

### TEAM

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"It's really hard to keep the house clean and organized when I don't have much time."



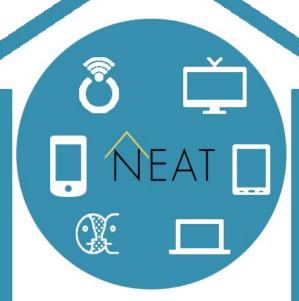
# 55% of Americans point to an unclean home as a source of stress<sup>1</sup>



An unclean environment has negative health outcomes



### Solution Overview



Use existing personal data

Parse through the user's emails and text messages to identify internal and external triggers





#### **Collect cleaning metrics**

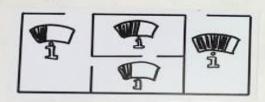
Use wearable devices to collect clening metrics: time on task, frequency and task name

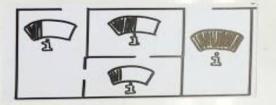
Voice recognition commands "Start cleaning toilet"



How to obtain the data

### INITIAL PAPER PROTOTYPE





7 Days Ago	Vacuum Bedroom	151
8 Days Ago	Change Bedsheets	10'
8 Dage Ago	Dust Surfaces	10,
5 Days Ago	Clean Floor	12,
15 Dage Ago	Mop Floor	12'
16 Days Age	Clean Windows	15"



	1	图》	1	48
151	30,	454	60	
15"	30"	42,	60'	other

Today	Clean bothoom sonk	10
Tomarrow	Clem to: let	151
Tomarra	Map living mem Hoor	20
Tomorro	Clean kitchen countertops	10
Friday	Change Sheets	51

Dear Sid,

Did you know that regular vacuuming can keep allergens under control and im prove air quality?

Let Next show you what you can do in just 15 mins to that you can have a clean home.











### Task One

Promote cleaning activities during idle times



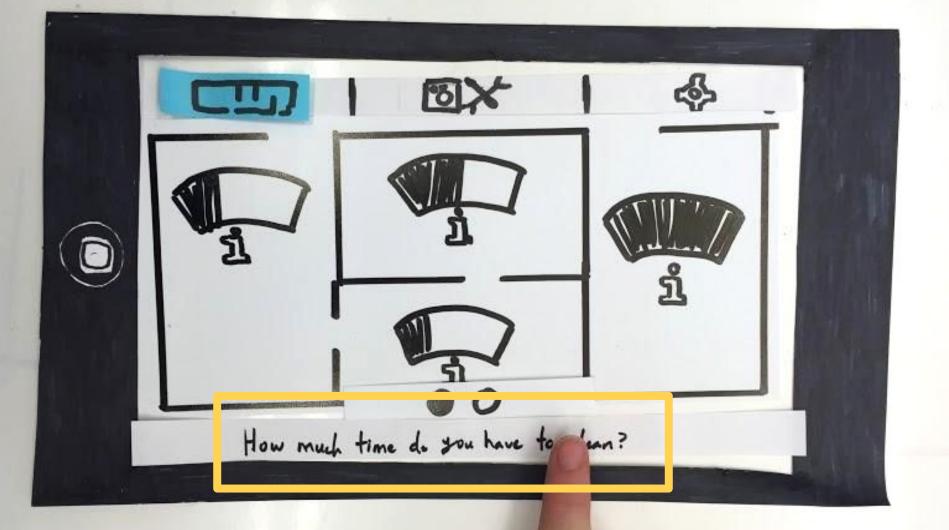
-800-444-3456

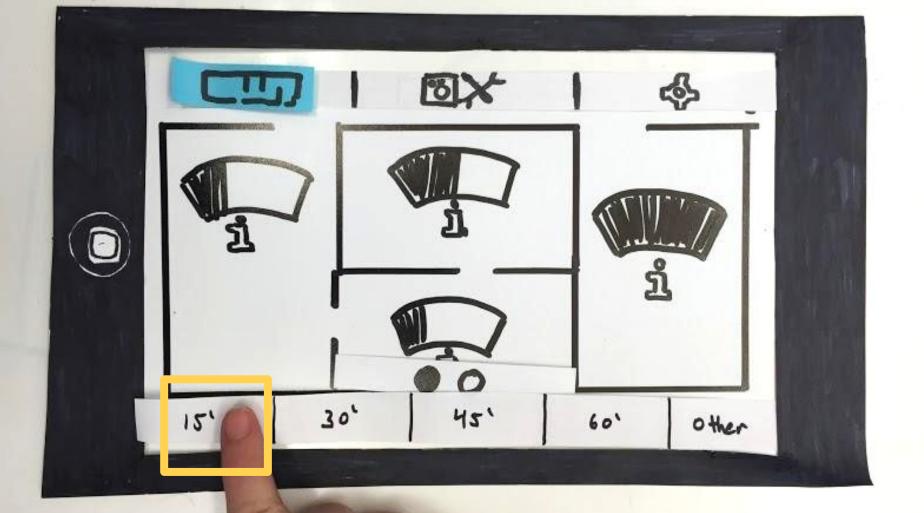
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Dear Sid.

