

THRIVE

predictive health

RACHEL FAGAN | Senior Industrial Design Capstone

”

an ounce of prevention is worth a pound of cure

- Benjamin Franklin

predict and avoid ailments.



live a healthier lifestyle.

THRIVE

health determinant mapping

basic health information

entered by user

- height
- weight
- sex
- age

customizable digital elements

based on user's needs

- medications + supplements
- menstrual cycle
- preexisting conditions
- prayer + spiritual health

widely available data

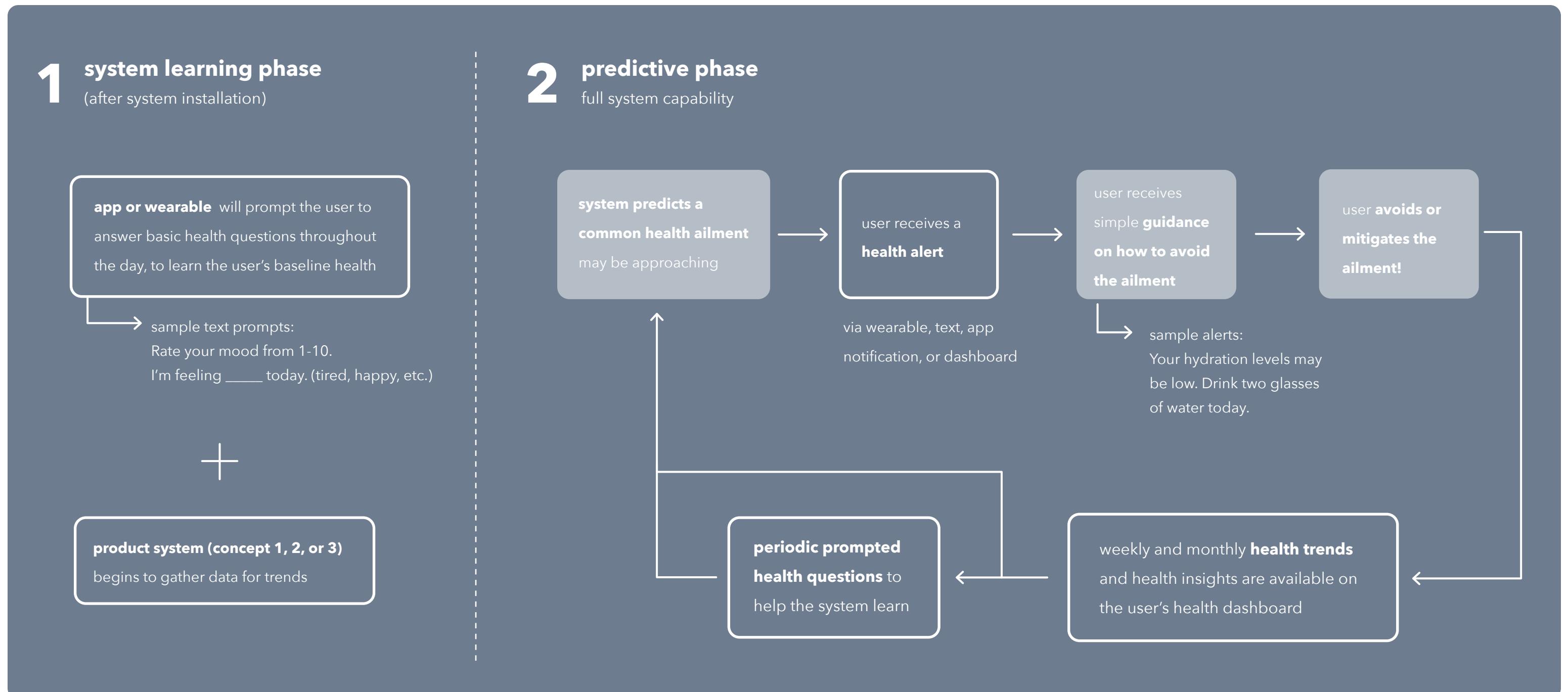
based on geolocation

- weather
- pollen count
- air quality
- season of the year



system base

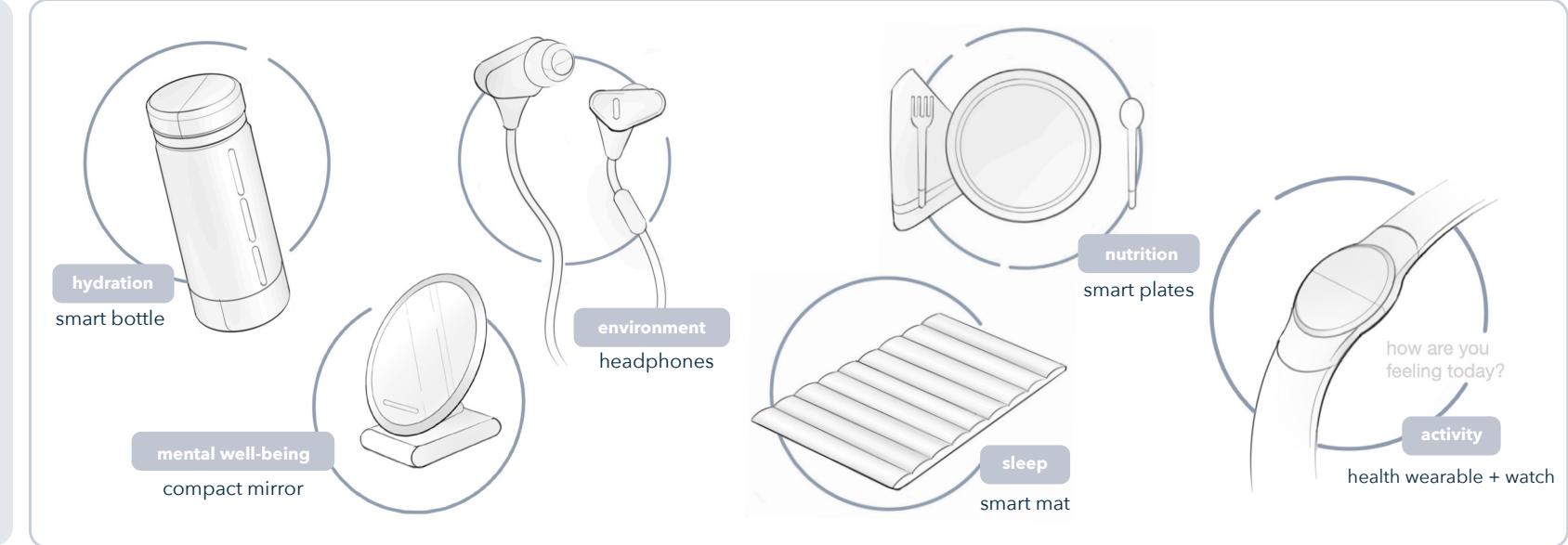
The system will work in two phases: learning and predictive.



