

# ***It's Complicated:*** Unpacking Behaviors to Estimate Persistence

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Cool Choices

December 8, 2014



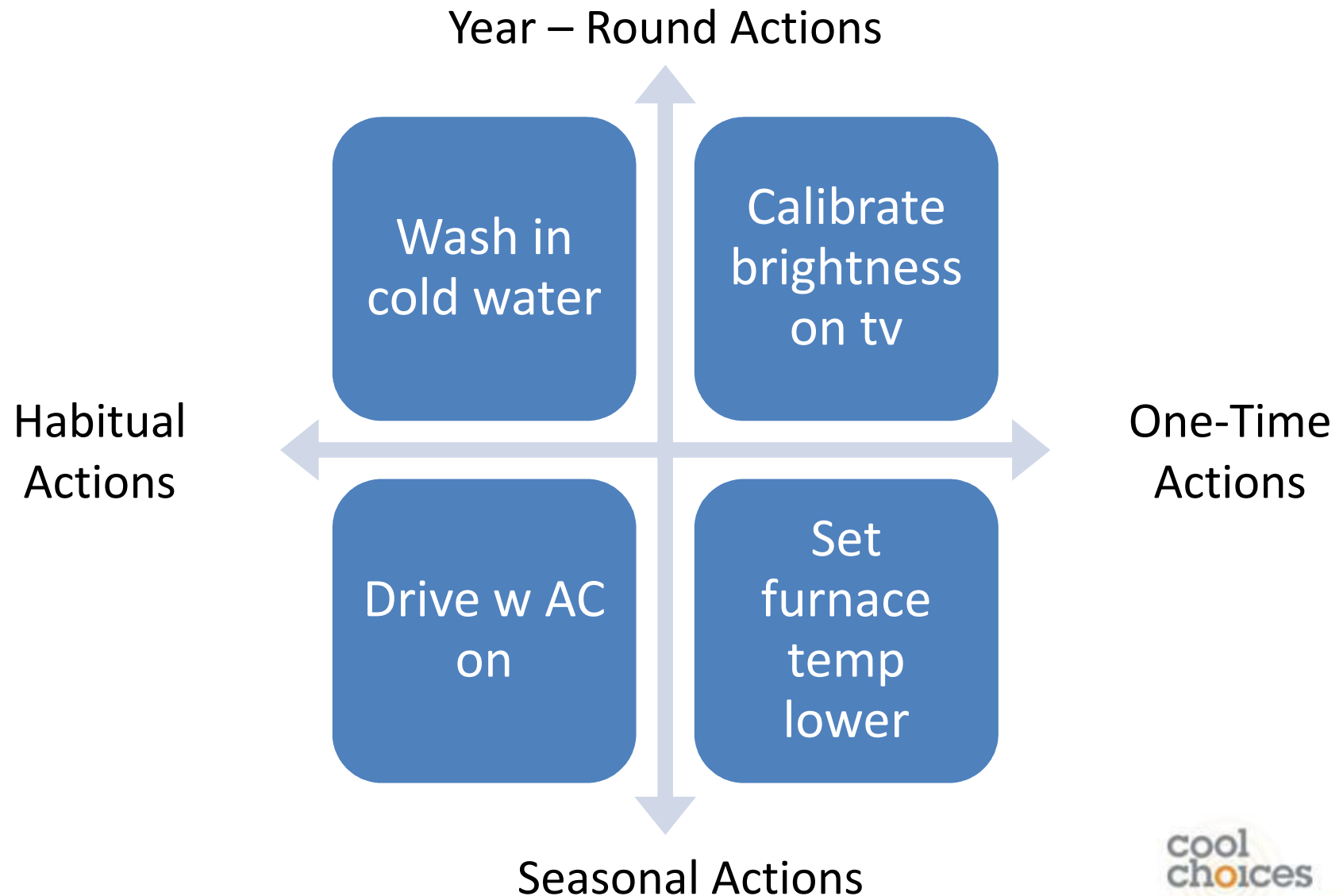
ICAN'T HELP THINKING  
THAT THIS WOULD BE  
A BETTER WORLD  
IF EVERYONE  
WOULD LISTEN TO ME..



