Community Based Social Marketing Pilot

Gilee Corral, Sustainability Program Coordinator
Feb. 15, 2018 Project Update to Sustainability Commission

CUPERTINO GREEN

Project Overview

- Goal: Develop in-house residential program

- Focus on energy or water

- Learn the CBSM process

CBSM Steps:

1. ✓ Select Behavior(s)

2. ✓ Barriers & Benefits Research

3. **Develop Strategy**

4. Pilot Test

5. Implement Broadly & Evaluate

1. Select Behavior(s)

Behavior List

- Purpose: priority list of behaviors to choose from

- Methods: Lit review, contractor interviews, NextDoor survey of residents

- The SVCE Effect: ~~Consumption~~ ⇨ Carbon

And the winners are:

Potential behaviors in **descending weight order**.	Impact (0-10)	Penetration (0-1)	Probability (0-10)	Potential Reach (1-Penetration)	Applicability (0-1)	Weight (0-50)
Buy an ENERGY STAR® gas furnace	4	0	8.76	1.00	0.752	26.35
Turn off the water heater when going away for a few days	4	0.217	5.83	0.78	0.85	15.52
Install double glazed windows	5	0.14	4.56	0.86	0.765	15.00
Switch to electric vehicle	5	0	3.27	1.00	0.824	13.47
Buy the most water efficient dishwasher possible	2	0	7.78	1.00	0.849	13.21
Buy the most water efficient washing machine possible	2	0	7.53	1.00	0.868	13.07
Switch to an electric furnace	5	0	3.09	1.00	0.752	11.62
Install a heating system with zone thermostats	3	0	4.68	1.00	0.752	10.56
Buy a front-loading washing machine	2	0	5.89	1.00	0.868	10.23
Install low flow aerators on faucets (a device that reduces the flow of water from the faucet without reducing pressure)	3	0.37	5.12	0.63	1	9.68
Install water efficient shower heads	3	0.44	5.4	0.56	1	9.07
Take 5-minute showers	3	0.591	6.17	0.41	1	7.57
Wash clothes in cold water	4	0.667	6.72	0.33	0.74	6.62
Install weather stripping to fix drafts	3	0.45	4.61	0.55	0.843	6.41
Program thermostat to 65 degrees in winter	3	0.531	5.31	0.47	0.809	6.04
Use electric blankets rather than heating the entire bedroom	3	0.276	3.23	0.72	0.843	5.91
Install a wifi-enabled smart thermostat	3	0.1	2.86	0.90	0.765	5.91
Only heat rooms in use by family (by closing vents or turning off heaters in unused rooms)	3	0.584	6	0.42	0.761	5.70
Caulk doors and windows to fix drafts	3	0.48	4.33	0.52	0.843	5.69
Insulate the hot water tank using a thermal blanket	3	0.34	2.86	0.66	0.85	4.81
Install electrical outlet gaskets	3	0.21	2.39	0.79	0.843	4.78
Set water heater to 120 degrees	3	0.52	3.77	0.48	0.85	4.61
Switch from a gas water tank to an electric water tank or instant system	5	0	1.15	1.00	0.792	4.55
Install an on-demand hot water recirculating pump that reduces time waiting for hot water	3	0.1	1.87	0.90	0.878	4.43
Wash full loads of laundry	3	0.832	8.79	0.17	1	4.43
Insulate walls	3	0.14	2	0.86	0.765	3.95
Install a green roof	4	0.16	1.42	0.84	0.725	3.46
Switch from a gas water heater to a solar water heater	5	0	0.87	1.00	0.792	3.45
Insulate floors	4	0.25	1.43	0.75	0.765	3.28
Install light switch gaskets	2	0.21	2.39	0.79	0.843	3.18
Insulate ceiling	3	0.23	1.78	0.77	0.765	3.15
Insulate air ducts	4	0.17	2.47	0.83	0.366	3.00
Insulate attic	4	0.17	3.33	0.83	0.259	2.86

Weight = impact * probability * 1-penetration * applicability

2. Barriers and Benefits Research

Behaviors selected:

