Sitless

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7.7 hours

The amount of time an average person spends sitting a day

Sitting more than

3 hours / day

can cut life expectancy by

2 years

even with regular exercise

How can we motivate people to sit less?
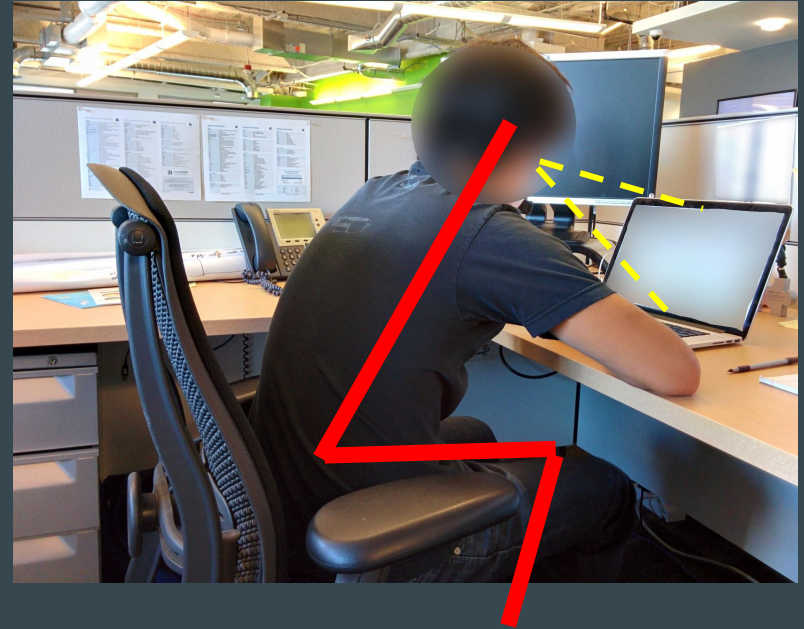
Contextual inquiries

Observations in the field

Observations in the field

What did we observe?

- Posture
- Duration of sitting
- Duration of breaks
- Type of seat
- Other metrics

What we found

In general, our participants...

- sat for long intervals
- took short breaks
- were aware of bad habits
- wanted access to a standing desk
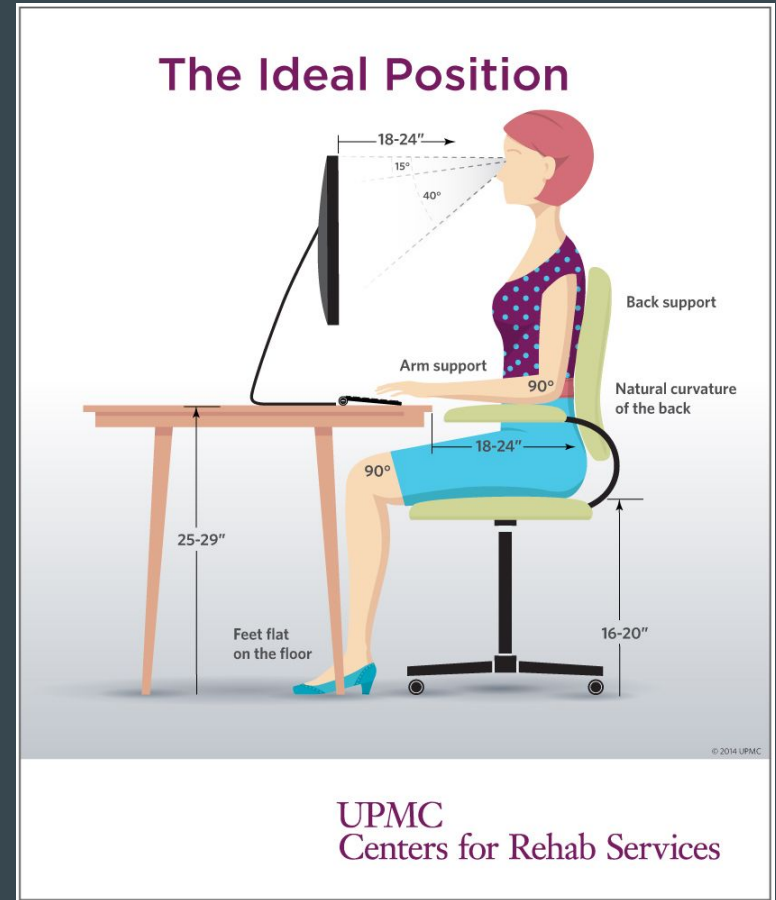
Some questions for our design

How can we...

