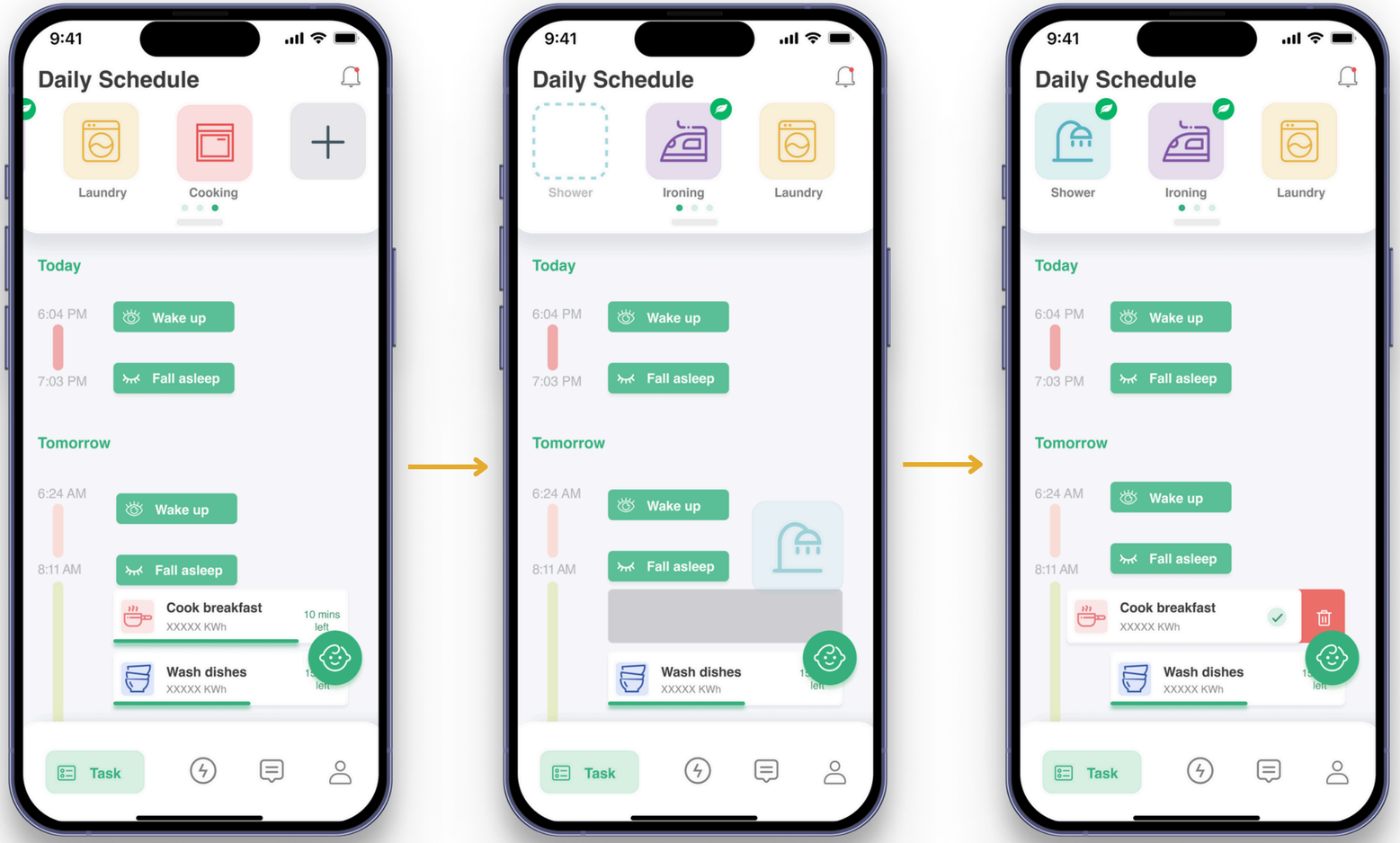




Buttons

UI PROTOTYPES

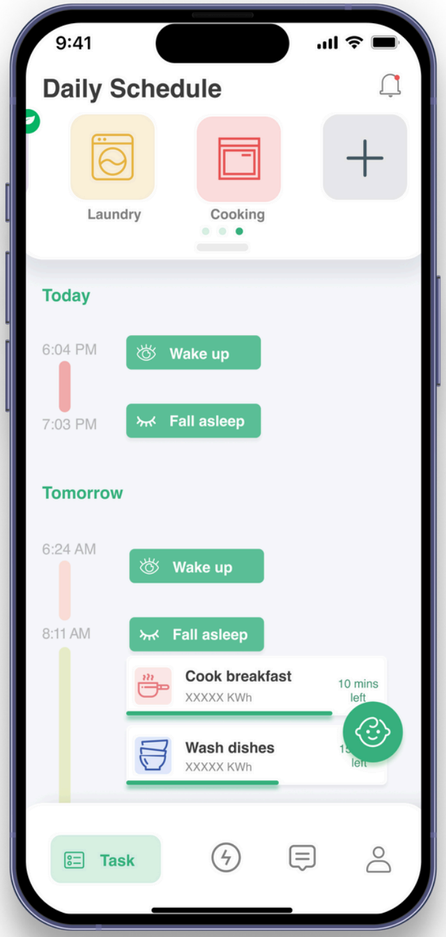
Daily schedule planning and management

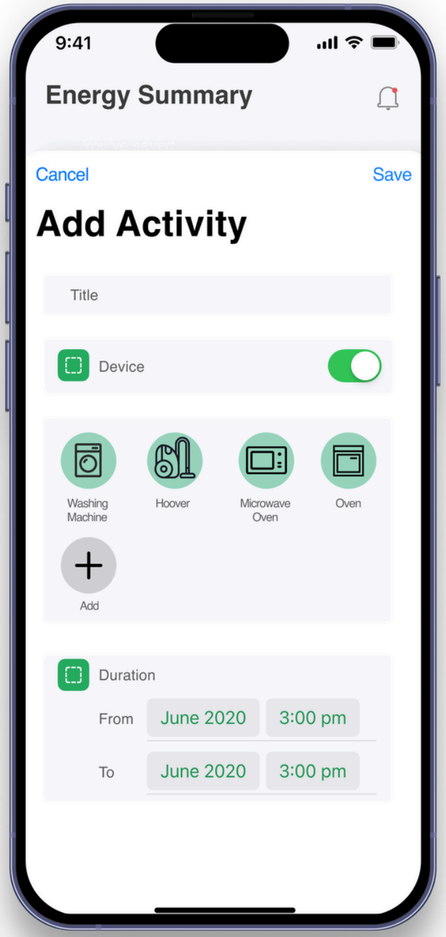


In the activity library at the top of the screen, AI will recommend more economical tasks to users based on the data of smart meters and the user's usage habits (displayed as a green corner)