Did you know that regular vacuuming em hasp all ergent water control and in prove air quelity? Let Next then you what the form of the price of the party of the party

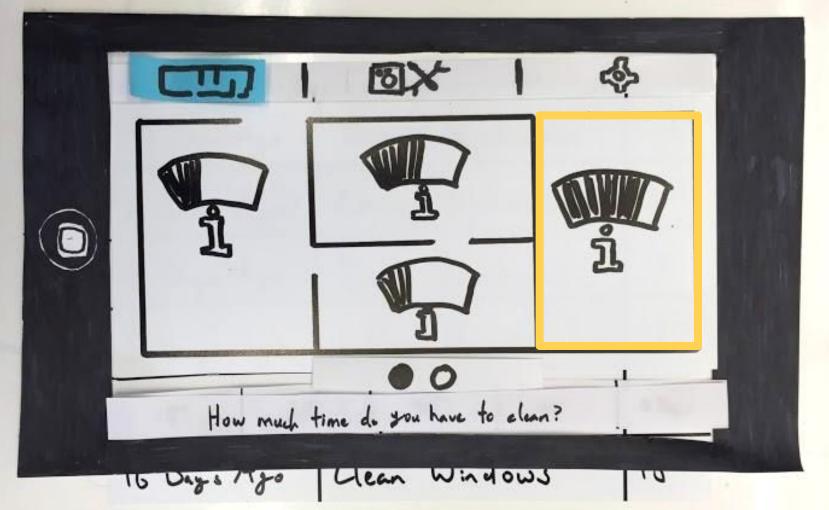






	图》(	3
7 Days Ago	Vacuum Bedroom	121
8 Daga Ago	Change Bed sheets	101
8 Dege Ago	Dust Surfaces	10,
5 Days Ago	Clean Floor	12,
15' 3	0' 45' 60'	other
To John Bo	Mean whyows	10