system concepts

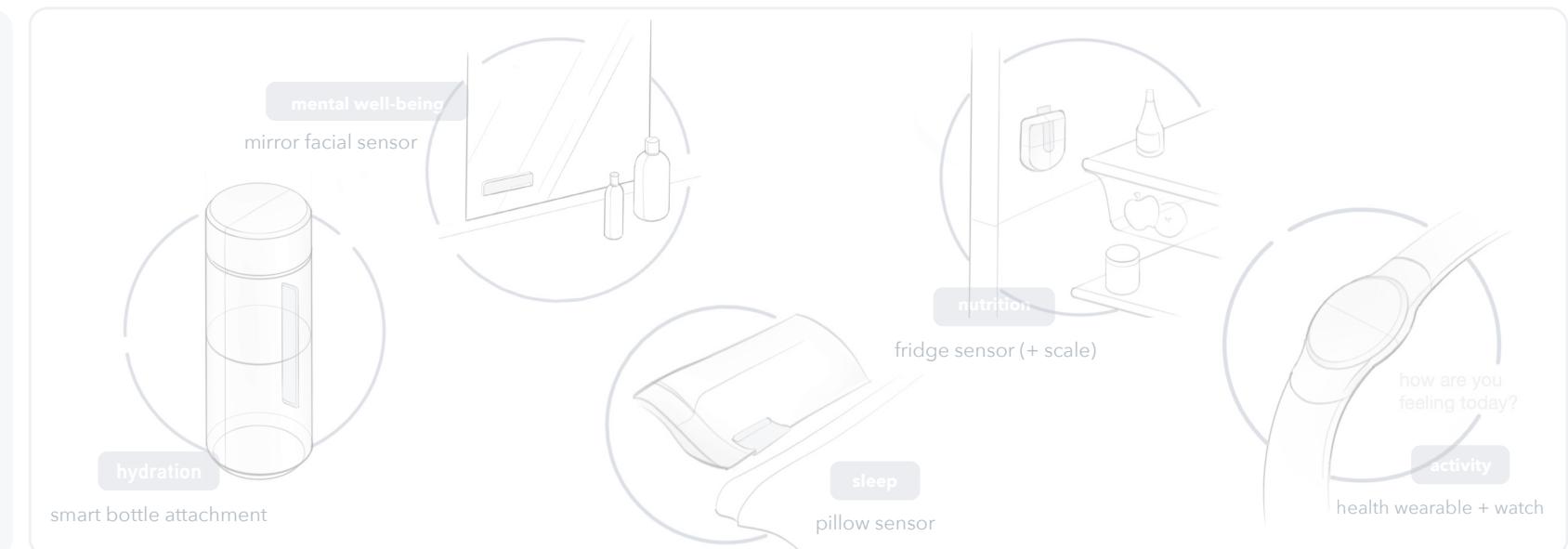
concept 1 | integrated product suite

everyday products that work together to measure health



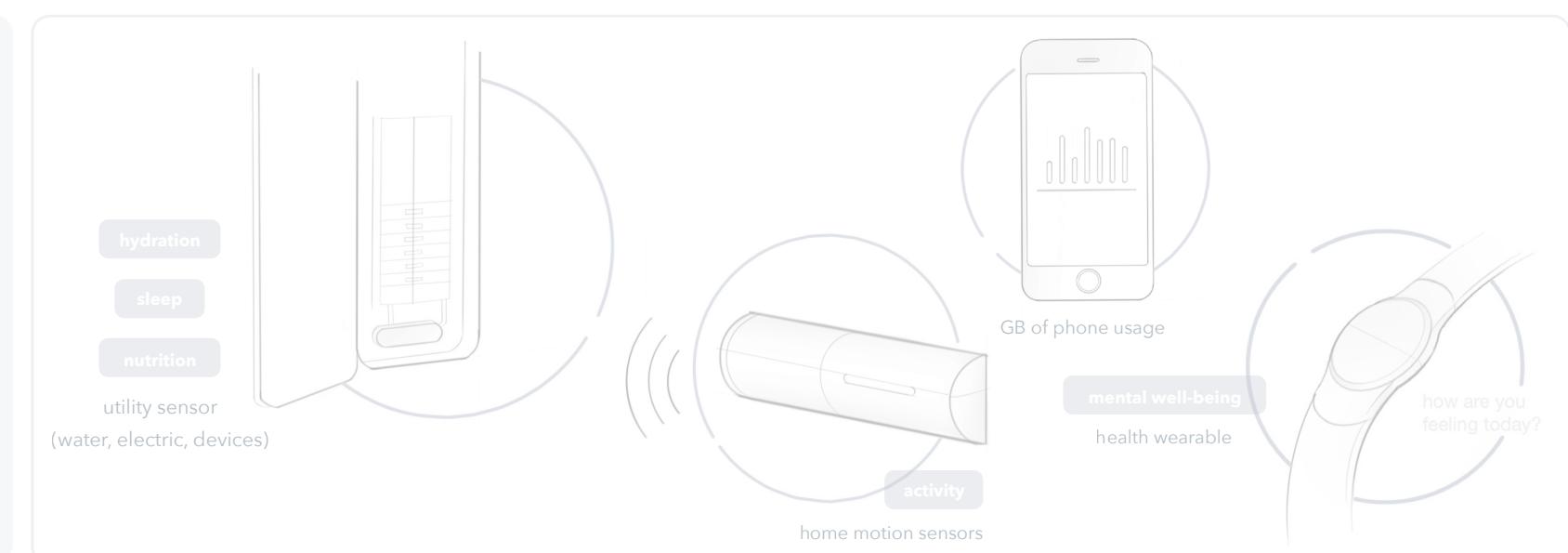
concept 2 | monitoring devices

monitors attached to existing products measure health

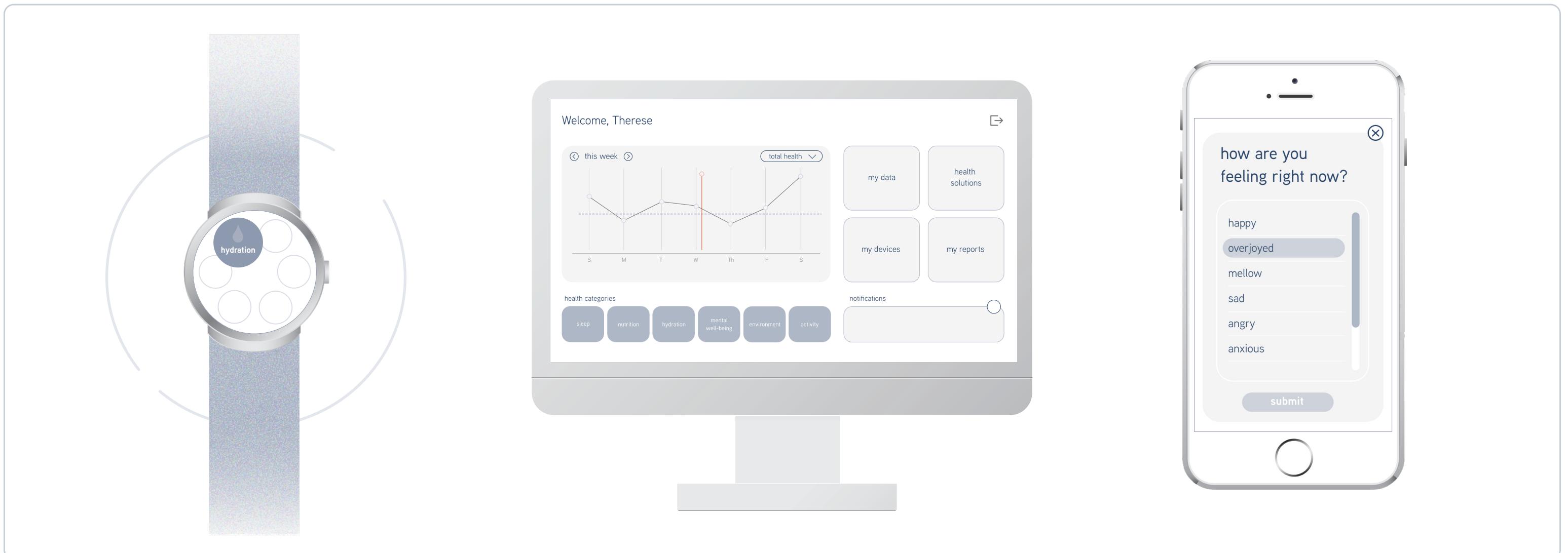


concept 3 | utility and appliance usage

utility and appliance usage indirectly measures health



interaction concepts



concept a | health wearable

concept b | health dashboard

concept c | health app

Users will can access their health trends, receive health alerts, view suggested guidance, and answer daily health questions using one or a combination of the interaction concepts above.

consumer validation | methods

12

consumer
interviews

screening survey

interviewees took a survey gauging their comfort with technology and health

Please indicate the extent to which you agree or disagree with the statements below.

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree	Not Applicable
I am eager to use the latest technology available.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have concerns about protecting my privacy when using technology.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My smart products help me live a healthier lifestyle.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



stimuli

interviewees reviewed and rated the 3 system concepts and combinations of the 3 interaction concepts



50

digital survey
respondents

screening section

a section gauging respondents' health and comfort with tech

Do you use any technology to monitor your fitness or health, such as apps, fitness watches, or other products?

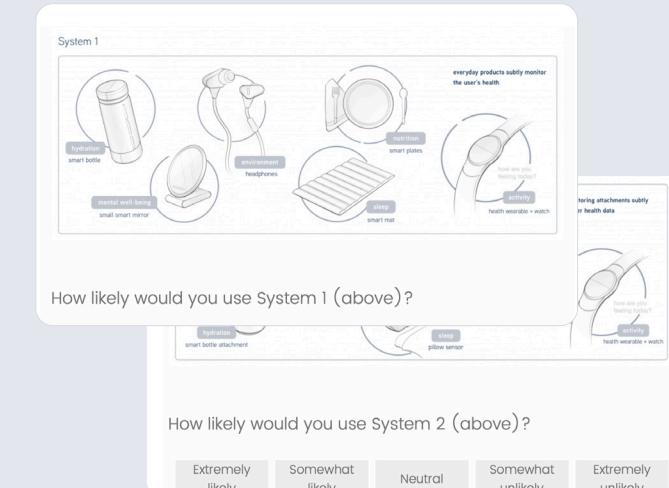
Yes (please list the names of the products or apps you use)

No

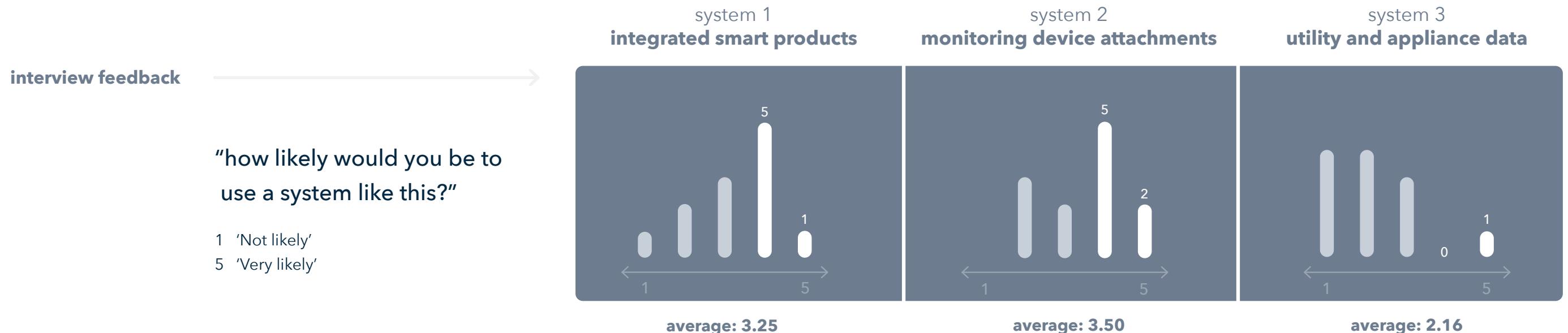


opinion section

respondents reviewed and rated the 3 systems and chose between two interaction combinations

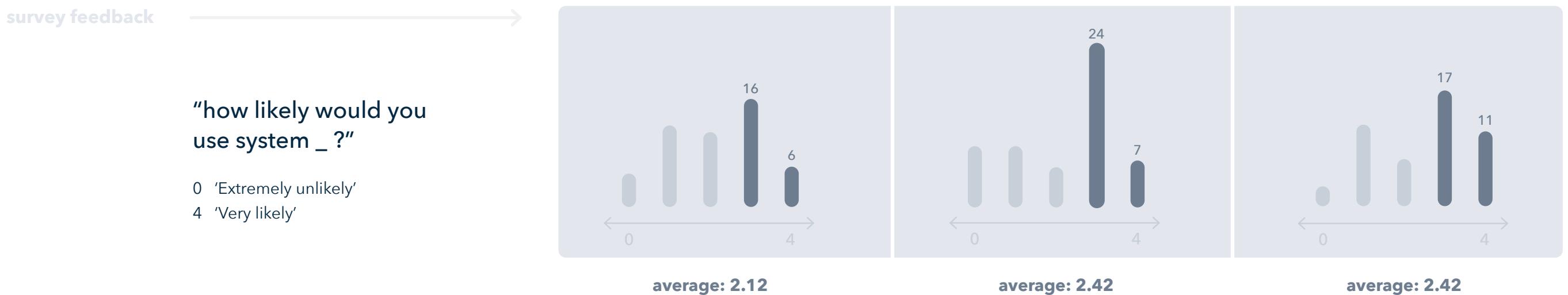


consumer validation | system feedback



“which system was your favorite?”

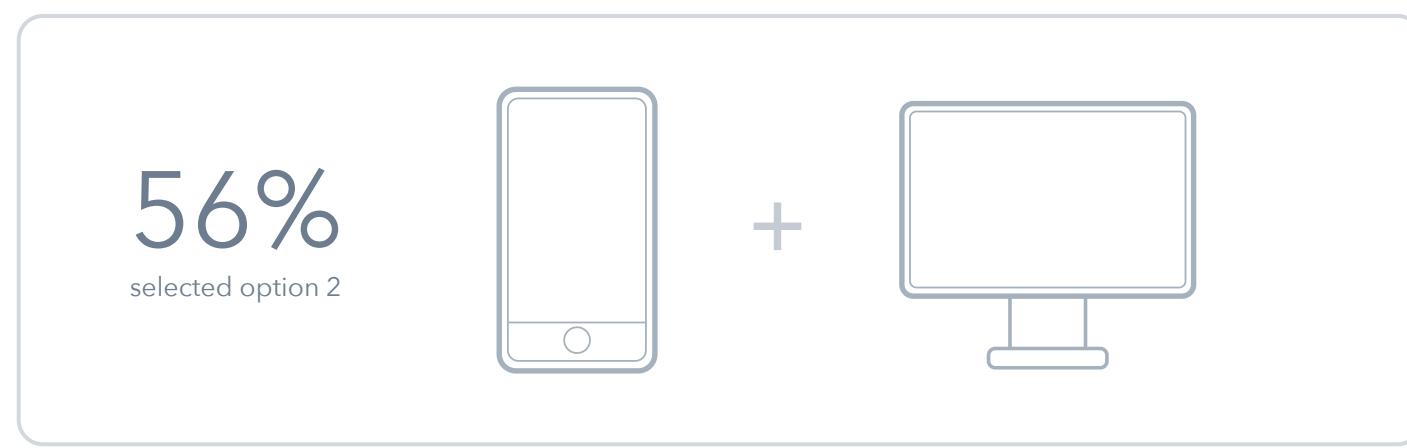
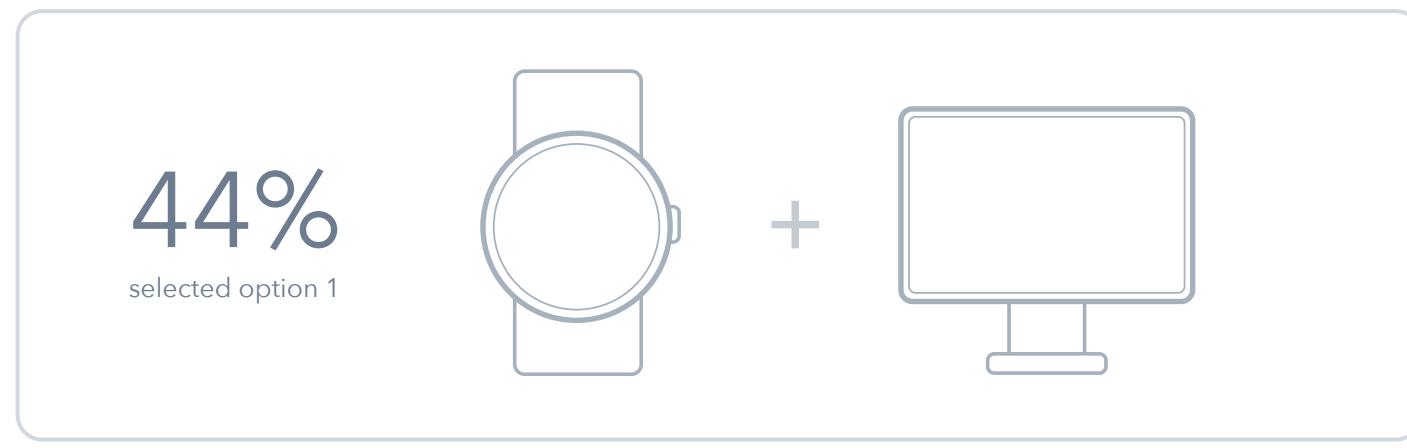
6 / 12 selected System 1	5 / 12 selected System 2	1 / 12 selected System 3
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consumer validation | interaction feedback

survey feedback

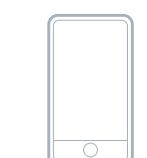
"which option is your favorite method of receiving information?"