1. Turn of water heater when away for a few days

2. Wifi enabled thermostat

Intercept survey

- 177 respondents

- Languages: English and Chinese

- Locations: Library, main street, Philz, WholeFoods, Ranch 99, and Chinese Church in Christ
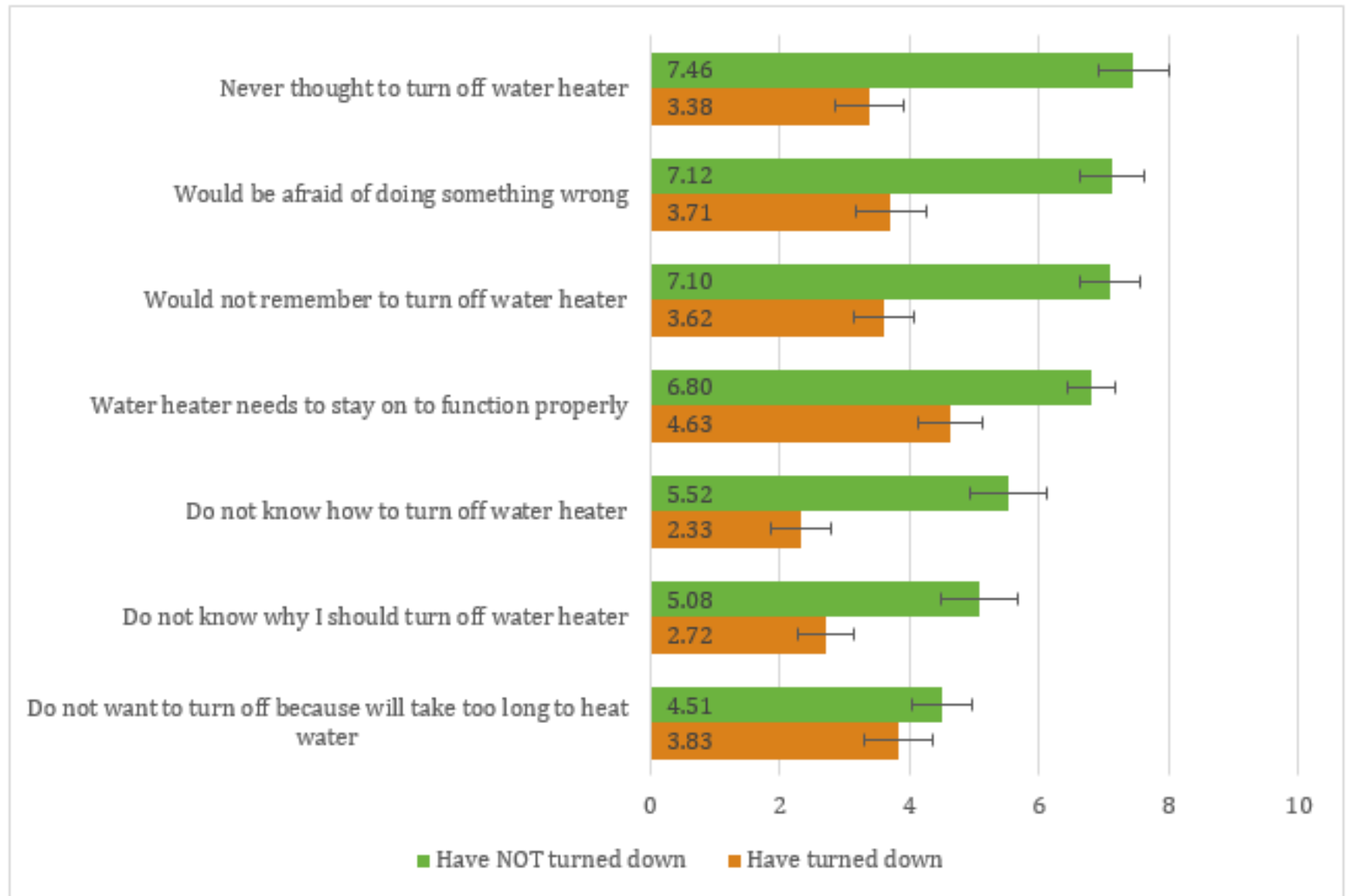
Survey Results

Participant Characteristics	
Language of Survey:	English (83%); Chinese (17%)
Ownership:	Own (62%); Rent (38%)
Residence Type:	Single-family (65%); Multi-family (35%)
Age:	Mean = 47; Range 21 − 88
Employment:	Full Time (59%); Stay-at-home Parent (13%); Retired (13%); Part Time (6%); Self-employed (5%); Unemployed (2%); Student (2%)
Gender:	Female (57%); Male (33%)
Race:	Asian or Pacific Islander (76%); Southeast Asian (10%); White or Caucasian (9%); Other (3%); American Indian or Alaskan Native (2%); Black or African American (1%); Hispanic or Latino (1%) Note: Respondents could choose more than one, so percentages do not equal 100%.
Language other than English spoken in home:	Yes (69%), No (19%)

Turn off water heater

Barriers

Barrier	Have NOT turned down	Have turned down
Never thought to turn off water heater	7.46	3.38
Would be afraid of doing something wrong	7.12	3.71
Would not remember to turn off water heater	7.10	3.62
Water heater needs to stay on to function properly	6.80	4.63
Do not know how to turn off water heater	5.52	2.33
Do not know why I should turn off water heater	5.08	2.72
Do not want to turn off because will take too long to heat water	4.51	3.83

■ Have NOT turned down   ■ Have turned down

Note: Have NOT turned down *N*=44; Have turned down *N*=54.