- encourage the user to un-sit without disrupting their flow?
- motivate users to take longer breaks?
- educate users on proper sitting posture?

Tasks

Improve sitting posture

Pictographic representation
of correct sitting posture

Smart reminders to sit less

Don't nag the user every *x* minutes -- remind them when they're not busy

Suggest activities while not sitting

What should the user do during his/her break?

Understand sitting patterns

Metrics and visualizations of the when, where, and why of sitting

Track progress towards healthy sitting habits

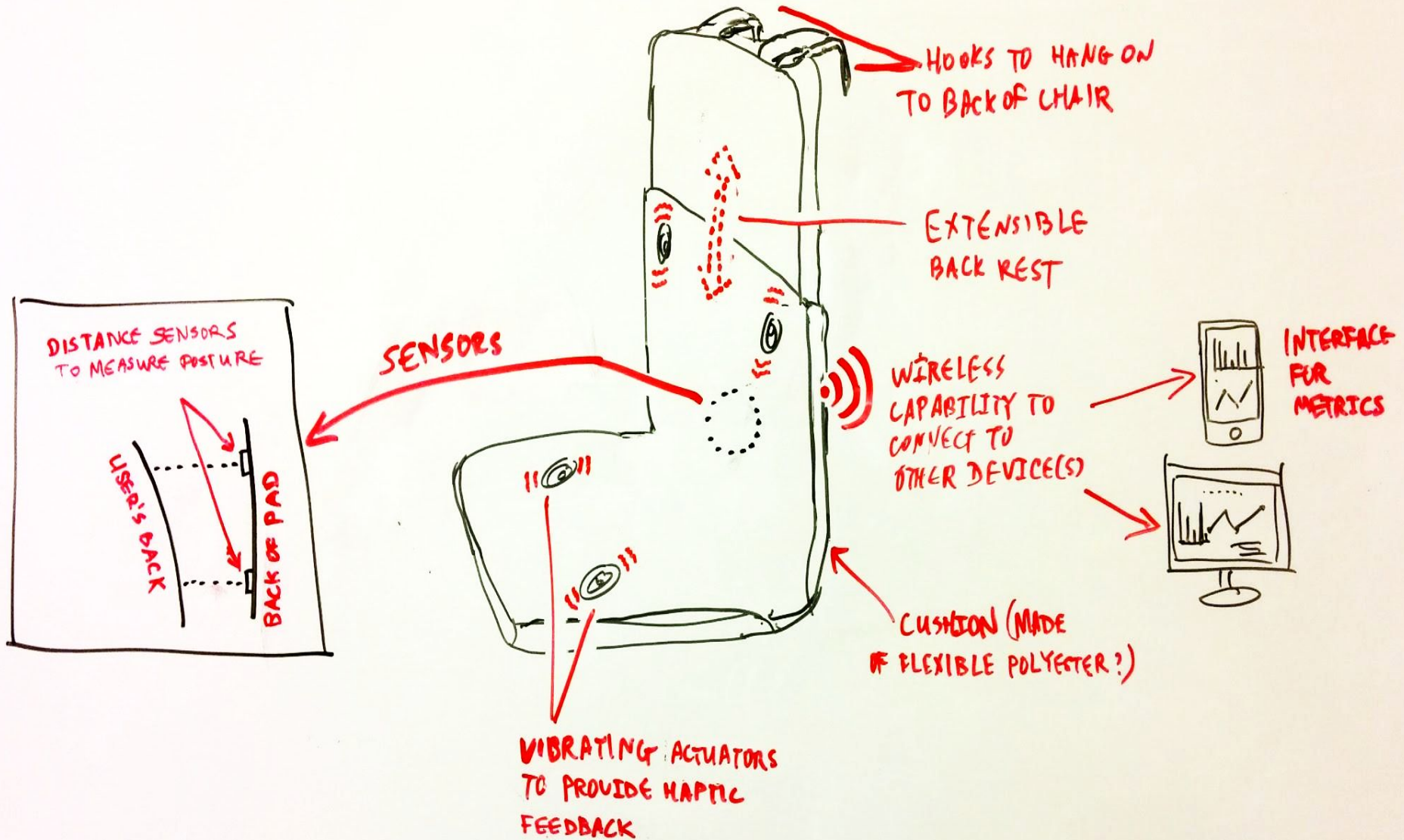Measurable, realistic goals personalized for the user