"Having something tangible that I can interact with for the purpose of improving my health appeals more to me than checking an app that I could forget to use."



"A watch is too difficult to get an overall perspective so a bigger screen is important."



"I think I would be more inclined to look at that kind of information on an app through my phone or something else that's not a small screen on my wrist."

consumer validation | filtering by consumer group

Consumer Group Qualities	Selected Favorite System	Favorite System Average Likeliness Score
consumer group 1: high tech + healthy (18 respondents) + Currently use technology to monitor fitness or health + 'Agrees' or 'Somewhat agrees' that they are eager to use the latest tech + 'Strongly agrees' or 'Somewhat agrees' that they live healthy lifestyles	system 1 integrated smart products 8 / 18 respondents	2.61 + 0.49 <small>from all-respondent likeliness avg.</small>
consumer group 2: high tech + low health (6 respondents) + 'Agrees' or 'Somewhat agrees' that they are eager to use the latest tech + 'Somewhat disagrees' that they eat healthy diets	system 1 integrated smart products 4 / 6 respondents	2.83 + 0.71 <small>from all-respondent likeliness avg.</small>
consumer group 3: avoids tech (7 respondents) + 'Strongly disagrees' or 'Somewhat disagrees' that they are eager to use the latest tech	system 3 utility and appliance data 3 / 7 respondents	1.71 - 0.71 <small>from all-respondent likeliness avg.</small>

system value for consumer groups

GROUP 1

interested in technology and
lives a very healthy lifestyle



VALUE : MORE DATA + PREDICTIONS

- increased data collection for fine-tuning lifestyle
- predictive capabilities, rather than just descriptive monitoring

GROUP 2

interested in technology
but is struggling to live a
healthy lifestyle

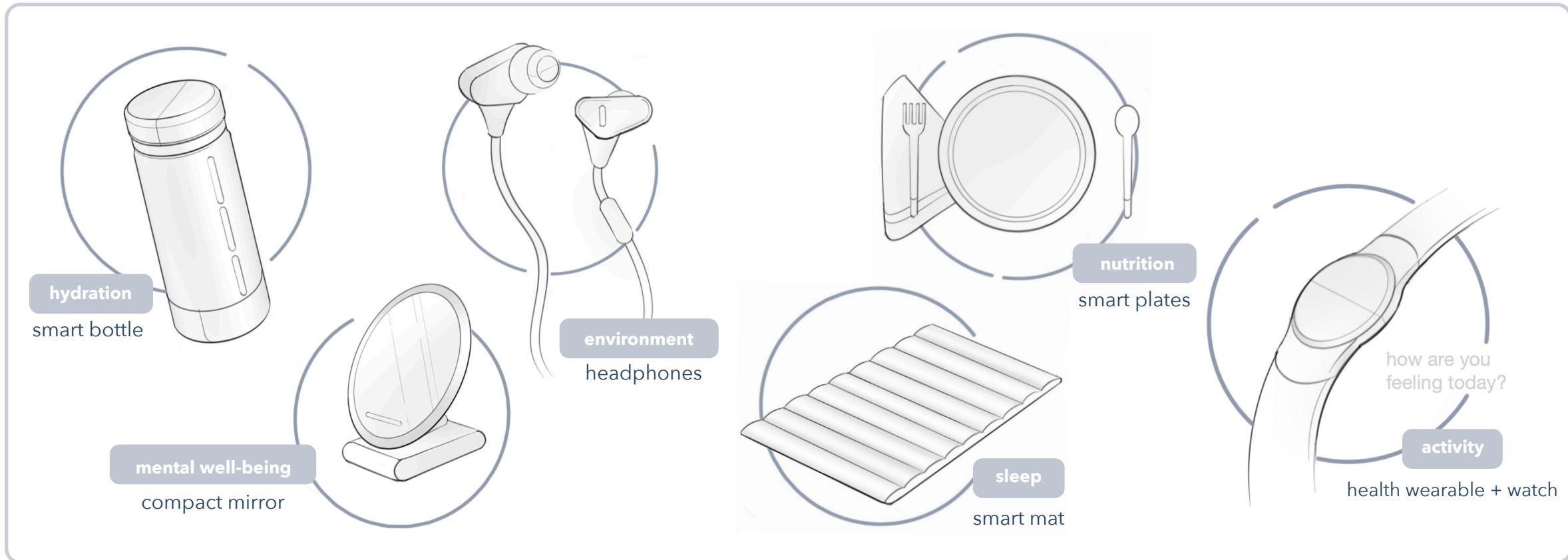


VALUE : MOTIVATION + GUIDANCE

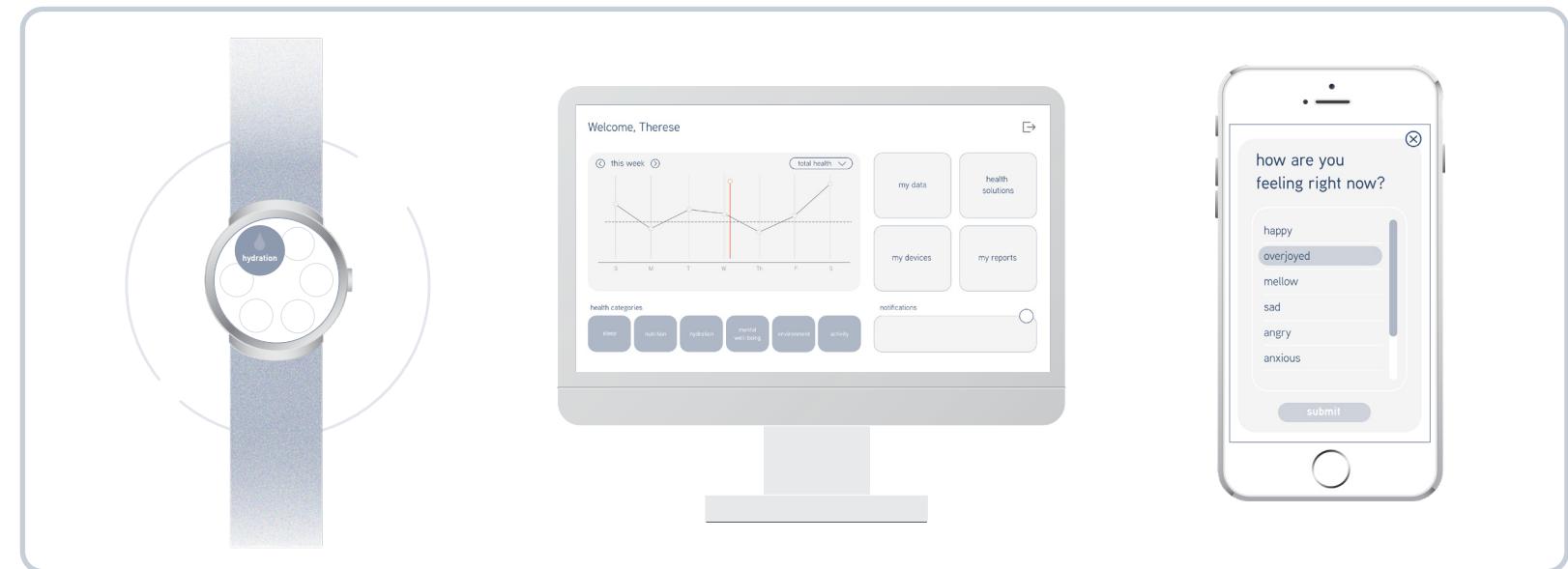
- health tips with suggestions on simple, pro-active steps to avoid ailments
- insights on what behaviors correlate with what health outcomes

selected direction

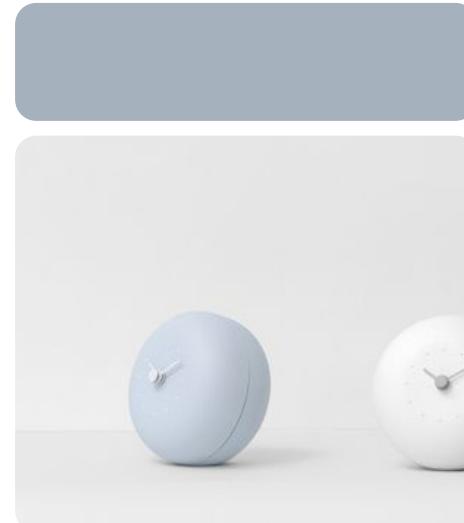
concept 1 | integrated product suite



- health watch
- health dashboard
- health app



consumer-driven aesthetic



high tech

- products look capable of sophisticated monitoring

minimalist design, cameras and touch screens

unobtrusive design

- products are integrated into daily routines and have an unobtrusive aesthetic

matte materials, silicone grips, soft rounds and pills

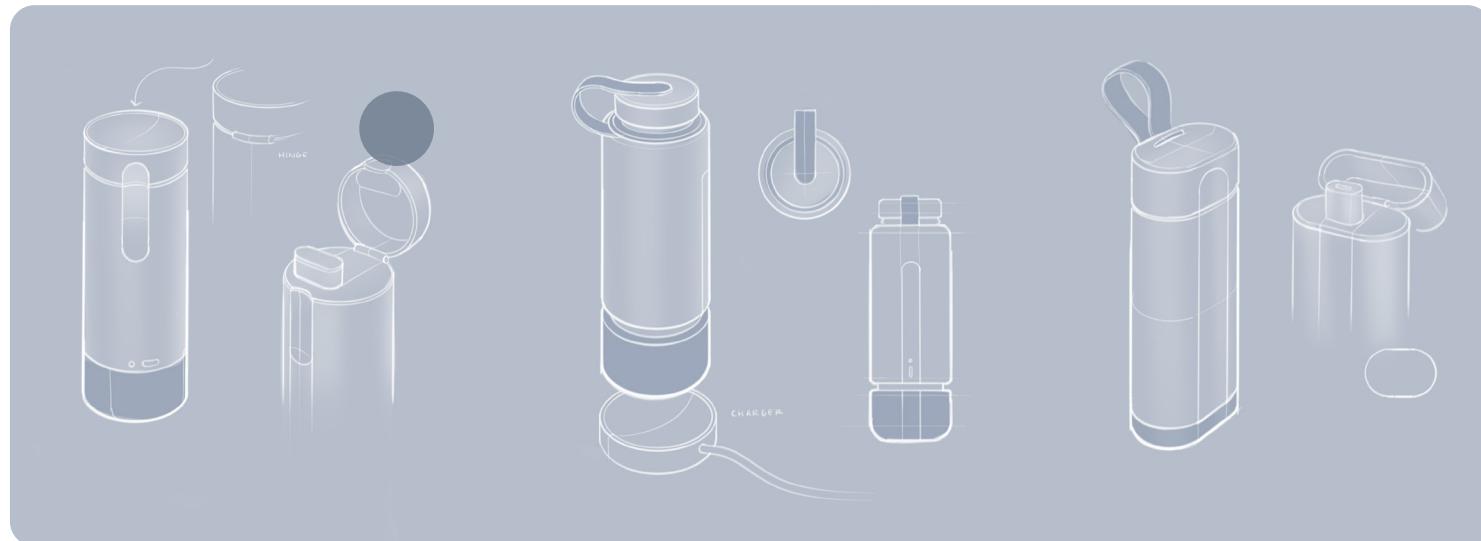
simple to use

- products have simple touch points and are easy to connect, charge, and use daily