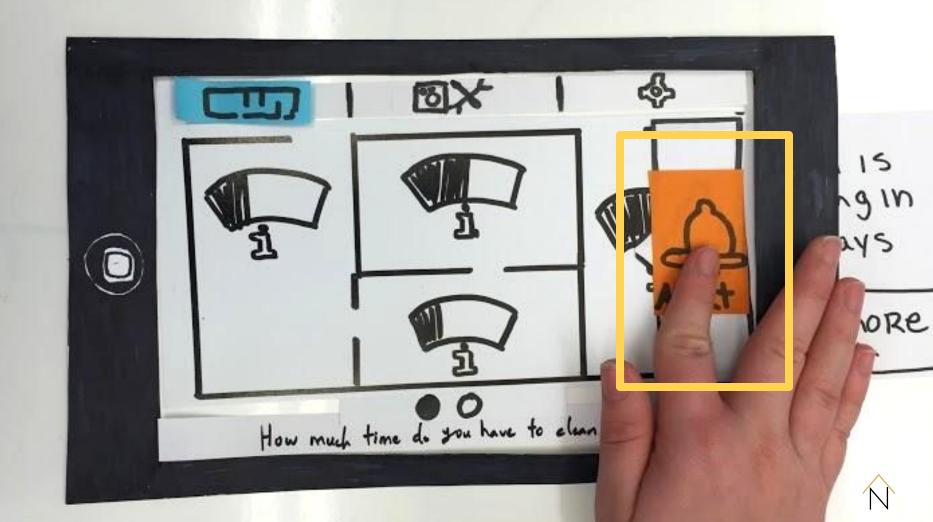


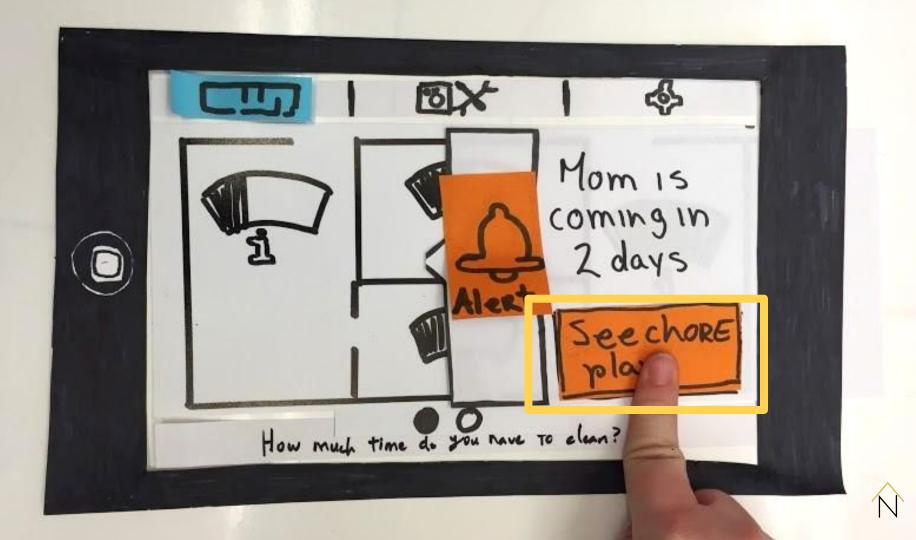
N

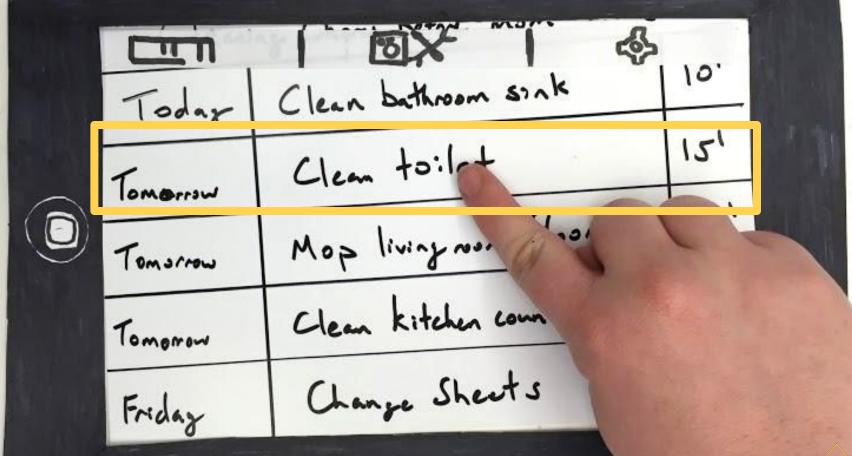
### Task Two

Facilitate preemptive cleaning chores



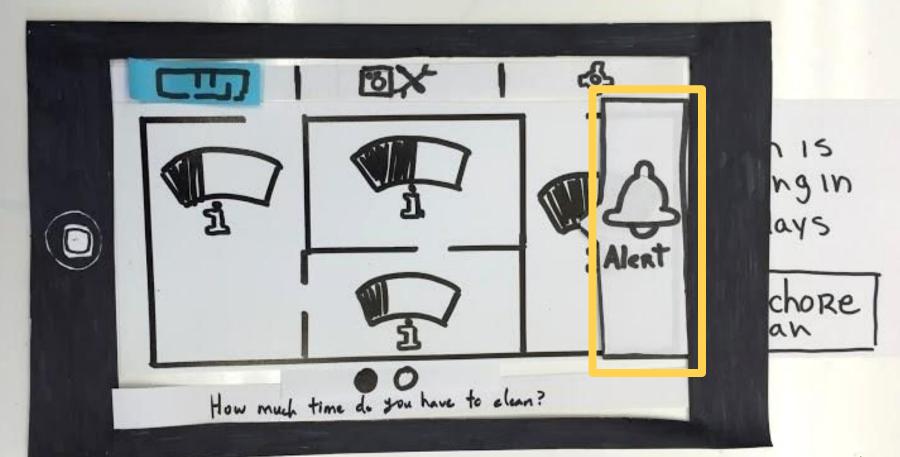






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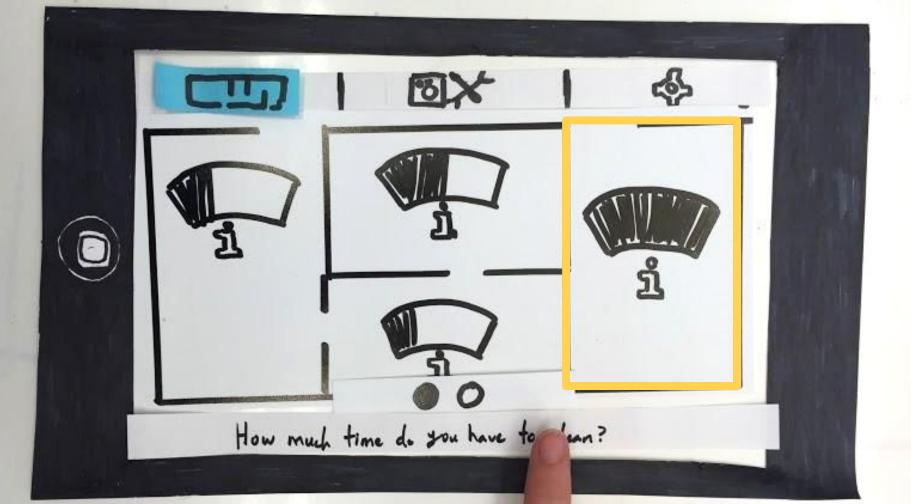
### Heuristic Violations

- Match between system and real world
- Recognition rather than recall
- User control and freedom



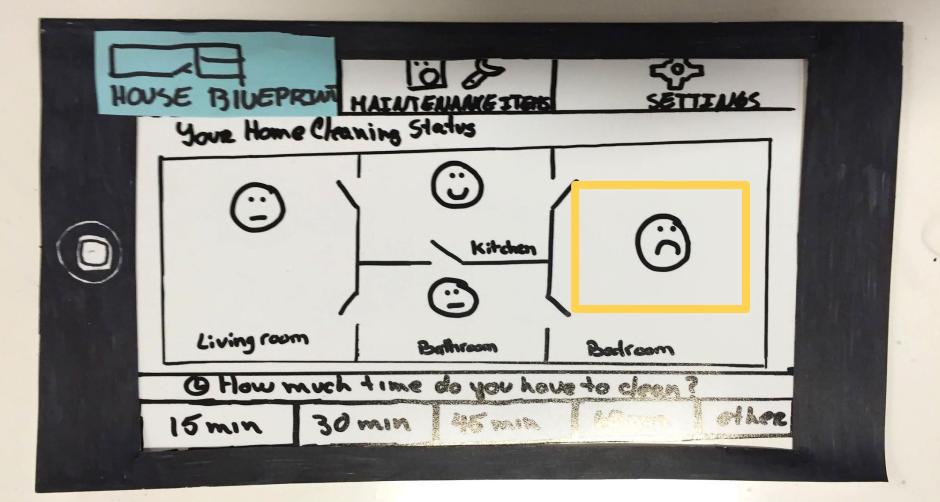
Cleanliness status didn't match real world

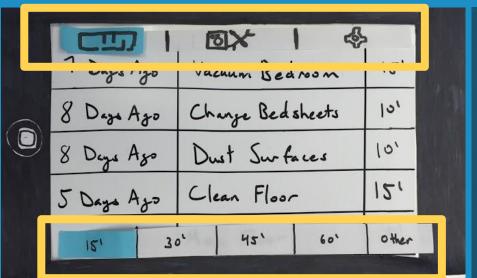


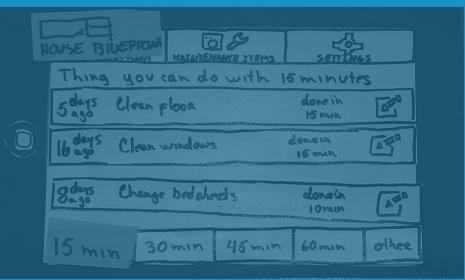


JUSE BIVEPROM	MAINTENANTE ITEMS	SETTINES		
Your Home (	raning Status			
A		V (XX)		
VIIII	clear, duty			
clean disty	Brichen	clean duety		
	1			
	clean dur			
LIVINGROOM "	Balkerow	Bedeoom		
(B) How much time doyou have to chen?				
	Jove Home Clark	Your Home Cleaning Status  Livingroom Rethrough  Livingroom Bathroom		

.....