Leverage social connections

Motivation from friends and
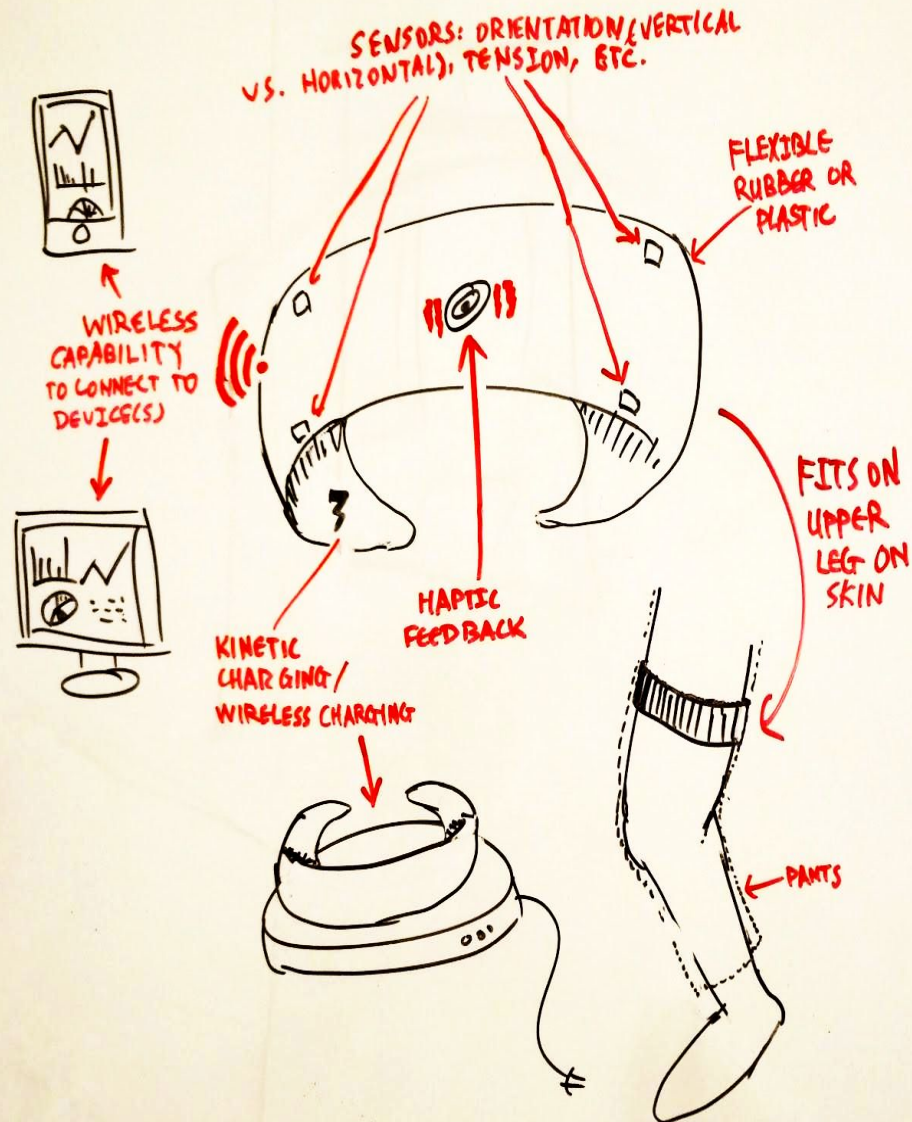coworkers using the
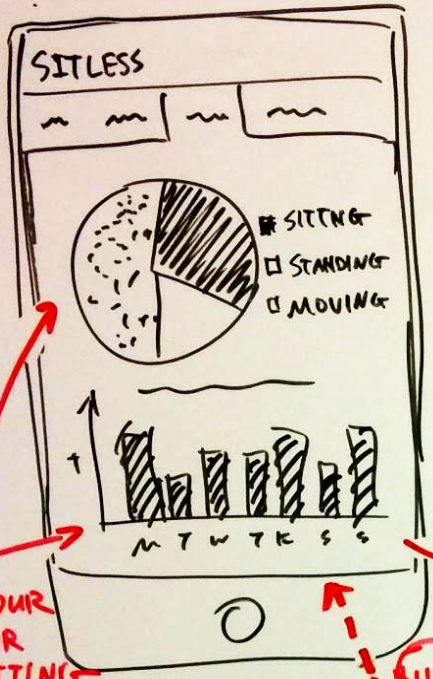integrated system