simple light cues, buttons, and charging

form + feature exploration

bottle



headphones

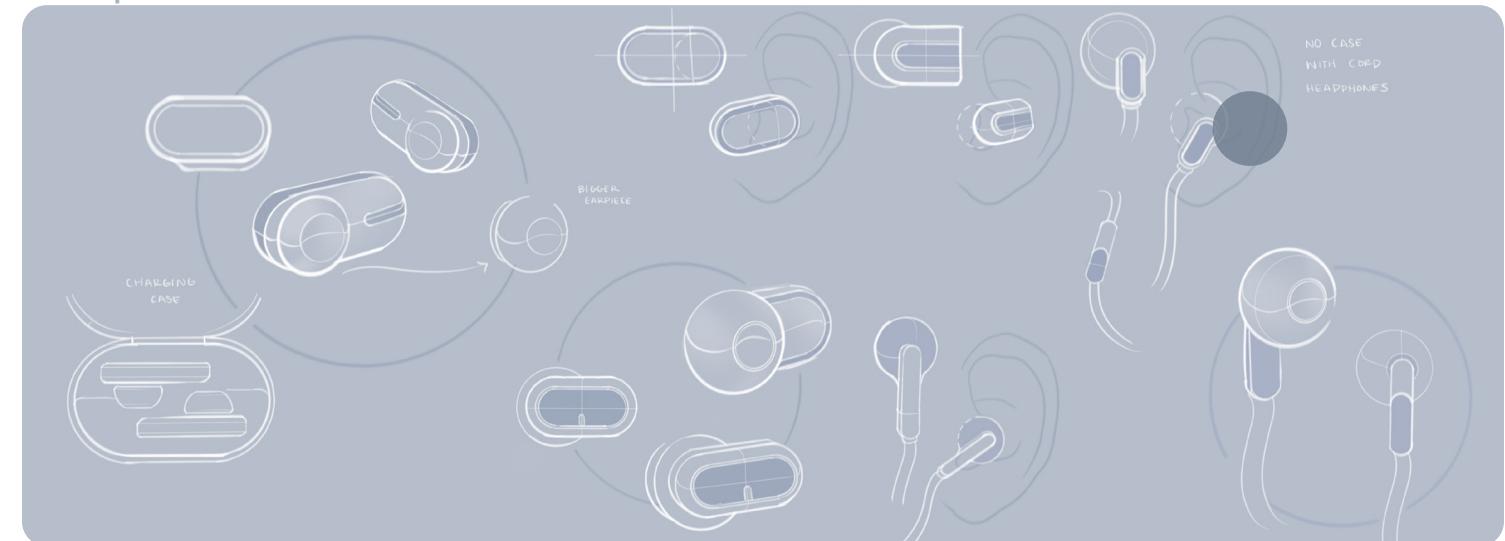
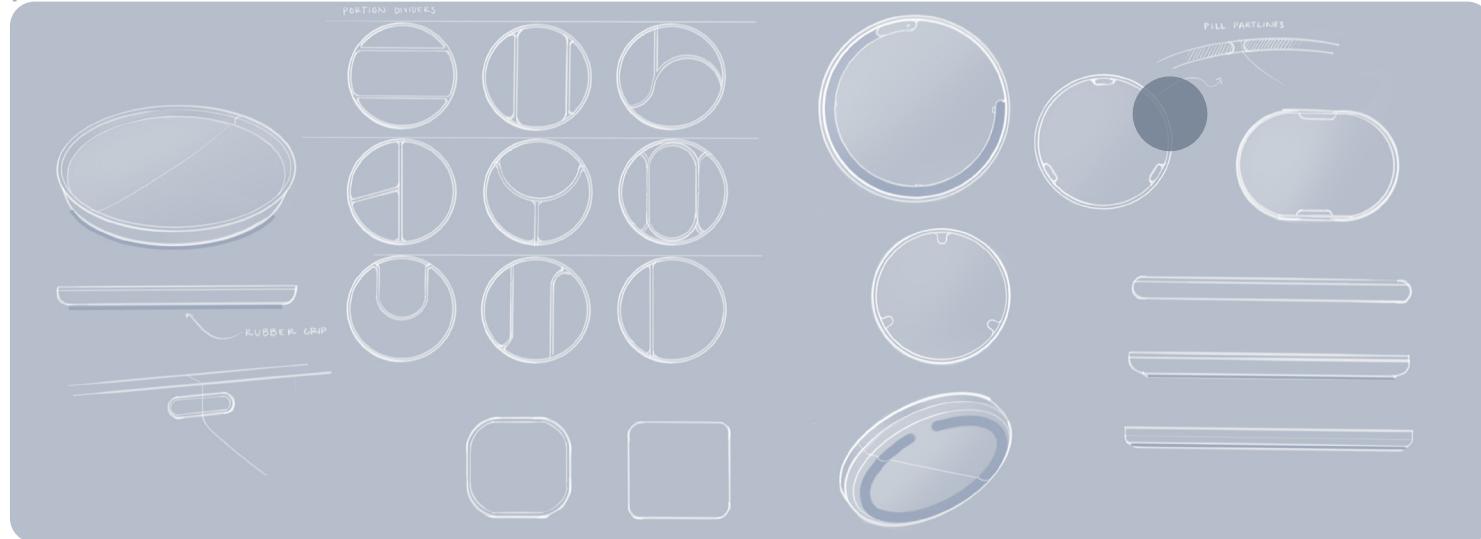
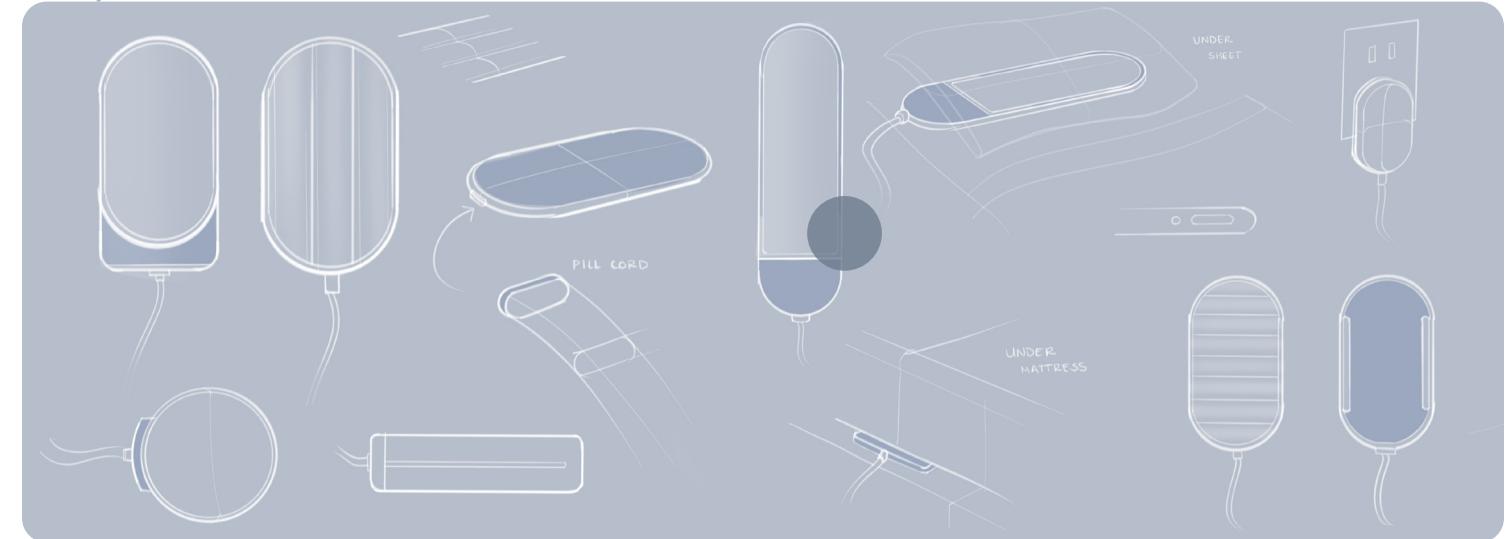