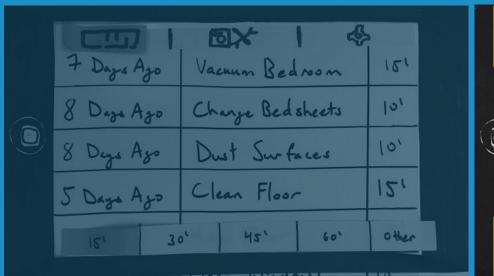


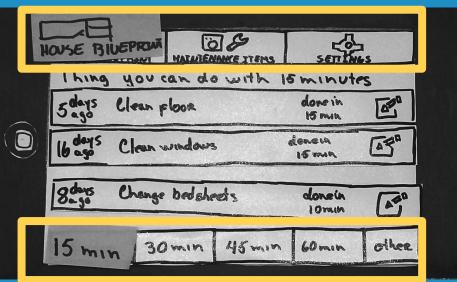




Iconography required recall rather than recognition





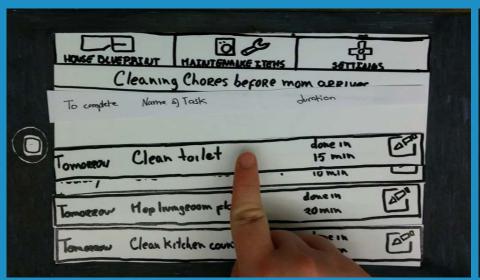


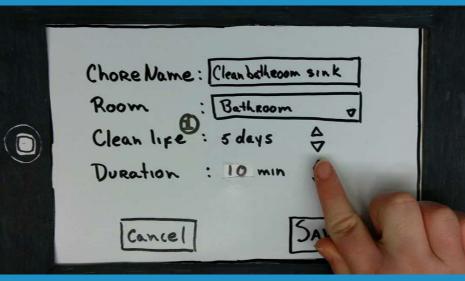
Iconography required recall rather than recognition