Turn off water heater

Benefits

Would save money
- Have NOT turned down: 7.98
- Have turned down: 8.47

Is a way to protect the environment
- Have NOT turned down: 7.78
- Have turned down: 7.20

Would save energy
- Have NOT turned down: 7.24
- Have turned down: 7.06

Will make home safer while away
- Have NOT turned down: 6.75
- Have turned down: 6.98

Legend: ■ Have NOT turned down ■ Have turned down
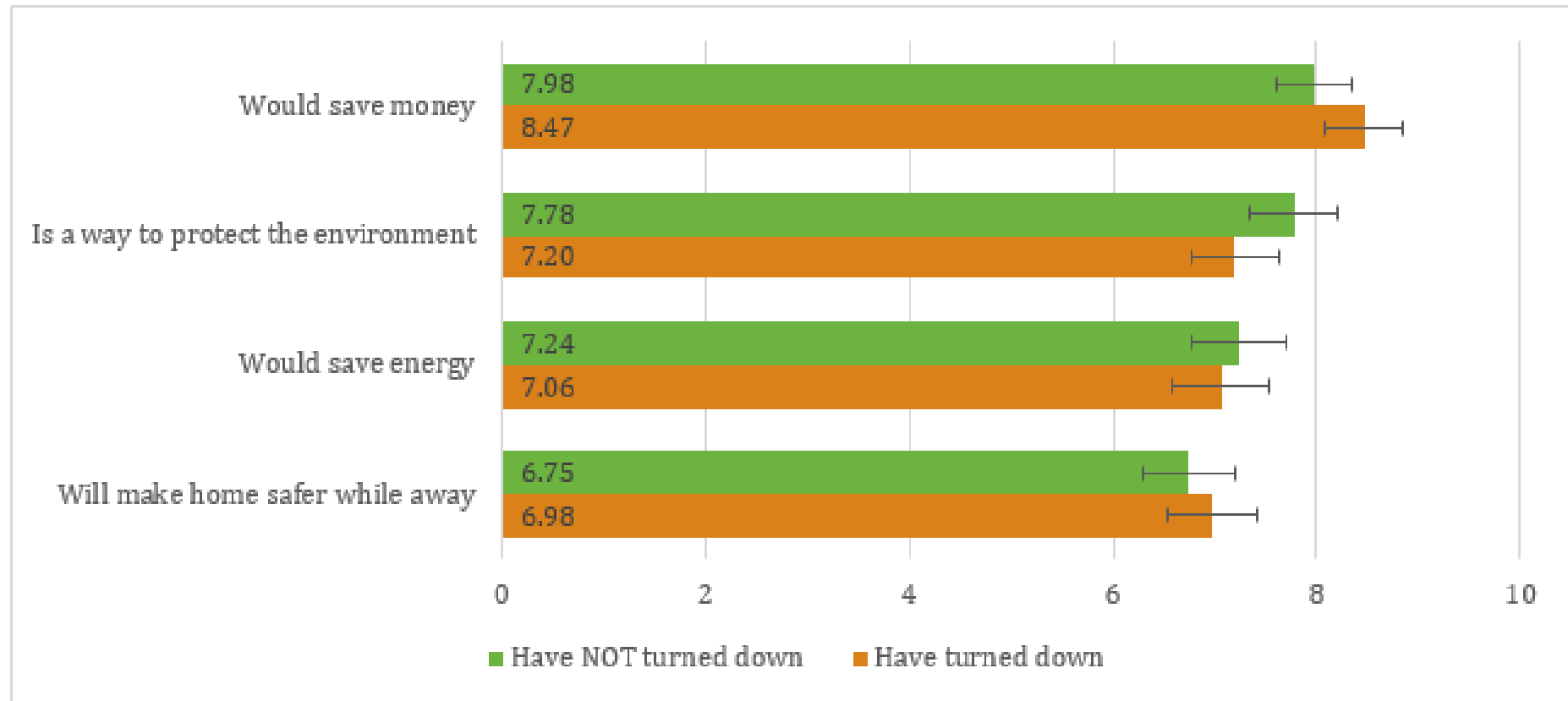
Note: Have NOT turned down N=44; Have turned down N=54.