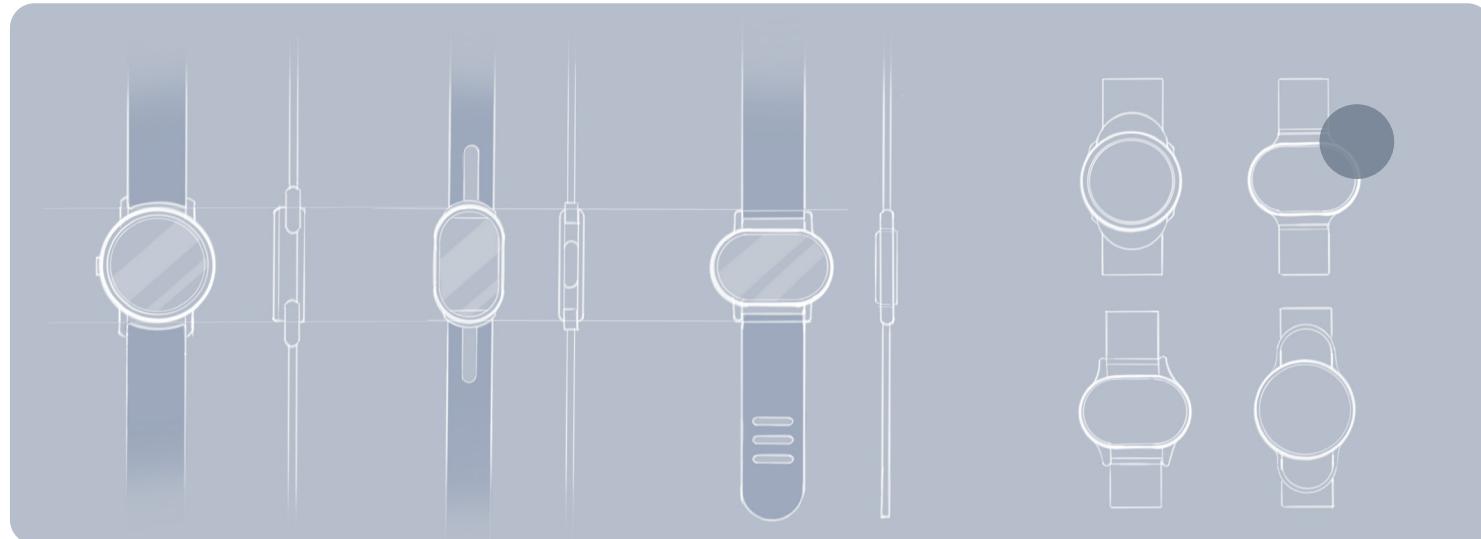
plate set



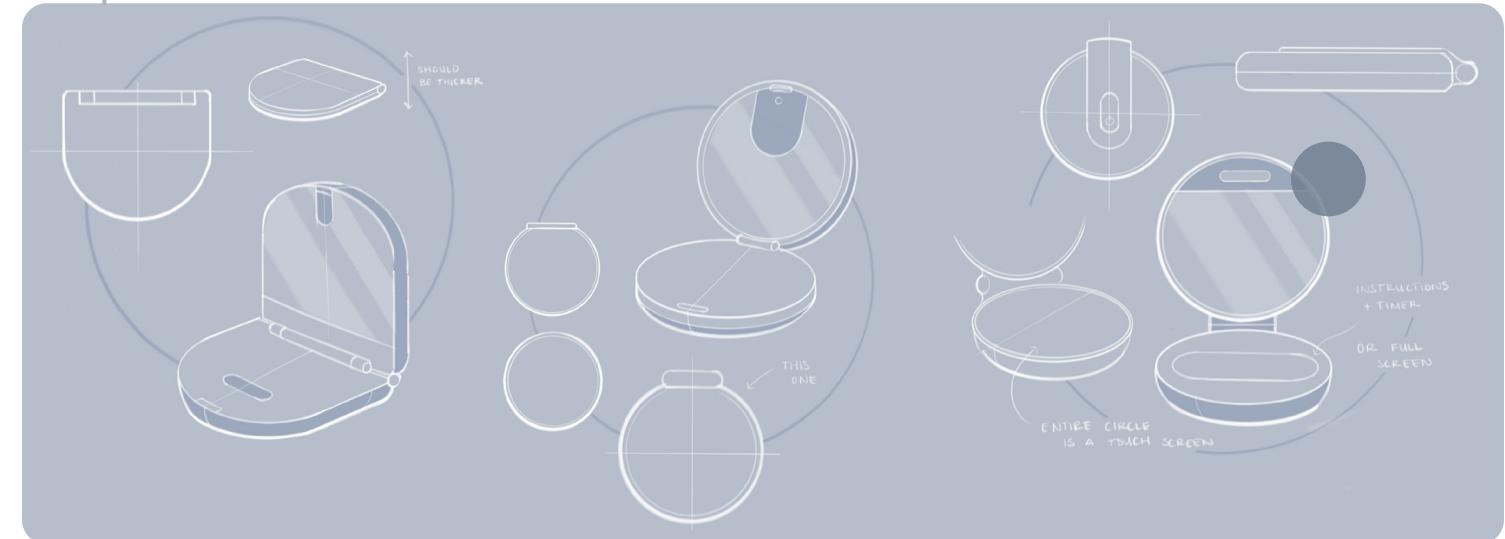
sleep sensor



health watch



compact mirror



THRIVE is a suite of connected, integrated products that monitor your health to predict upcoming ailments. You can avoid or mitigate ailments, gain health trend insights, understand the causes of ailments, and ultimately live a healthier lifestyle.

hydration



environment



mental well-being



sleep



nutrition



activity



THRIVE
predictive health



HYDRATION bottle

senses

quantity consumed

alcohol + sugar content

hydration schedule

location of bottle

ENVIRONMENT headphones

sense

amount of sunlight

temperature

time in fresh air

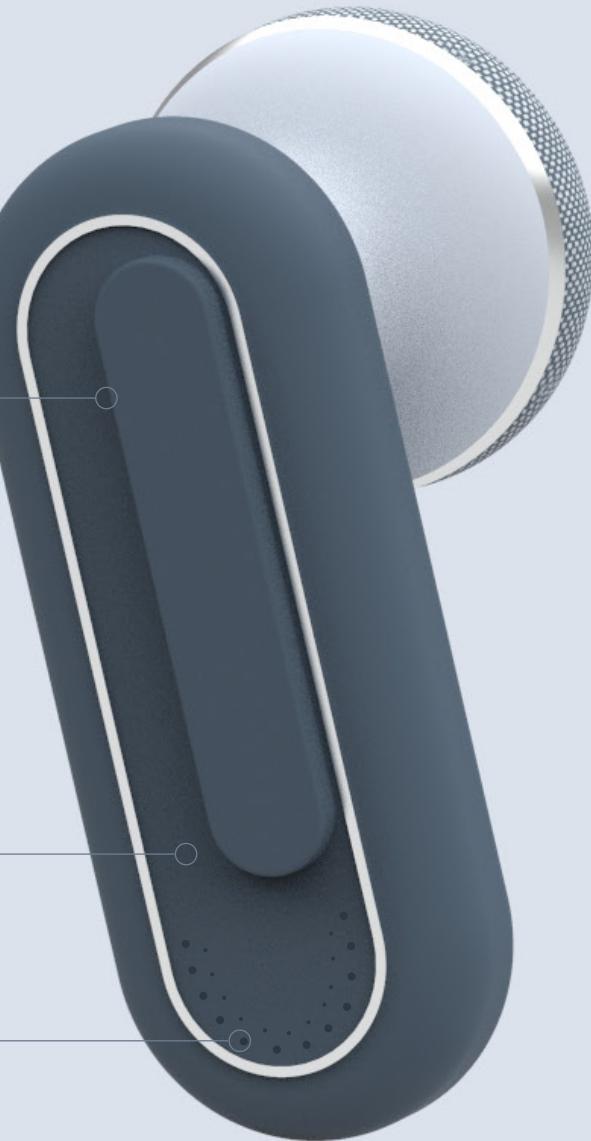
noise level

indoors vs. outdoors

+ play music

volume

push top (+) or bottom (-)



sensing strip

sunlight sensor + thermometer

microphone

detects immediate sound level



power + pairing

connects to the app via Bluetooth

indicator light

power (full) + time to charge

(blinking)



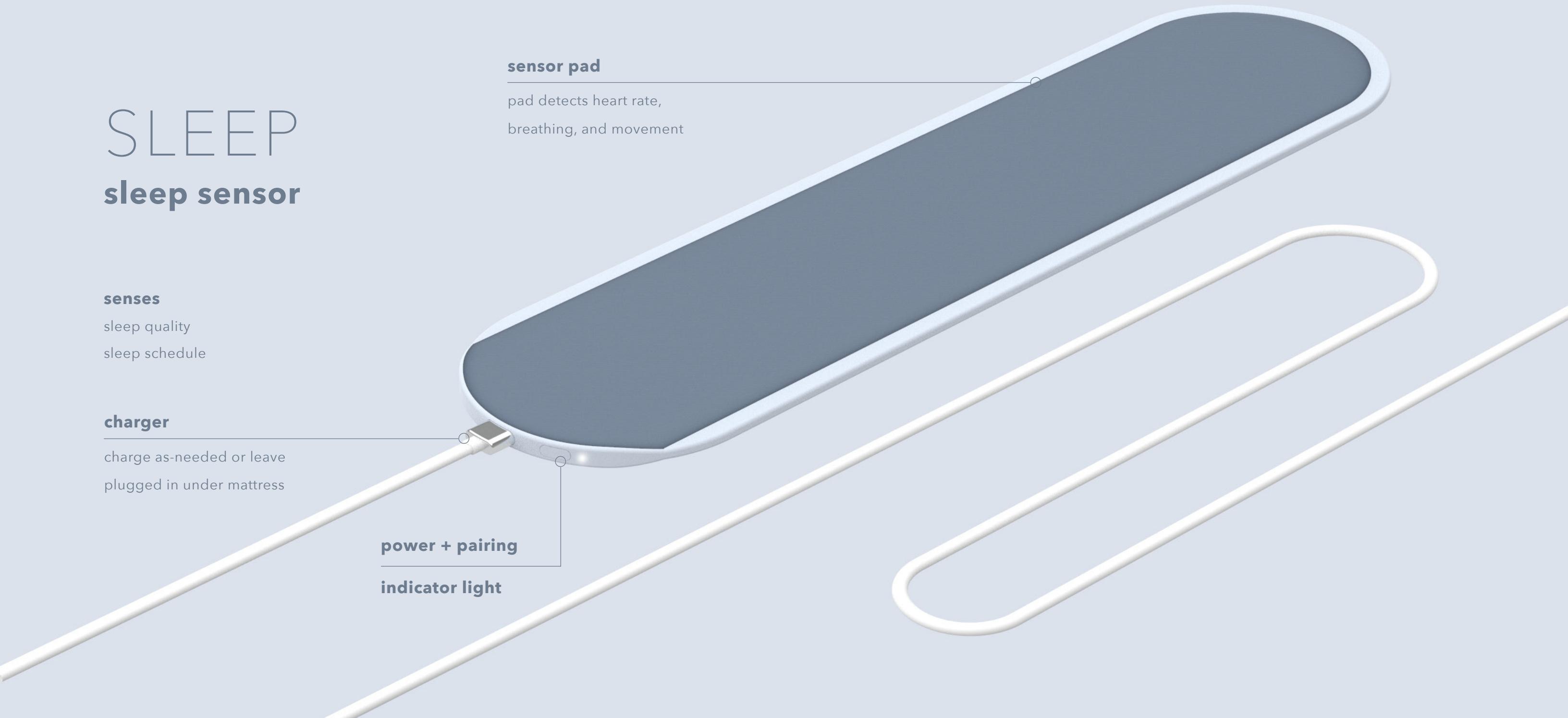
MENTAL WELL-BEING

compact mirror

senses
stress levels
well-being (sick?)
energy levels
emotional state

SLEEP

sleep sensor





silicone grip
grips surfaces and locks
into wireless plate charger

scale
detects weight of
food on plate

matte plastic

senses
eating schedule
diet
quantity (weight) consumed

3 plates included

camera (one of 3)
images food to compare to
database; detects what
type of food

power + pairing
indicator light

NUTRITION

plate set

ACTIVITY health watch

senses

biometrics
exercise
daily schedule
geolocation

traditional smart watch capabilities

guiding exercise routines
connect call + text with phone
additional apps

power

hold to turn off watch

touch screen

notifications

health predictions,
health tips,
+ health reminders



magnetic closure

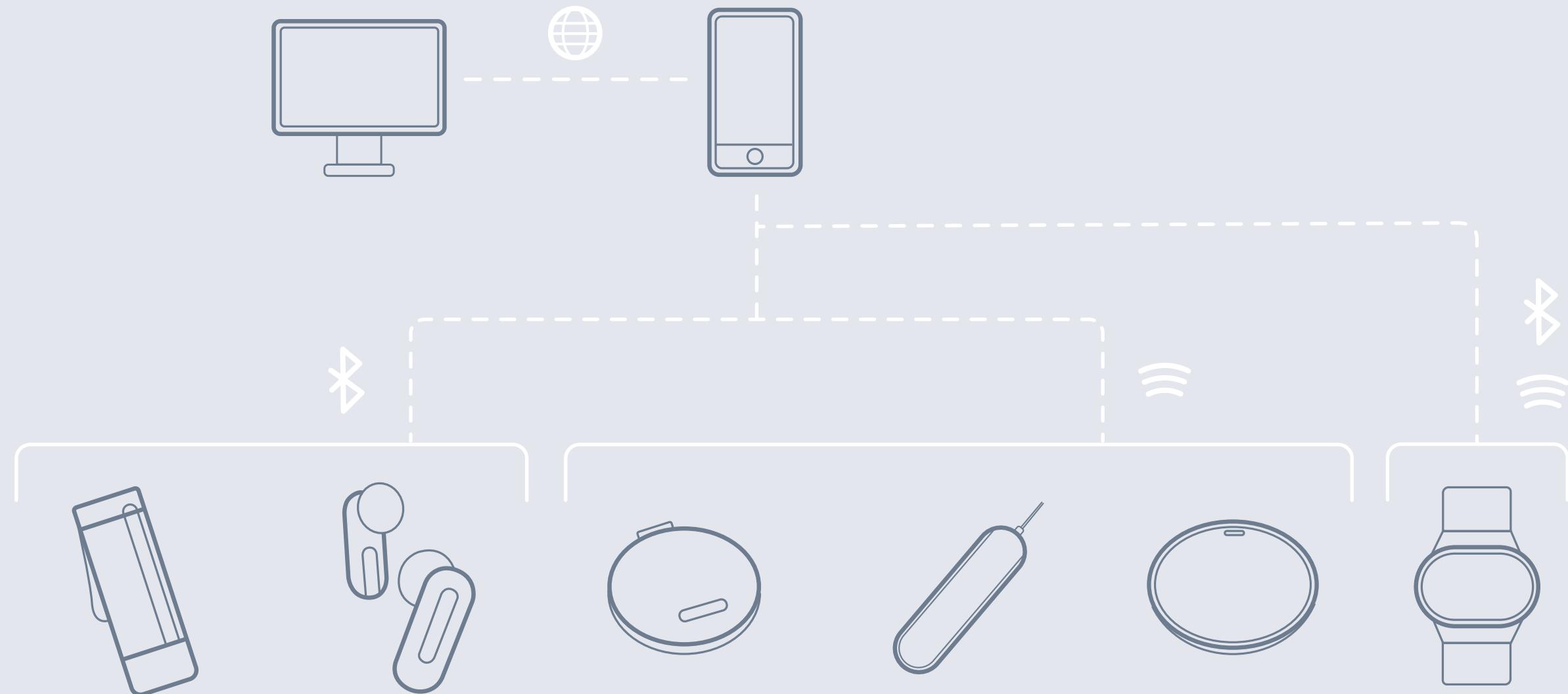
adjustable to custom circumference



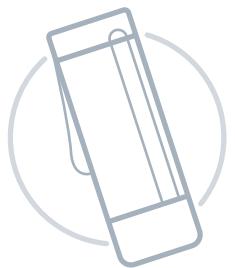
soft silicone watch band

wireless charging

system map

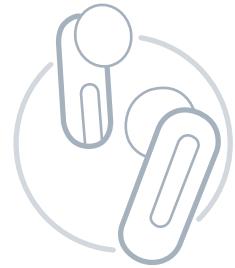


predicting an ailment



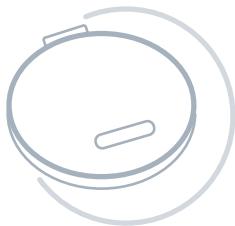
hydration

hydration schedule
alcohol content
sugar content
quantity consumed



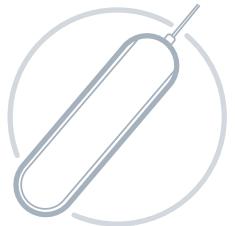
environment

amount of sunlight
temperature
time in fresh air
noise level
indoors vs. outdoors