### Modify order of chores

#### Edit chores





Chores lacked user control and freedom



# Test Participants

- One HCDE Student
- Two Friends of CI
   Participants





## Usability Testing Methodology

- Provide context regarding Neat
- Convey scenarios and tasks



### User Tasks

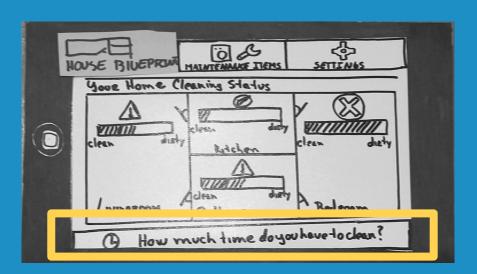
Check last time bedsheets were changed

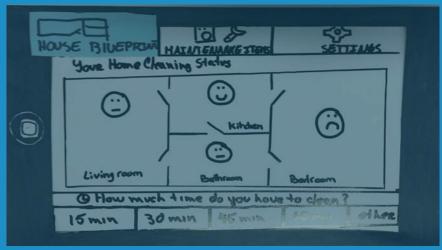
Find what can be cleaned in 15 minutes

Learn what needs to be cleaned before mom arrives

# Usability Testing Results

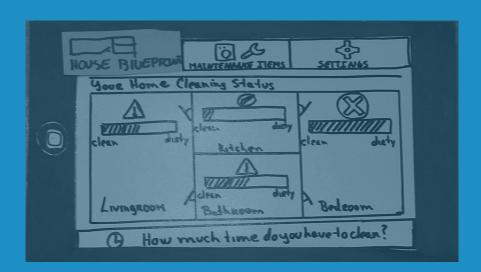


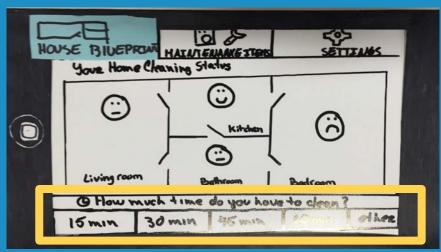




Button was not perceived as a button

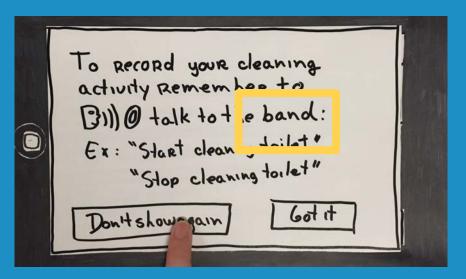


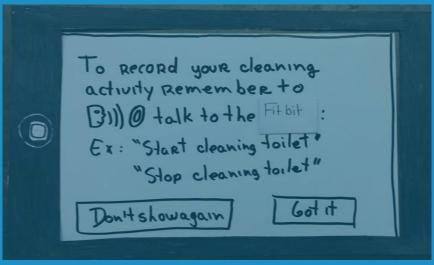




Button was not perceived as a button

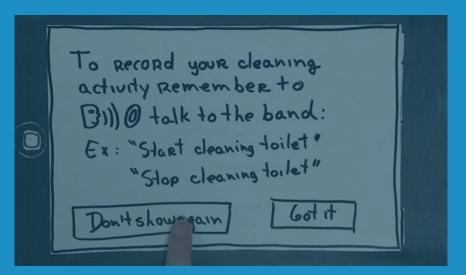


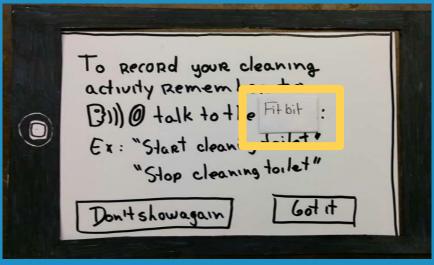




Proprietary wearable adds complexity

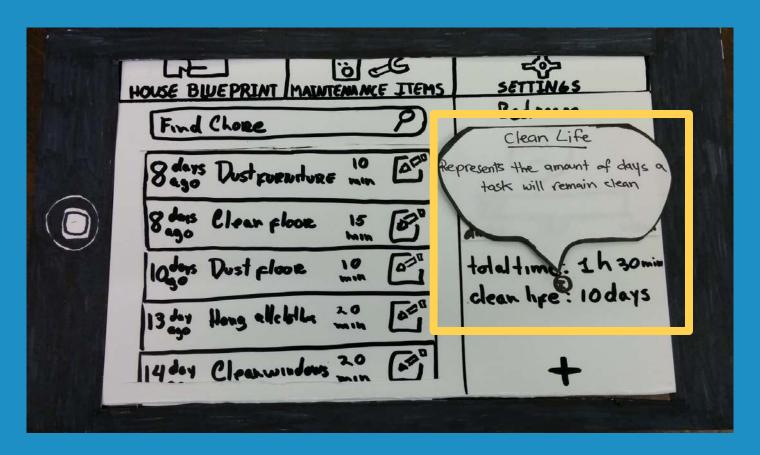






Proprietary wearable adds complexity

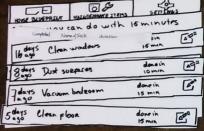


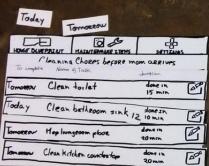


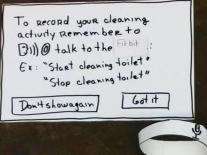
Unclear terminology

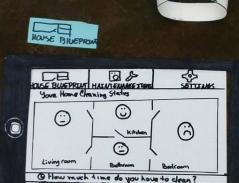
















60 min



other

Change Sheets

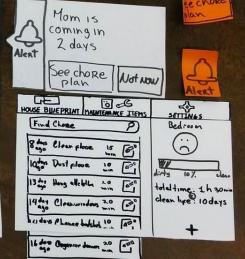
15min 30min 45min

Clean Life
Represents the amount of days a
tack will remain clean



#### FINAL PAPER PROTOTYPE







#### Task One

Promote cleaning activities during idle times



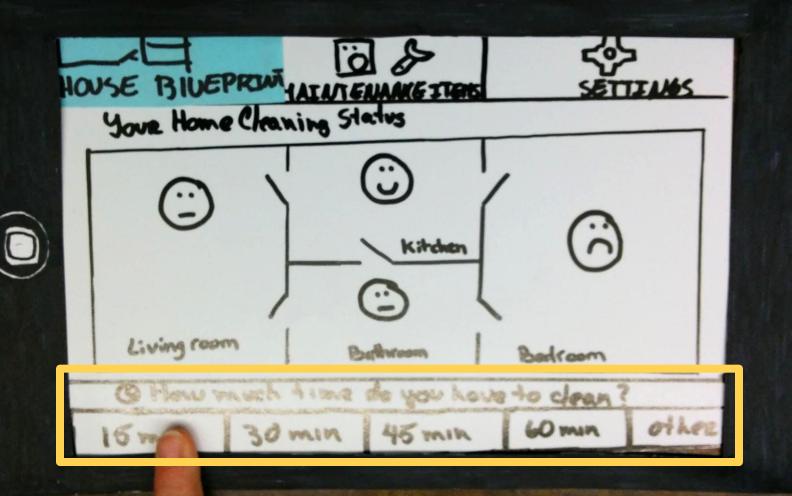
Dear Jane,

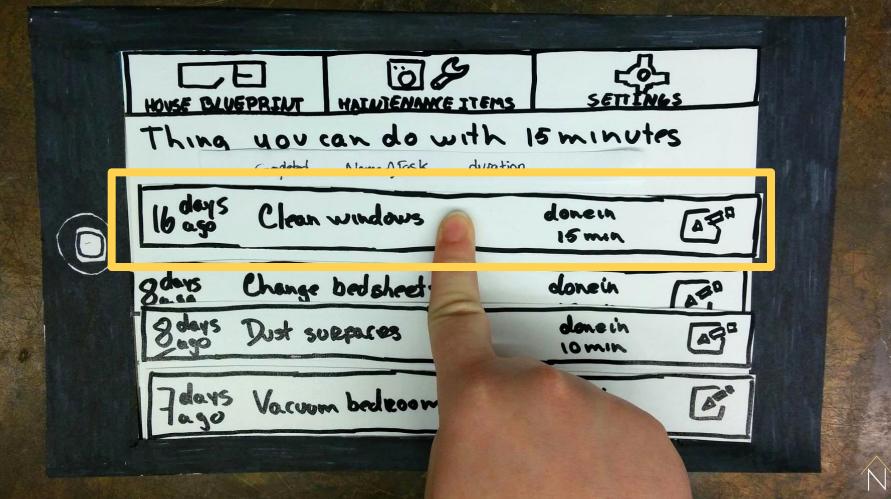
Regular vacuuming can keep allergens under control!