Wifi thermostat

Barriers

Barrier	Value
Current system does all I need	6.67
WiFi enabled is too costly	6.02
Do not have skills to install wifi enabled	4.98
Never heard of wifi enabled	4.59
Using app would use too much data	4.49
Uncomfortable linking home heating to phone	4.37
Do not want another app on phone	4.26
Programmng wifi enabled would be difficult	3.93
App would use too much phone memory	3.77
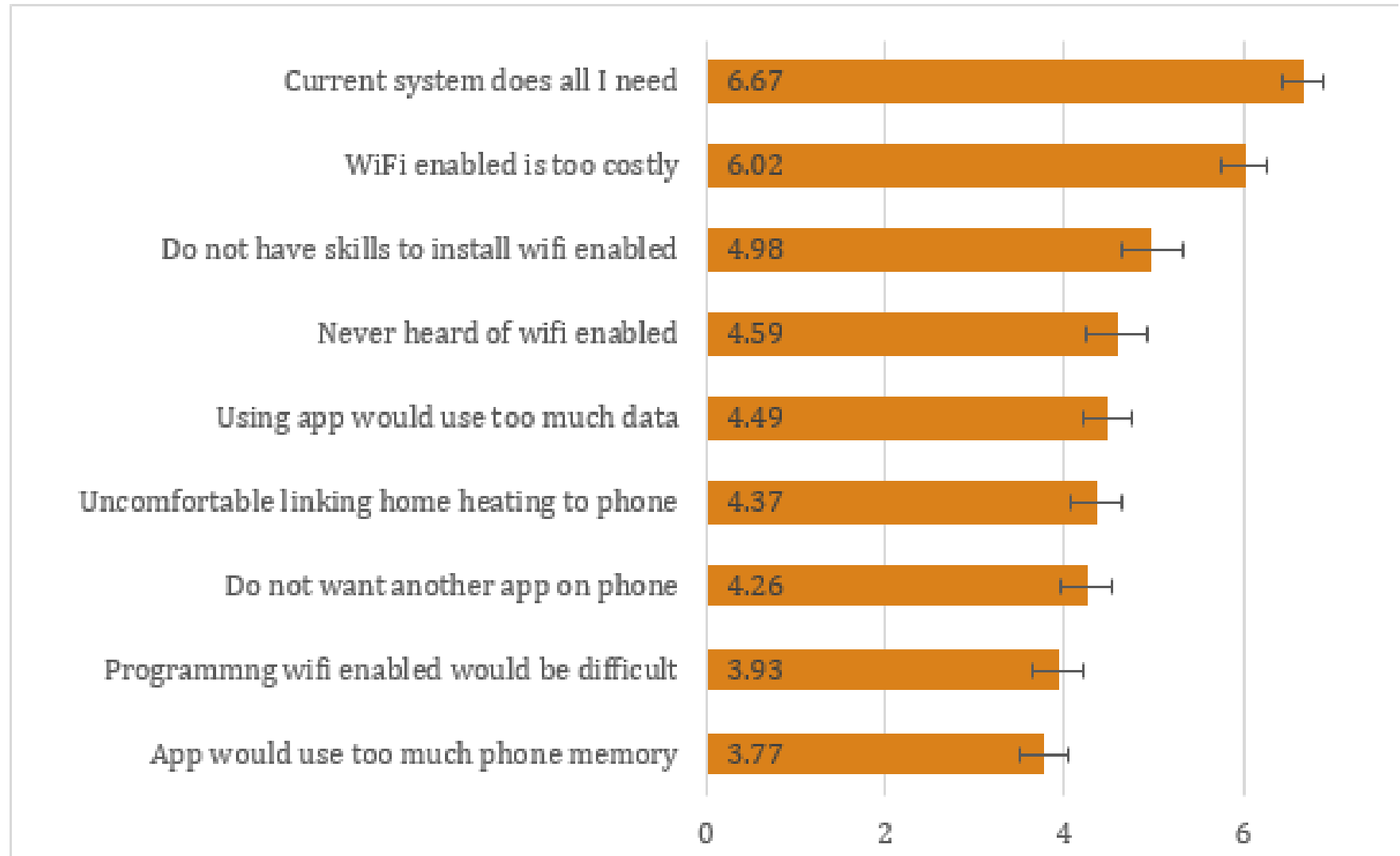
Note: Respondents with Manual or Programmable Thermostats *N*=147.