Design sketches

Smart Chair Pad

Hooks to hang on to back of chair

Extensible back rest

Distance sensors to measure posture

User's back

Back of pad

Sensors

Wireless capability to connect to other device(s)

Interface for metrics

Cushion (made of flexible polyester?)

Vibrating actuators to provide haptic feedback

SMART LEG BAND

SENSORS: ORIENTATION (VERTICAL vs. HORIZONTAL), TENSION, ETC.

FLEXIBLE RUBBER OR PLASTIC

WIRELESS CAPABILITY TO CONNECT TO DEVICE(S)

KINETIC CHARGING / WIRELESS CHARGING

HAPTIC FEEDBACK

FITS ON UPPER LEG ON SKIN

PANTS

INTEGRATED SYSTEM

SITLESS

□ SITTING
□ STANDING
□ MOVING

M T W T F S S

TRACK YOUR BEHAVIOR FOR SITTING

SITLESS

ADD DEVICE

CONNECT TO MORE SENSORS FOR SITTING DATA

SITLESS

Here are some suggested activities!

Get coffee

Talk with coworkers

Take a walk

stretch!

ACTIVITY SUGGESTIONS WHILE NOT SITTING

SITLESS

This is how to properly sit!

SHOW USER GOOD POSTURE FOR SITTING.

USER NOT BUSY, STAND UP!

- LAPTOP/
- DESKTOP MONITORING SOFTWARE

WEB CAMERA

SENSOR TO DETECT GOOD OPPORTUNITIES TO NUDGE USER TO UN-SIT

APP SAYS: EVERYONE STAND UP!

LEVERAGE TH USER'S SOCIAL NETWORK
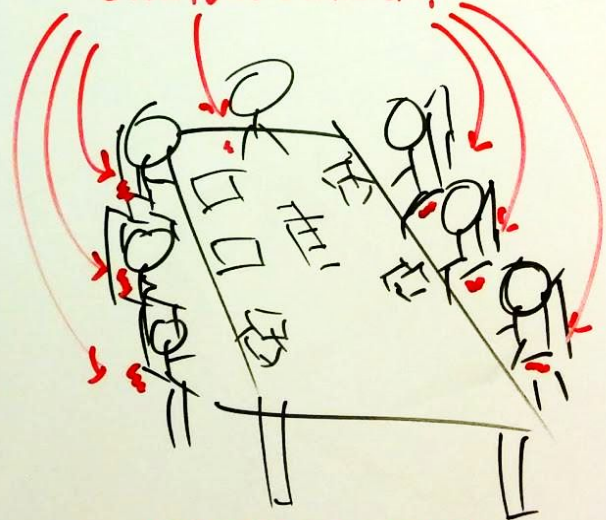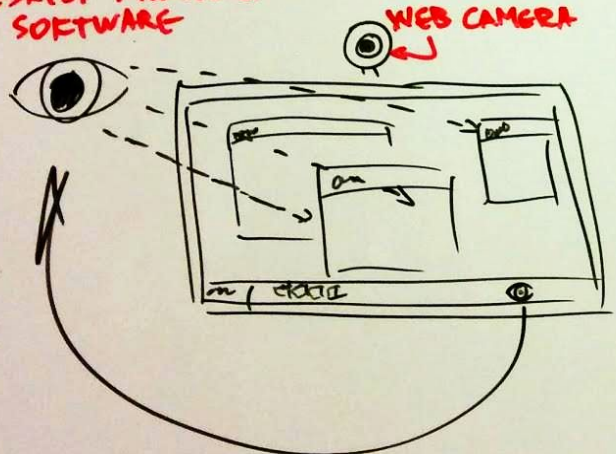
Our choice