Let Neat help you keep your home in good shape.

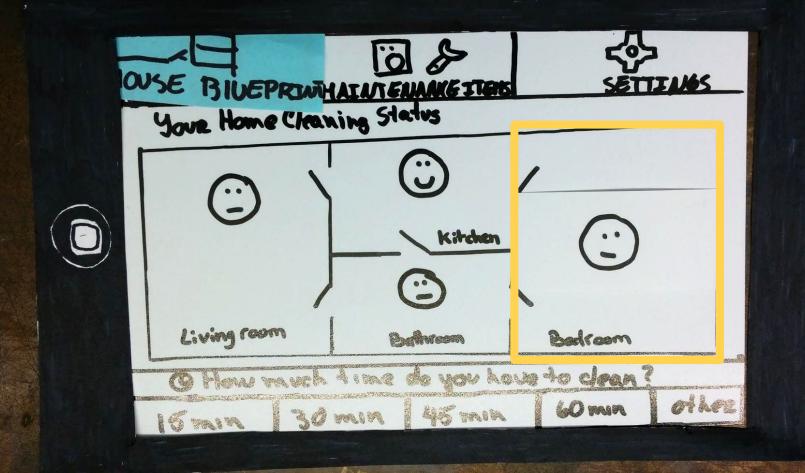
Learn what you can clean in 15 min.







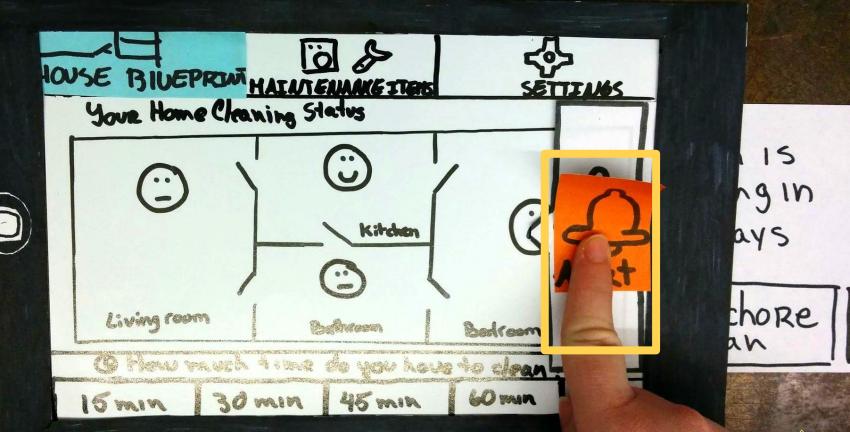
To record your cleaning activity remember to (311) @ talk to the Fitbit: Ex: "Start cleaning toilet" "Stop cleaning toilet" Don't shagain



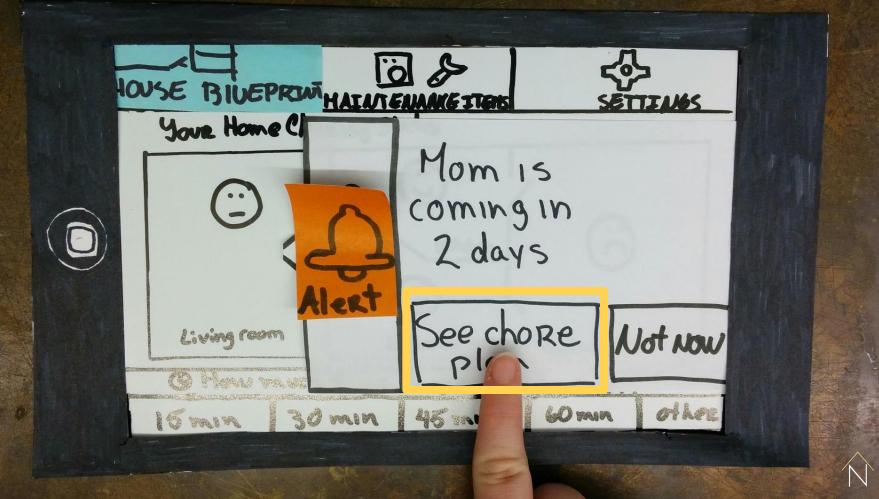
### Task Two

Facilitate preemptive cleaning chores





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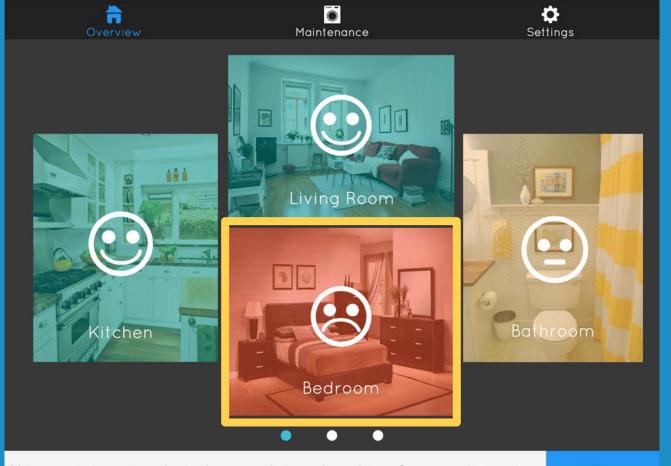
# Digital Mockup