Wifi thermostat

Benefits

Benefit	Rating
Like to stay up to date with technology	7.34
Would like to control temp while away	6.99
WiFi enabled would save money on energy bill	6.98
WiFi enabled will help protect environment	6.85
WiFi enabled would make home more comfortable	6.51
WiFi enabled would save energy	6.25
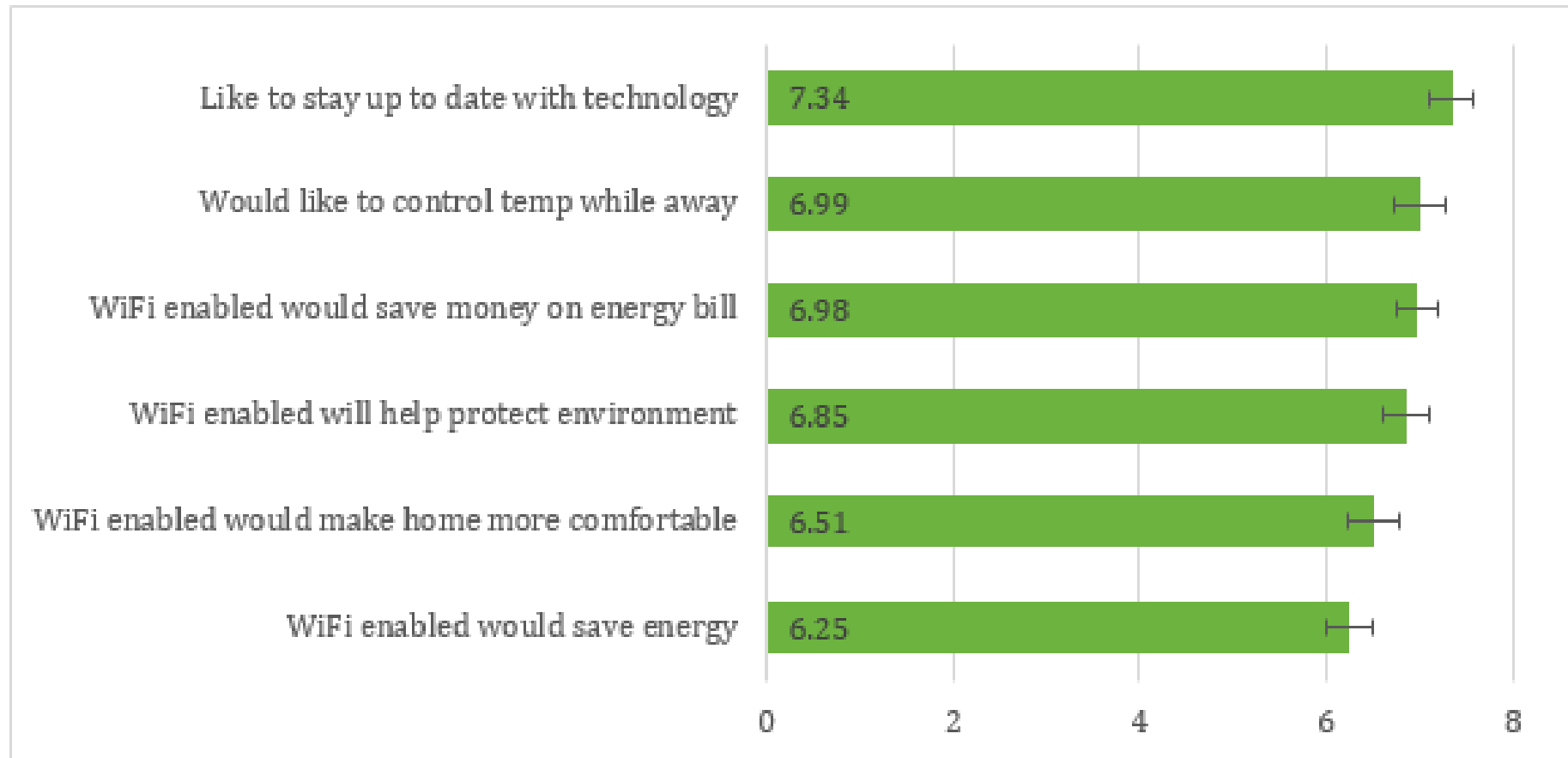
Note: Respondents with Manual or Programmable Thermostats N=147.

3. Develop Strategy

February and March -

Develop strategy & outreach materials

Next stages:

April through June – Pilot phase

July and August – Evaluation of pilot and create program

Watch this space!

gileec@cupertino.org

408-777-1364

CUPERTINO GREEN