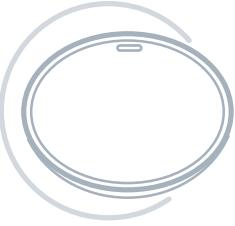
mental well-being

stress levels
energy levels
emotional state
well-being (sick?)



sleep

sleep quality
sleep schedule



nutrition

eating schedule
diet
quantity consumed



activity

biometrics
exercise
daily schedule
geolocation

external

pollen count + air quality
weather
season of the year

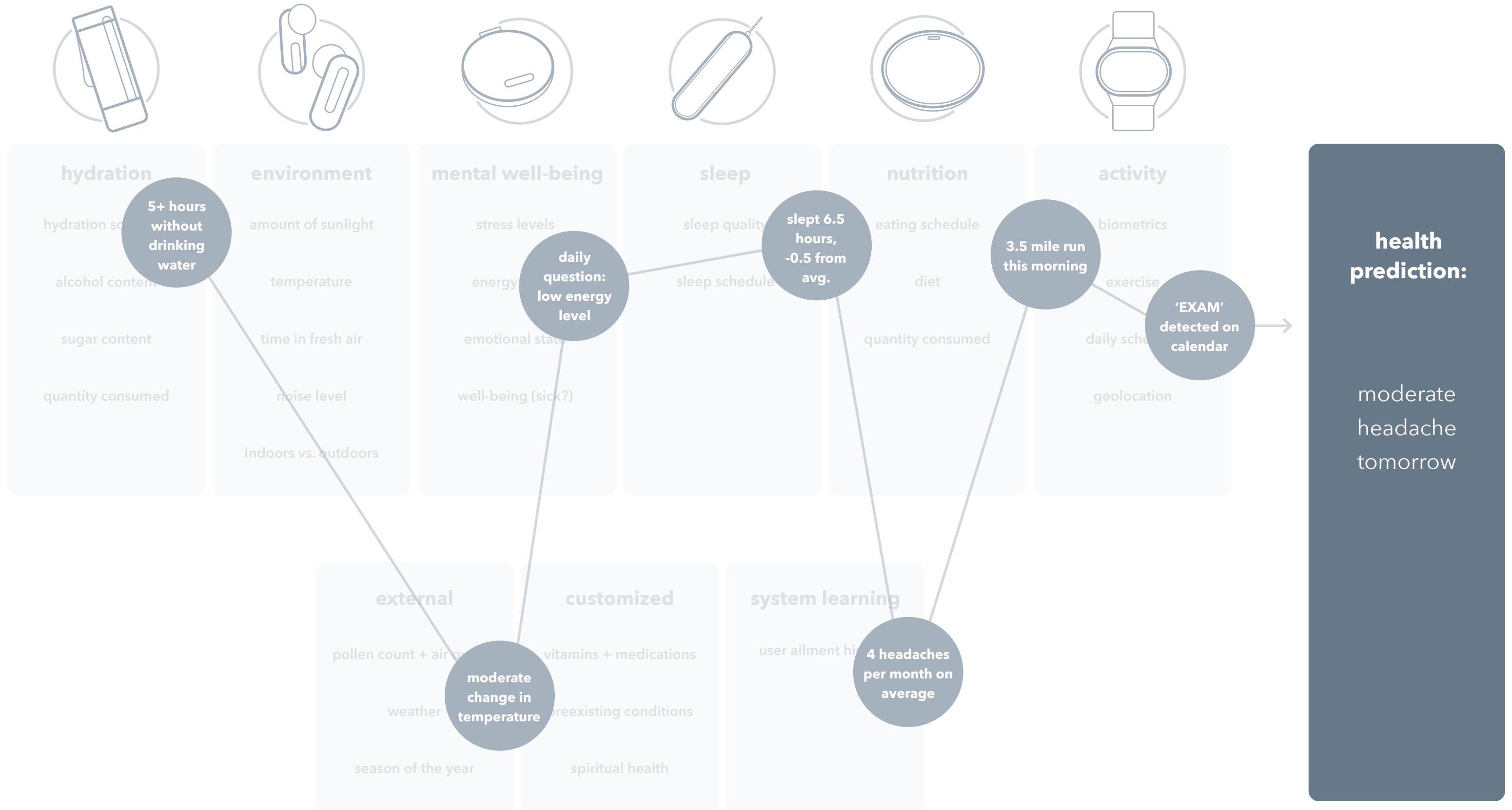
customized

vitamins + medications
preexisting conditions
spiritual health

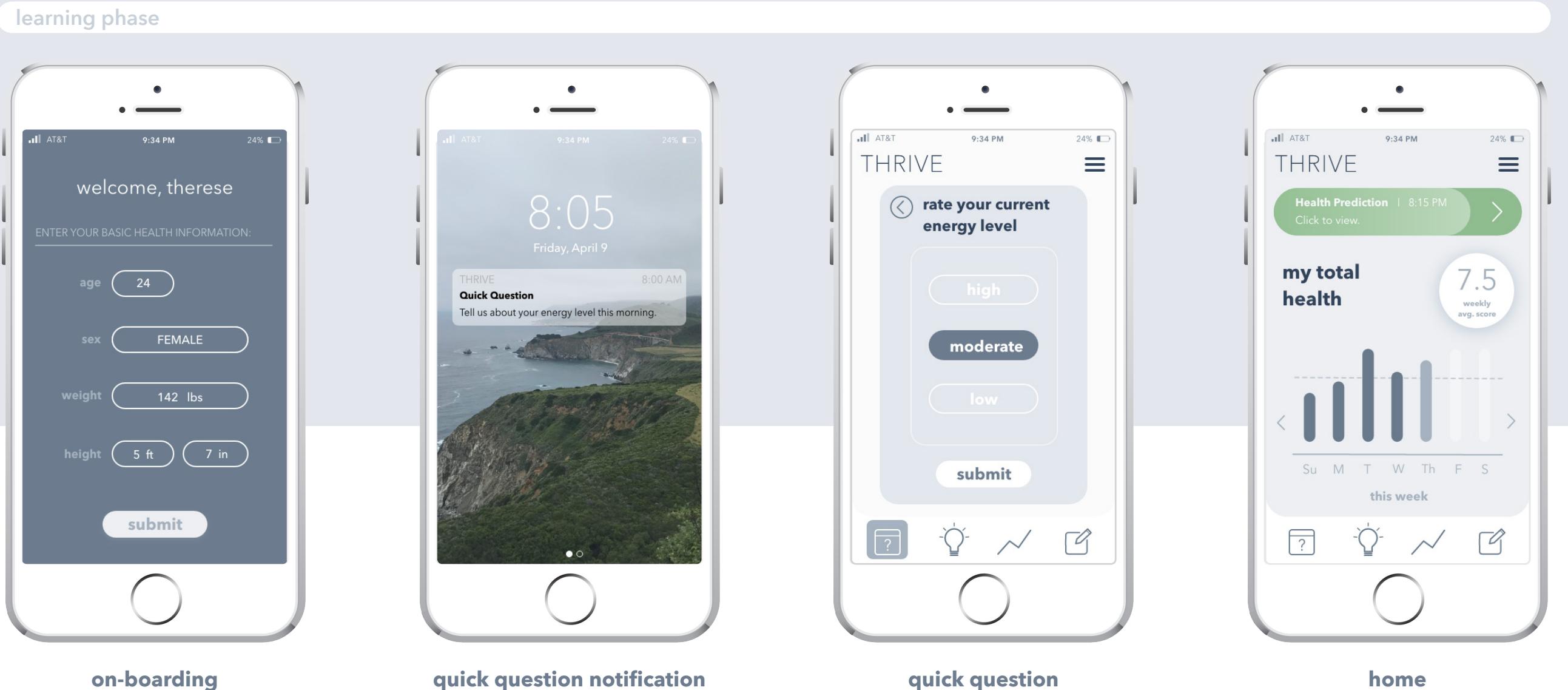
system learning

user ailment history

predicting an ailment

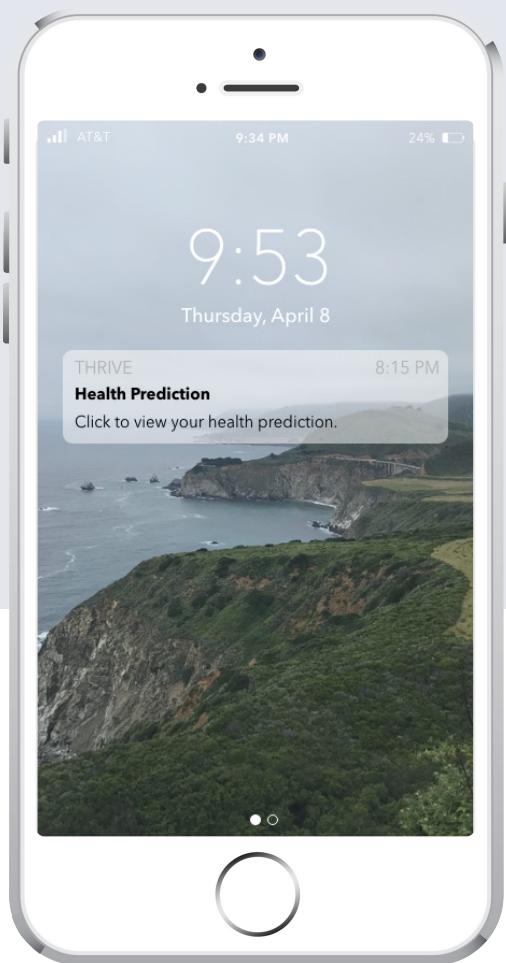


user journey

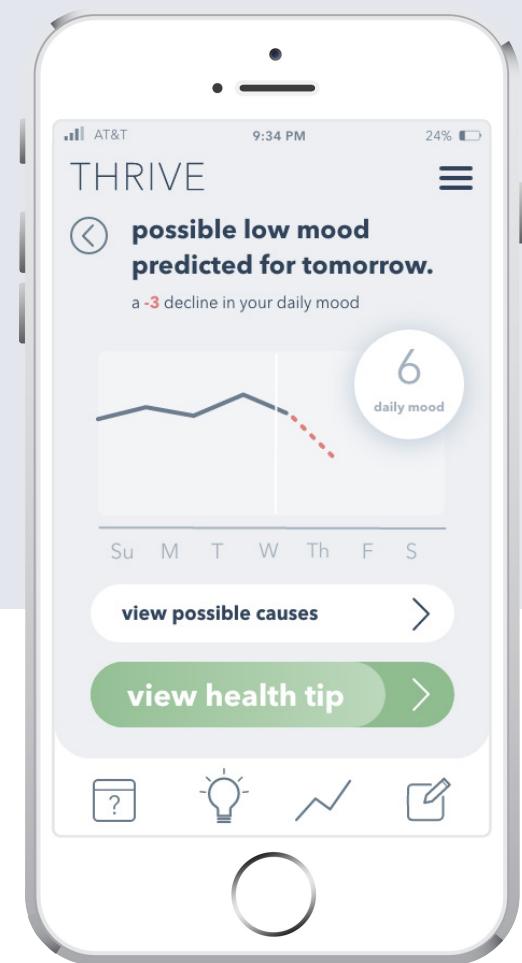


user journey

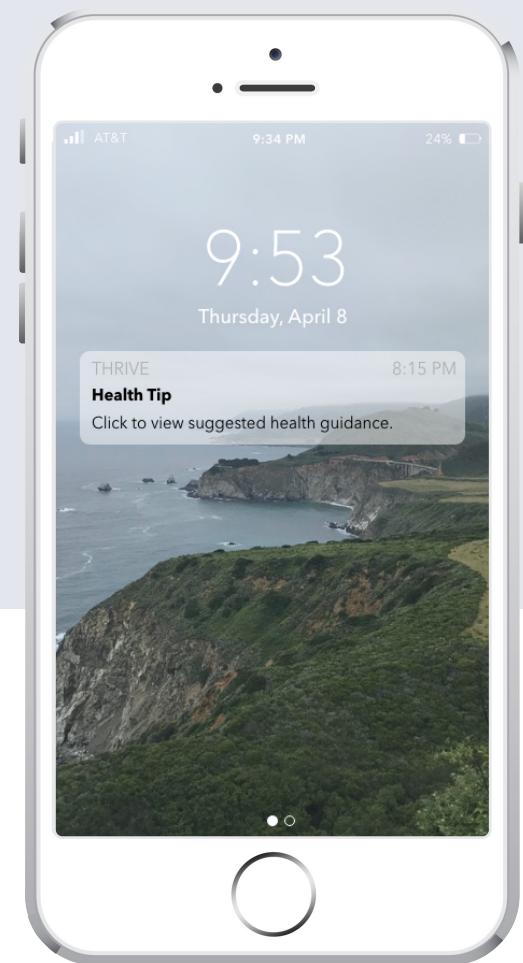
predictive phase



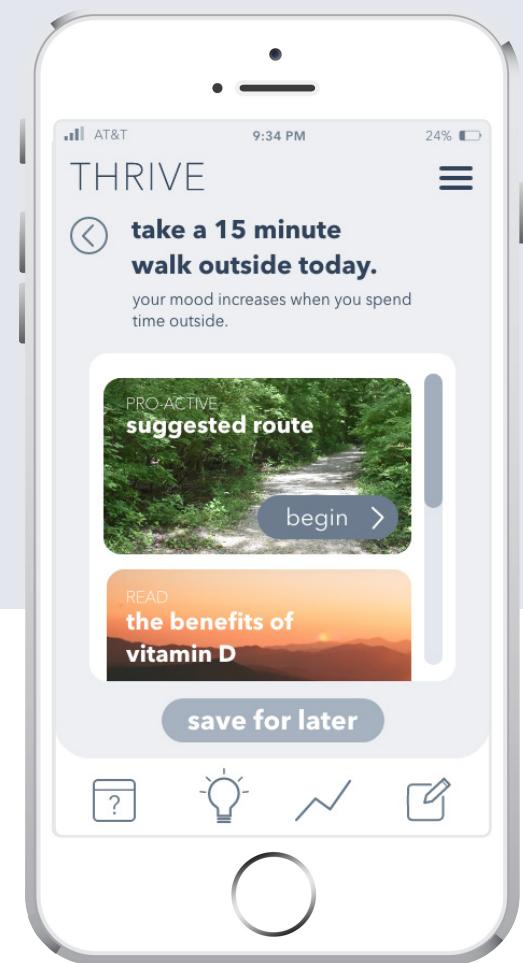
health prediction notification



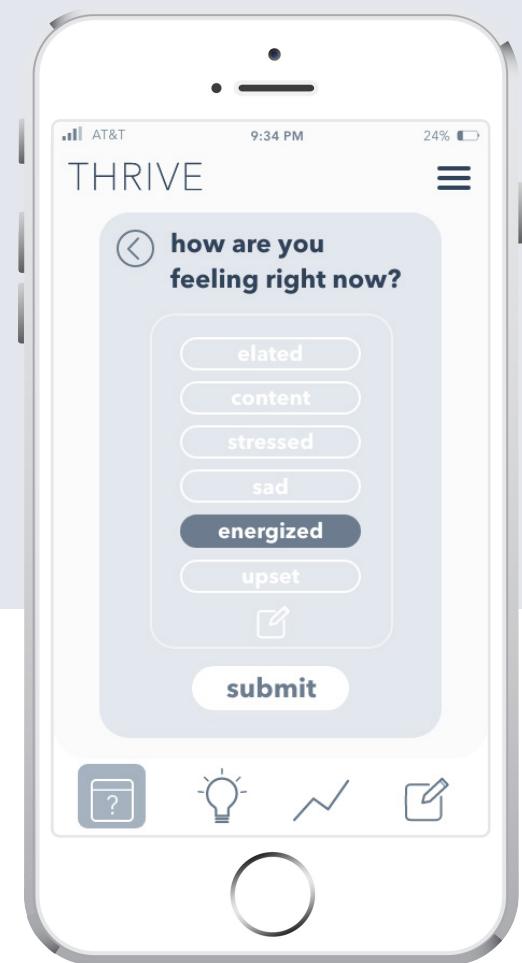
health prediction



health tip notification



health tip

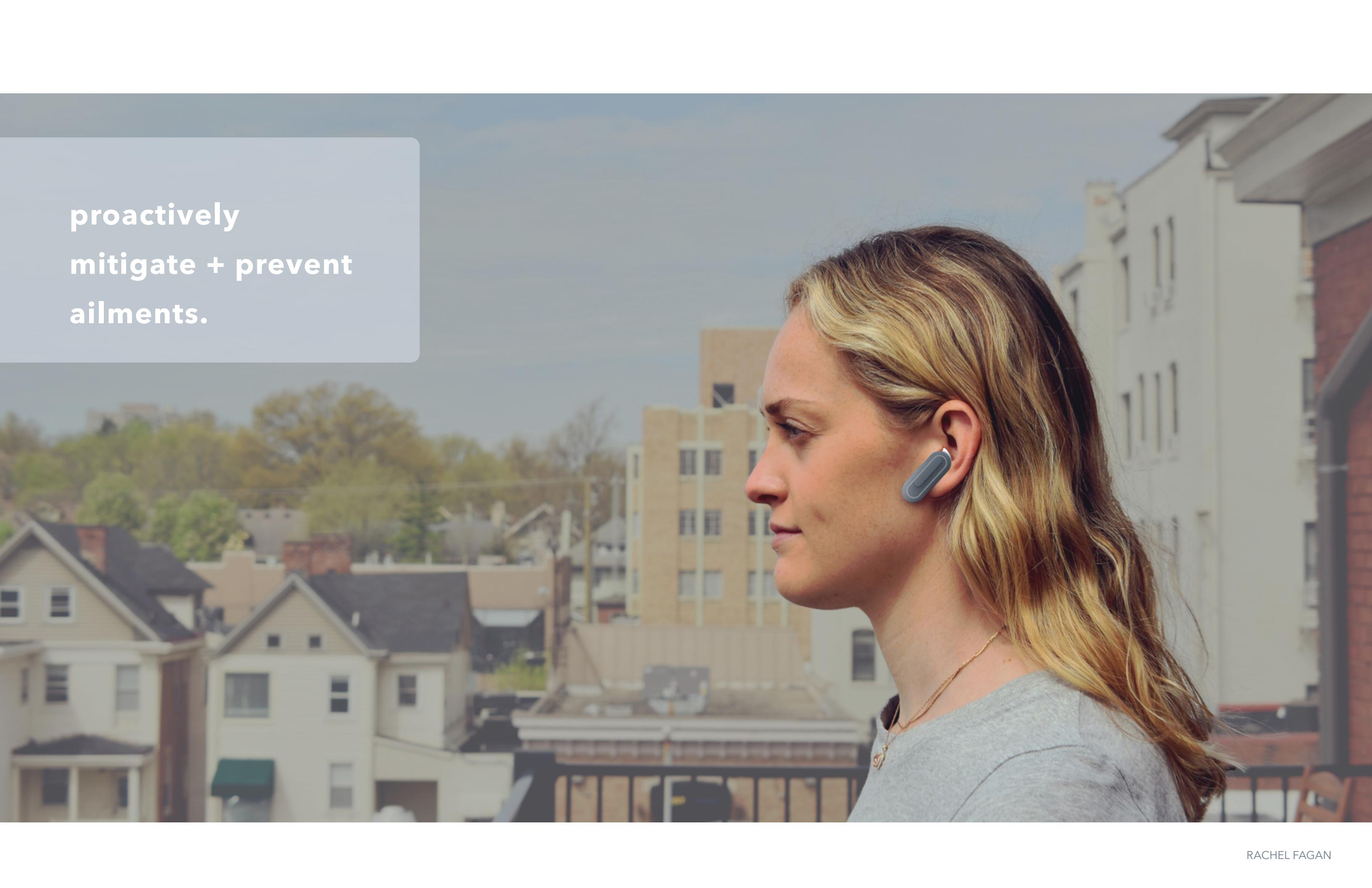


wellness check

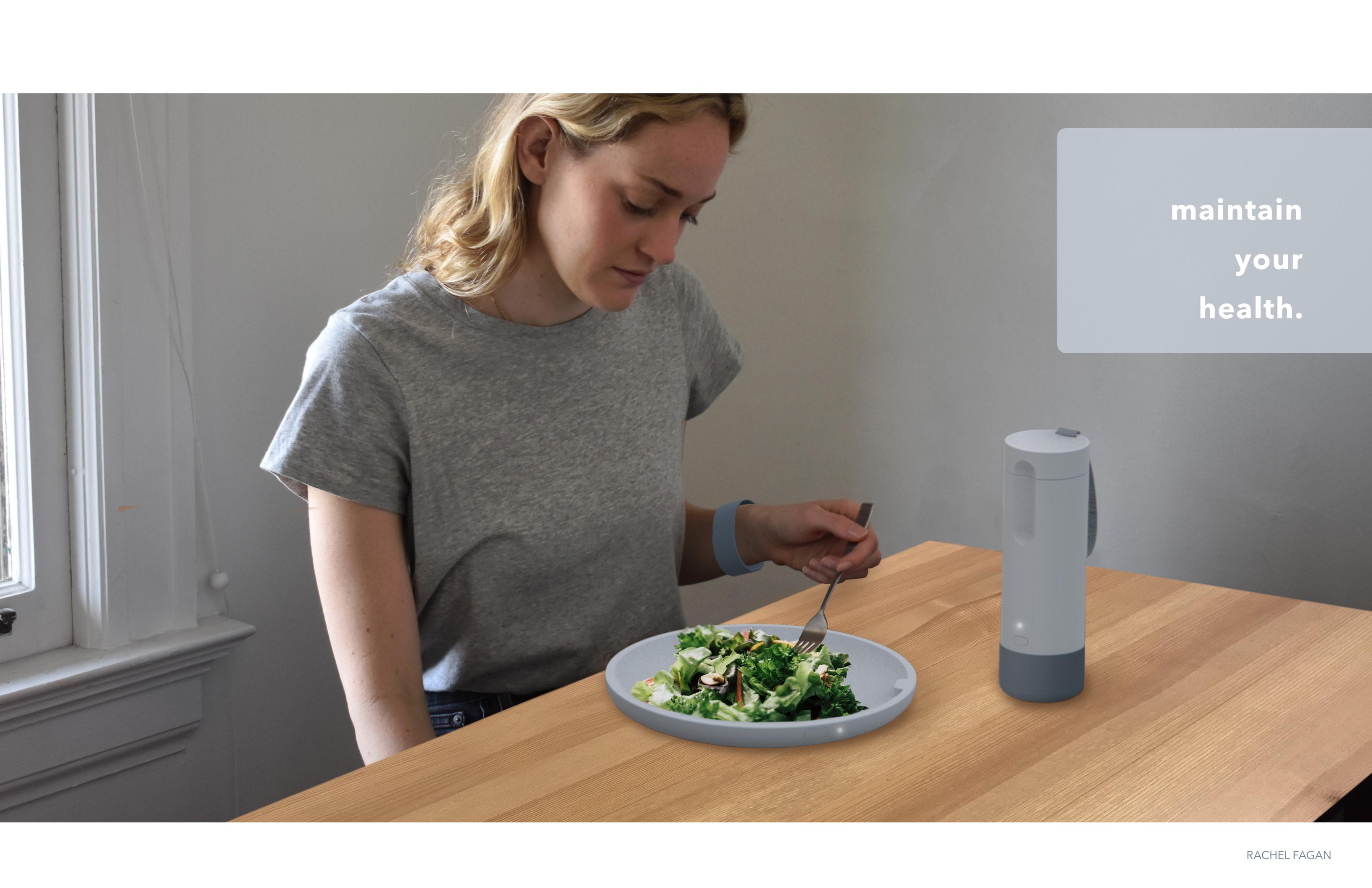




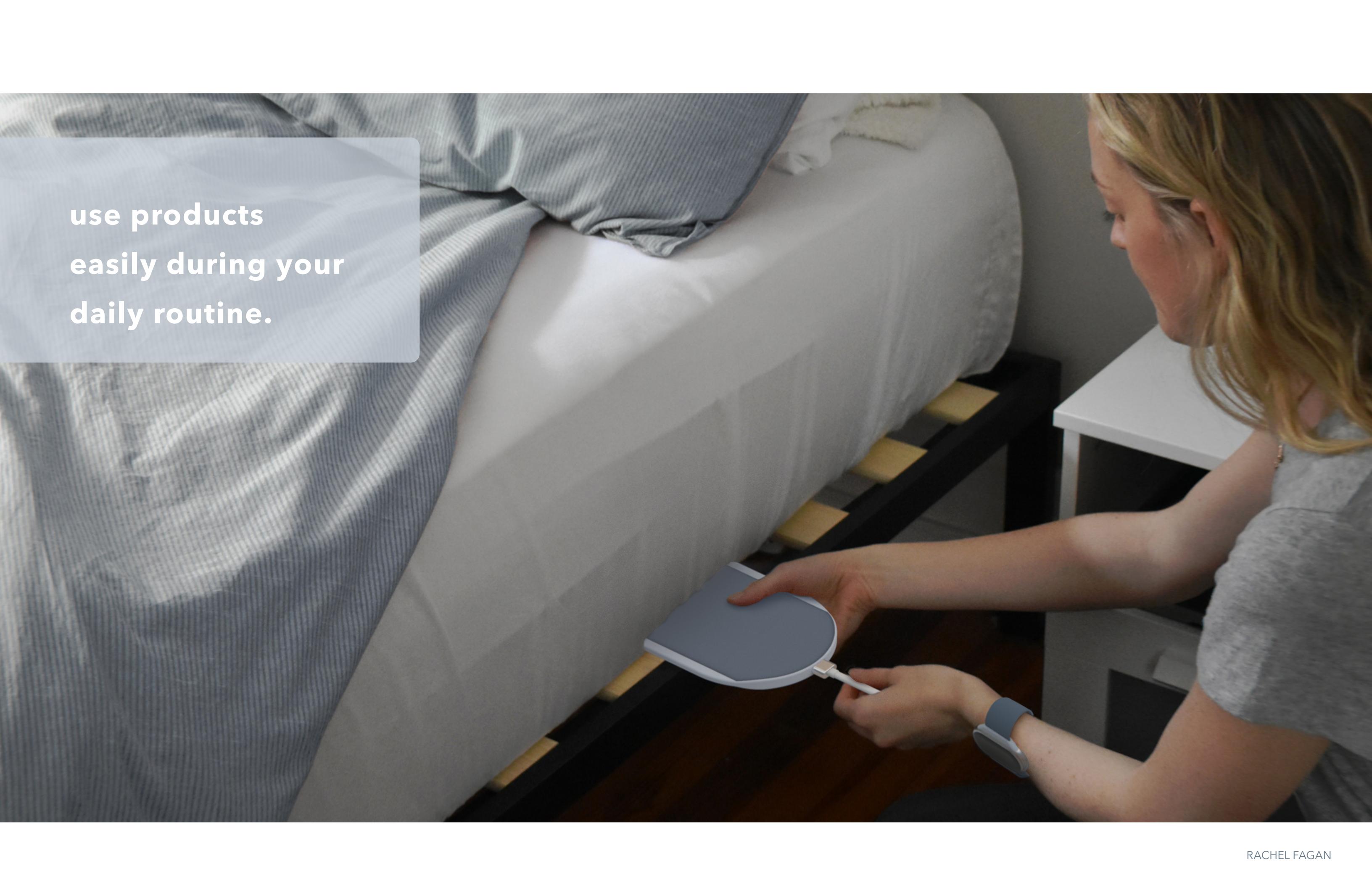
**predict
upcoming
ailments.**



**proactively
mitigate + prevent
ailments.**

A woman with blonde hair, wearing a grey t-shirt, is sitting at a wooden table and eating a salad from a white plate. She is wearing a blue fitness tracker on her left wrist. To her right is a white and grey cylindrical device, possibly a smart speaker or a portable air purifier. The background is a plain, light-colored wall.