Users can add and swipe edit schedules by simply dragging and dropping

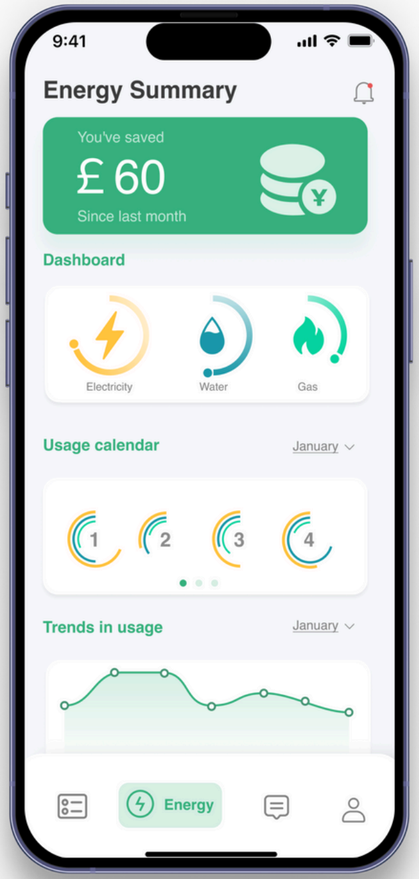
Users can intuitively see the peak hours of electricity consumption through the different colours on the Timeline on the left side of the screen





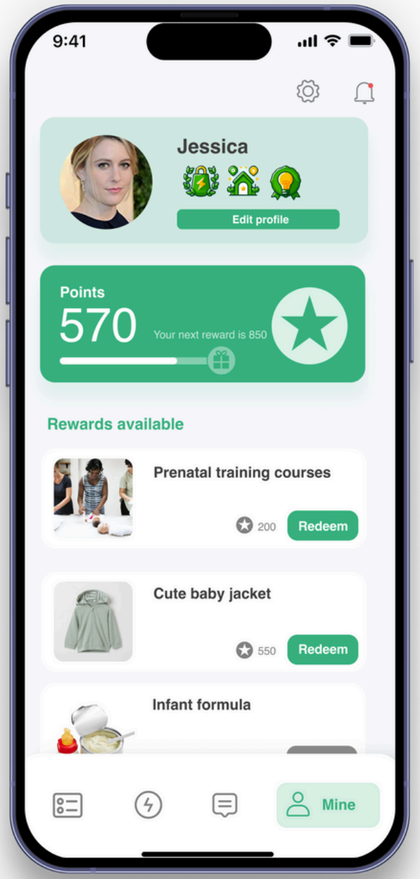
Users can click on + sign in the Activity Library to add new activities