Leg band with app and desktop integration

- Supports accurate data gathering
- More portable (unlike chair pad)
- Leverages existing devices (smartphone, desktop, laptop)
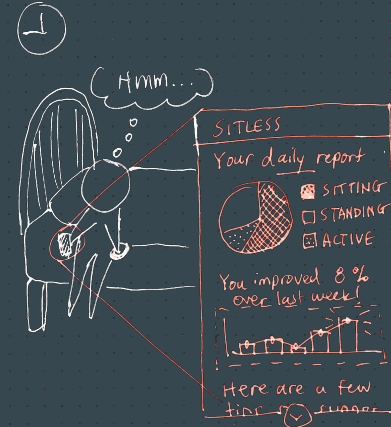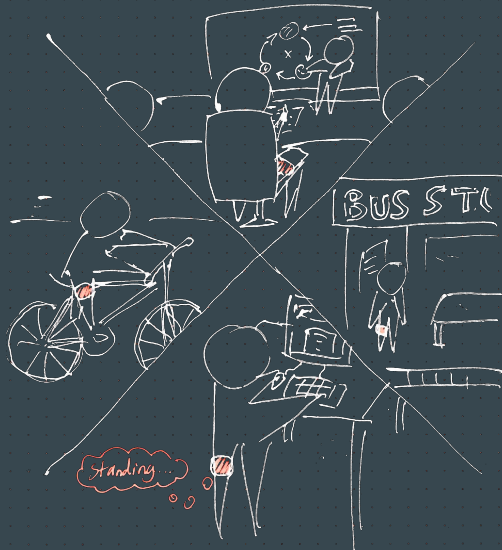
Storyboards
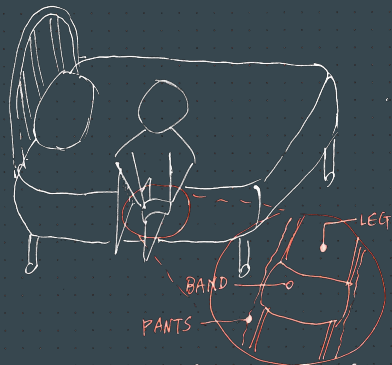
BEFORE SCHOOL, TAYLOR PUTS ON THE SITLESS BAND TO TRACK HIS SITTING ACTIVITY

LEG
BAND
PANTS

DURING THE DAY, THE BAND PASSIVELY MONITORS TAYLOR'S ACTIVITIES AND RELAYS THE DATA TO TAYLOR'S PHONE

SITTING

Hmm...

SITLESS
Your daily report
SITTING
STANDING
ACTIVE
You improved 8% over last week!
Here are a few tips

TAYLOR CAN CHECK HIS PHONE DURING HIS DOWNTIME TO SEE HIS DAILY REPORT AND PROGRESS TOWARD HEALTHIER SITTING HABITS.

BUS ST

Standing...

ARMED WITH THIS KNOWLEDGE, TAYLOR IMPROVES HIS SITTING HABITS, OVER A LONG PERIOD OF TIME.

SITLESS
Congratulations!
You sat for less than 3 hours today!
Your daily report
SITTING
STANDING
ACTIVE
You improved 13% over last week!
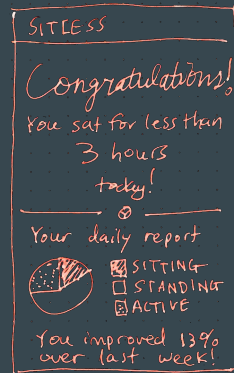
THE APP CONTINUES TO PROVIDE FEEDBACK AND MOTIVATION TO TAYLOR AS HE CONTINUALLY IMPROVES HIS GOOD HABITS.

In a nutshell

People...

- are generally aware that they sit too much
- take very short breaks
- need to be motivated and reminded to sit less

We learned that...

- this is an important health issue
- there are many apps that try to address this problem
- reminders need to be done more intelligently

Questions?