maintain
your
health.

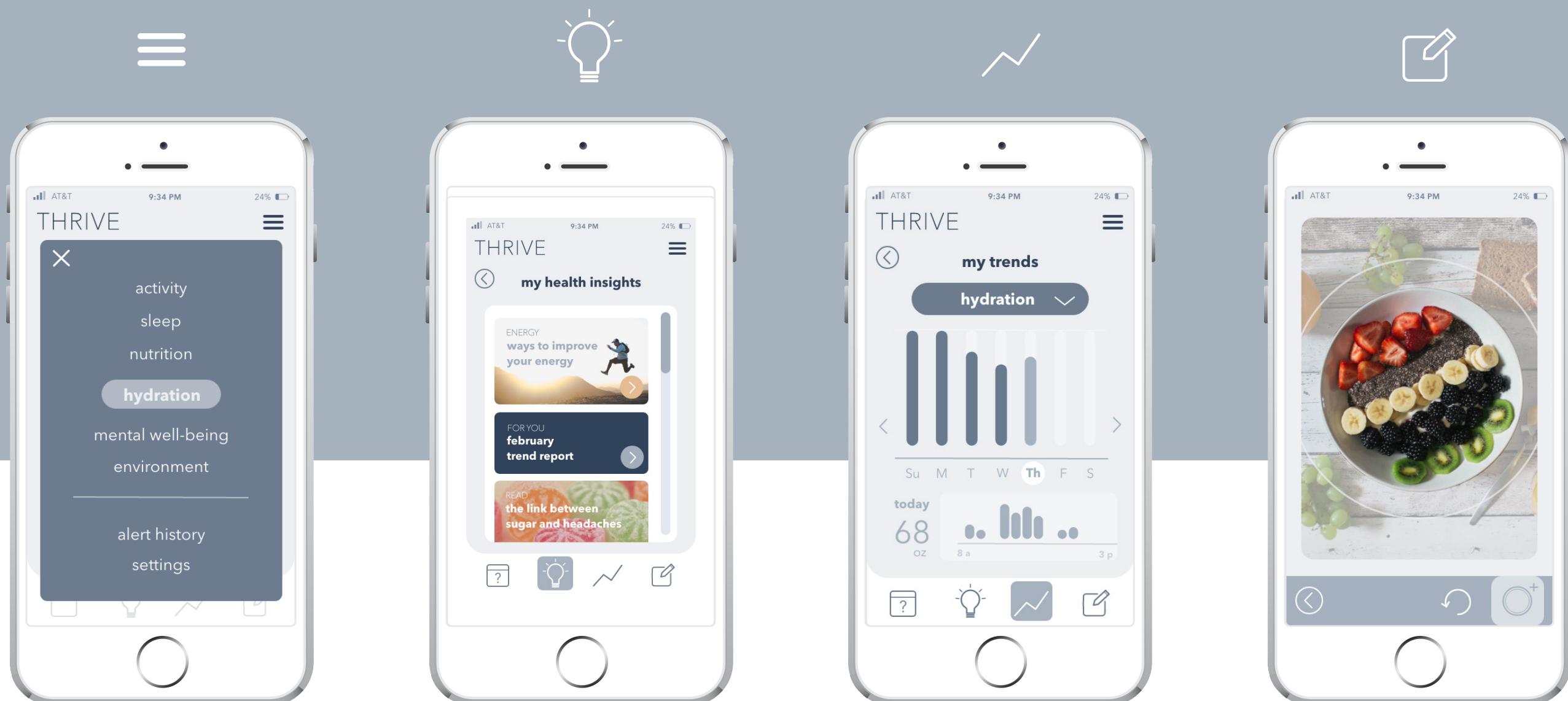


use products
easily during your
daily routine.

gain insights
into your health.



health app | additional features



drop-down menu

view data by
health category

health insights

customized insights and
information based on data

trends

view trends
by health category

manual entry

take photos of
food on-the-go



access your
health data
and trends.

health dashboard

The image shows the THRIVE mobile application interface. At the top, the word "THRIVE" is displayed in a large, light blue font. To the right are icons for search, refresh, and settings. Below the header, the user's name "therese" is shown. The main dashboard features a line graph titled "my total health" showing a weekly trend from Sunday to Saturday. The graph has markers for "my health baseline" on Sunday and "my total health" on Saturday. The daily score for Saturday is highlighted with a large circular overlay containing the text "7.8 daily score". Below the graph are buttons for "my total health", "mood", "energy", and "wellness". To the right of the graph is a "health notifications" section with two green cards for "Health Prediction" (2:34 PM and 9:05 AM), each with a "Click to view" link. A vertical scroll bar is visible on the right side of this section. At the bottom, there are "health categories" (sleep, nutrition, hydration, mental well-being, environment, activity) and a "health questions" section with a red card for a "Quick Question" (8:00 AM) asking to tell about mood, with a "1" notification badge.

home dashboard

view detailed health predictions, insights, and trends from a laptop or desktop



THRIVE
predictive health

[login](#)

login with your account

The THRIVE app interface displays a central hydration dashboard. On the left, a sidebar lists categories: sleep, nutrition, hydration, mental well-being, environment, and activity. The hydration section shows a circular progress bar with a 'daily score' of 6.2 and a 'weekly hydration' chart with daily intake levels for Sunday through Saturday. Below this, an 'average daily intake' of 68 fl oz is shown, with a 'log my hydration' button. To the right, a 'log' section tracks water intake at 7:40 am (10 fl oz), 8:15 am (1.5 fl oz), and 9:16 am (3 fl oz). A 'health notifications' section includes a 'Health Prediction' card for 2:34 PM and a 'hydration insights' card stating 'Headaches are most frequent when you do not meet your daily water goal.' and 'In the past month, your hydration intake has increased by 12%.'

health category

view data and notifications
by health category

report download

download custom reports
for personal use or to
communicate with a doctor

THRIVE

predictive health