#### Task One

Promote cleaning activities during idle times

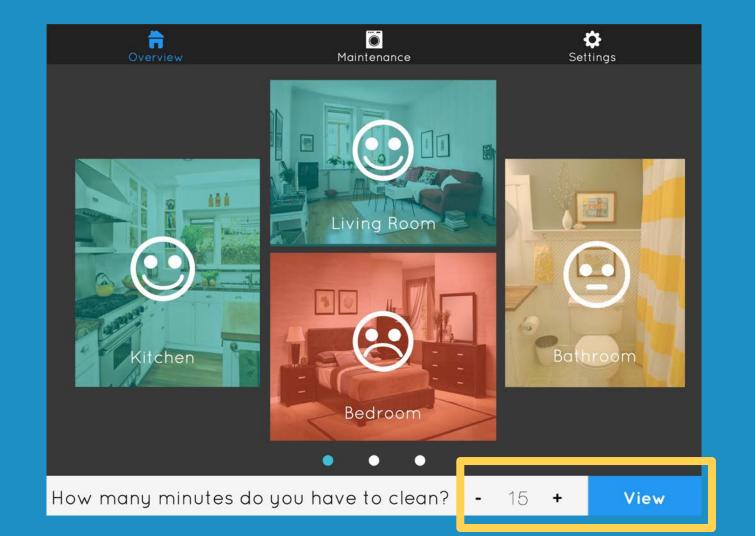






Ov	erview Q Search	Maintenance	<b>‡</b> Settings
Cleaned	Chore	Duration	Bedroom
:: :: 9 :: days ago	Dust furniture	15 minutes 🖊	
:: 9 :: days ago	Clean floors	20 minutes 🖊	Dirty 20% Clean
:: :: 9 :: <sup>days ago</sup>	Dust floors	15 minutes 🗾	Total Time: 1h 30m
:: :: 12 :: days ago	Clean windows	10 minutes 🗾	Clean Life <sup>©</sup> : 10 Days
:: :: 11 :: days ago	Hang clothes	20 minutes 🗾	
:: :: 30 :: days ago	Neat drawers	30 minutes 🖊	Too William
:: :: 10 :: days ago	Change sheets	20 minutes 🗾	
:: 8 :: 8 :: days ago	Clean lamps	10 minutes 🖊	New Chore
:: :: 8	Wash courtains	15 minutes 🖊	New Chore





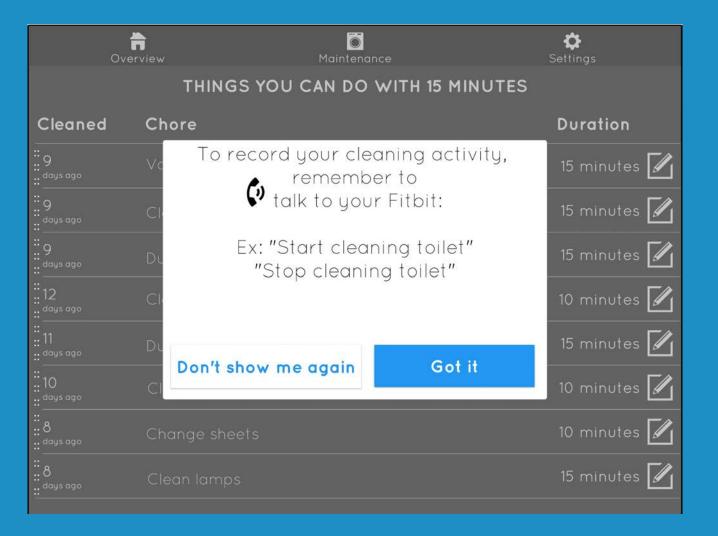
 $\wedge$ 



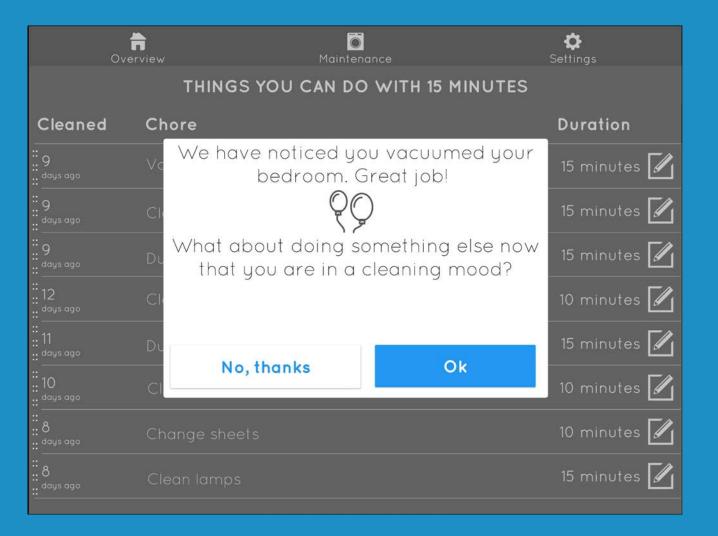
#### THINGS YOU CAN DO WITH 15 MINUTES

Cleaned	Chore	Duration
:: 9 .: days ago	Vacuum bedroom floors	15 minutes 🖊
:: 9 :: days ago	Clean bathroom floors	15 minutes 🗾
:: 9 :: days ago	Dust furniture in bedroom	15 minutes 🖊
:: 12 :: days ago	Clean windows	10 minutes 🖊
:: :: 11 :: days ago	Dust livingroom floors	15 minutes 🗾
:: :: 10 :: <sup>days</sup> ago	Clean kitchen counter	10 minutes 🗾
:: 8 :: days ago	Change sheets	10 minutes 🗾
:: 8 :: 8 :: days ago	Clean lamps	15 minutes 🖊