Add activities



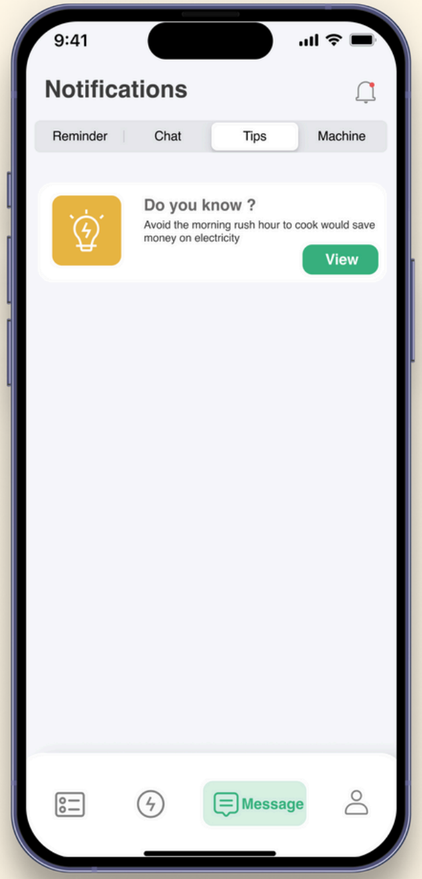
In the energy dashboard, users can see energy usage, expenditures and trends

Energy using dashboard

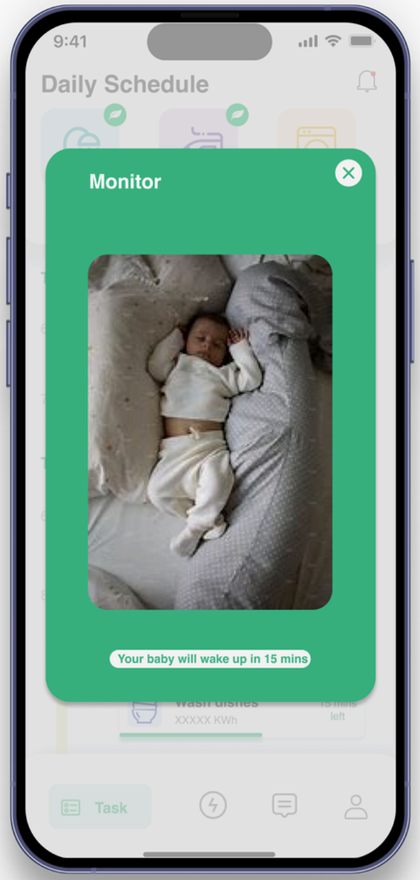


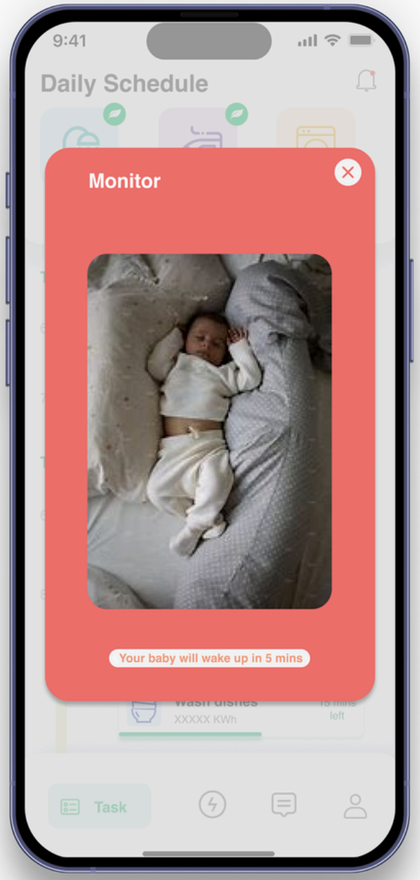
In the reward system, users use points earned by energy-saving behaviours to redeem rewards

Reward system



The notification panel classifies reminders, chats with family members, energy-saving suggestions and reminders of abnormal household device status





Depending on the connected baby activity detection device and machine learning, monitoring icons and windows will appear green when the baby is asleep and red when the baby is about to wake up

Notification systems and monitoring