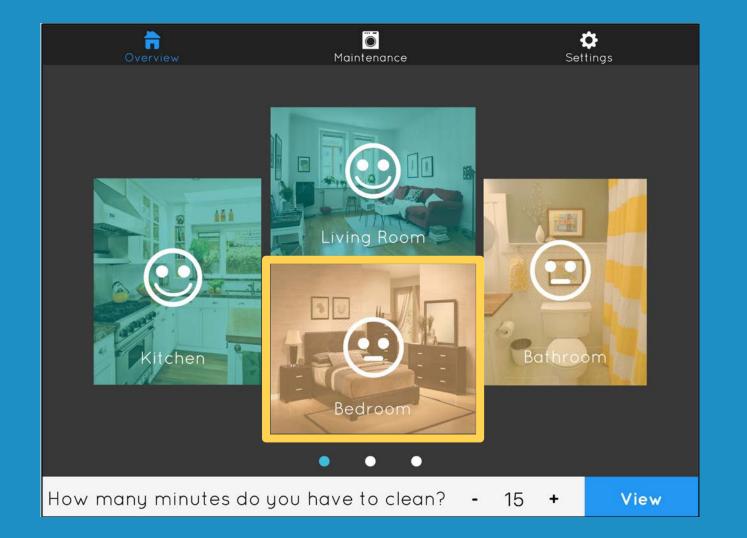










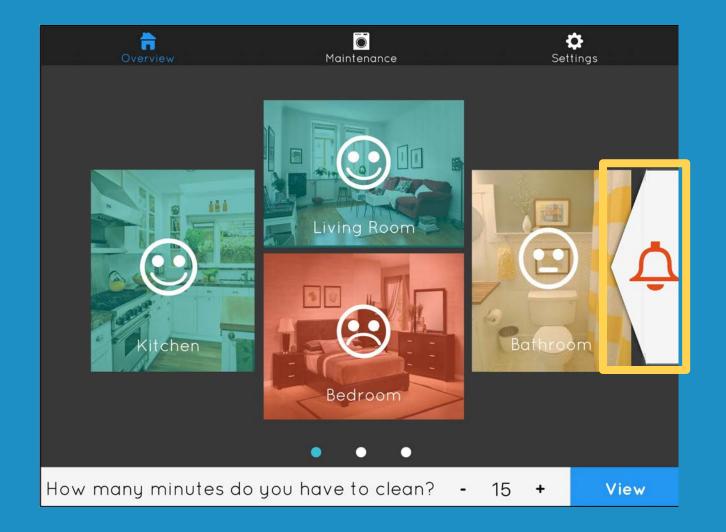




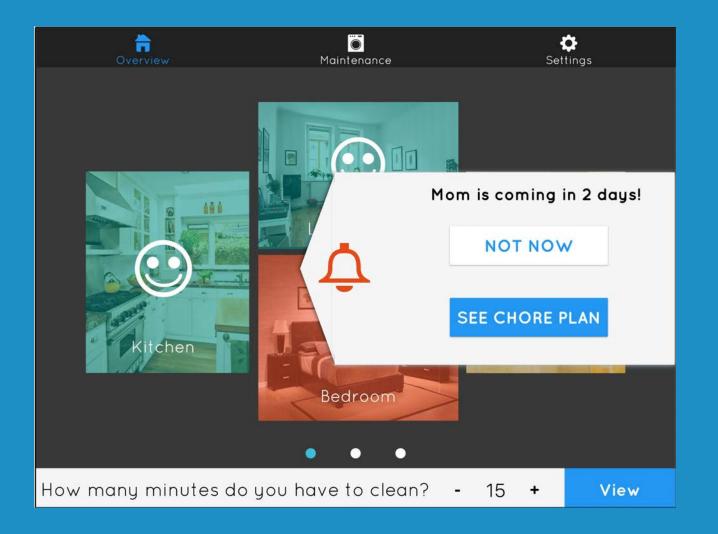
### Task Two

Facilitate preemptive cleaning chores

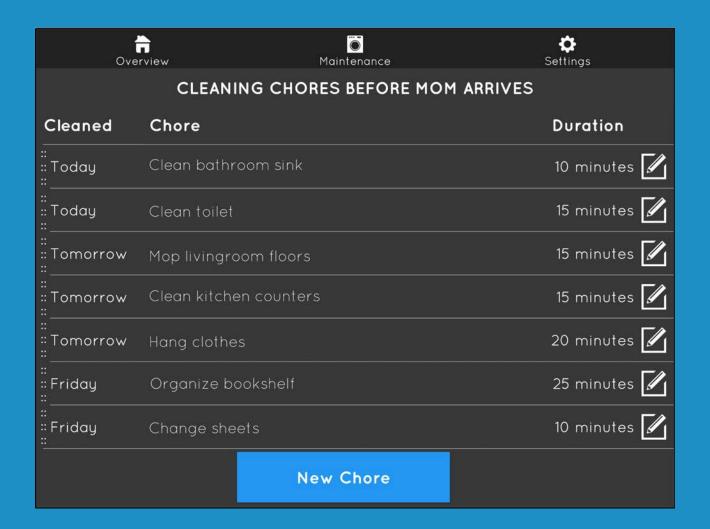














## SUMMARY

Conventions are not affordances

Designer concerns are important

User concerns are paramount





A solution for every home

QUESTIONS?