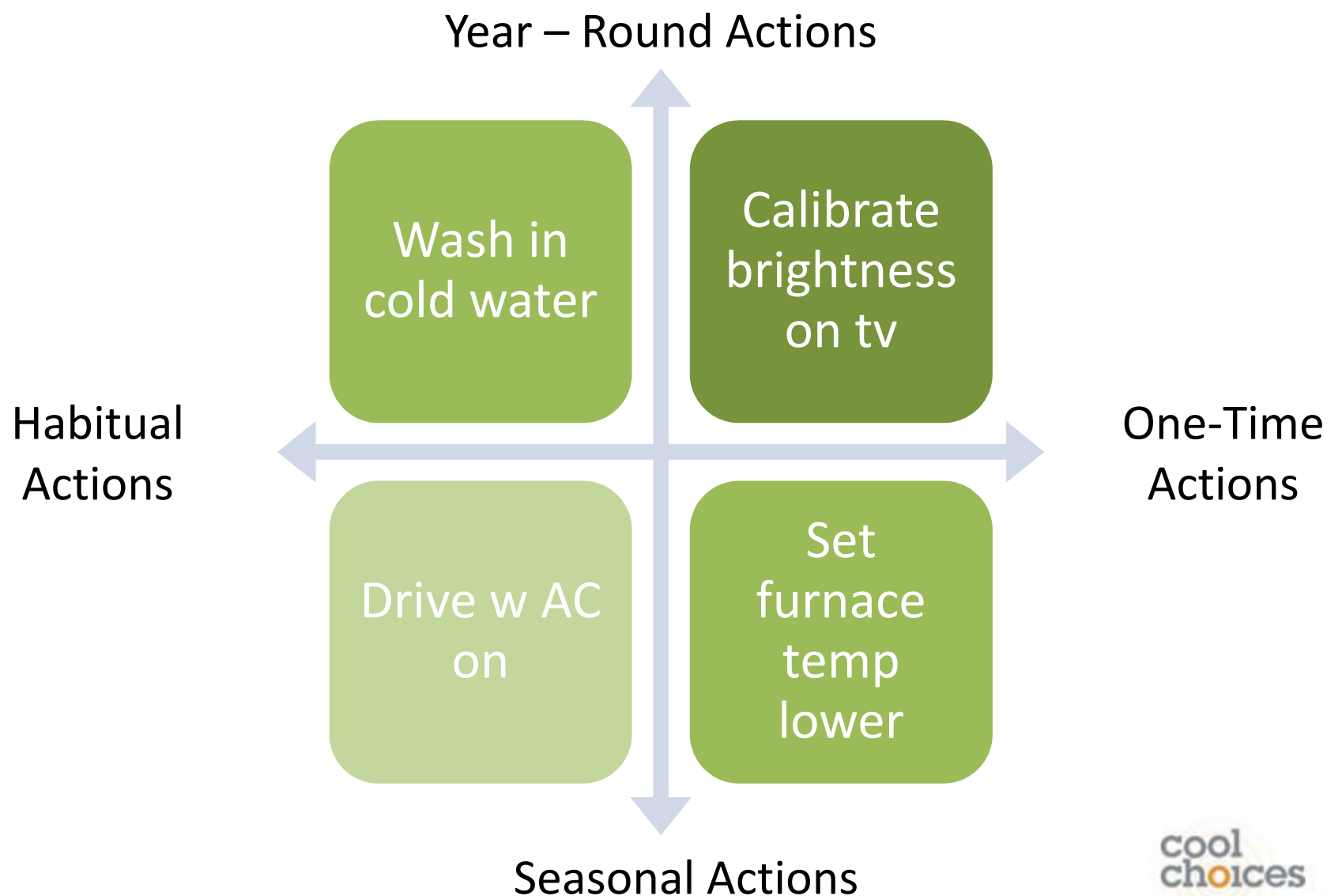
Yes,  
I was  
that girl.

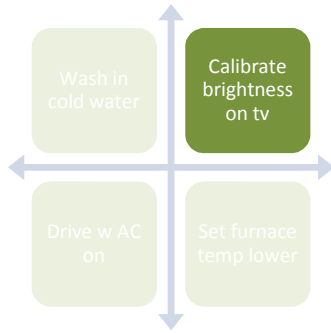


# Types of Behaviors



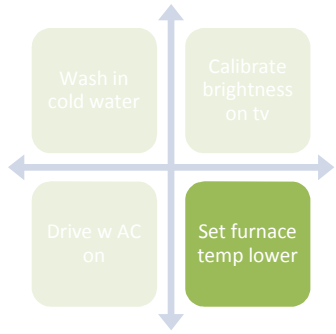
# Likely Persistence of Behaviors





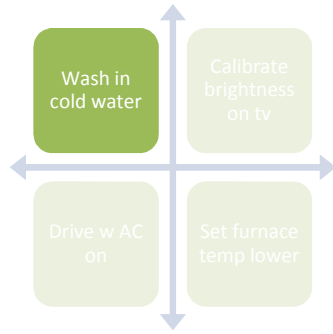
# One-Time Actions

- Calibrate electronics
- Set water heater temperature
- Install faucet aerators
- Unplug, recycle old appliances
- *Persist for life of equipment*



# One-Time Seasonal

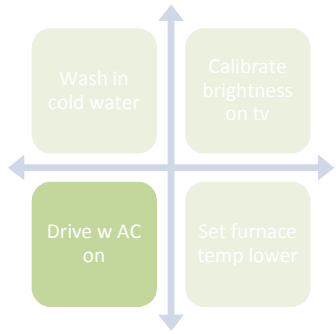
- Adjust thermostat setting (summer or winter)
- Run furnace fan on auto vs continuous
- Install rain barrel
- Install compost bin



# Habitual Actions

- Carpool to work
- Turn off water when brushing teeth
- Turn off lights, electronics when not in use
- Eat a meatless meal
- Wash laundry in cold water

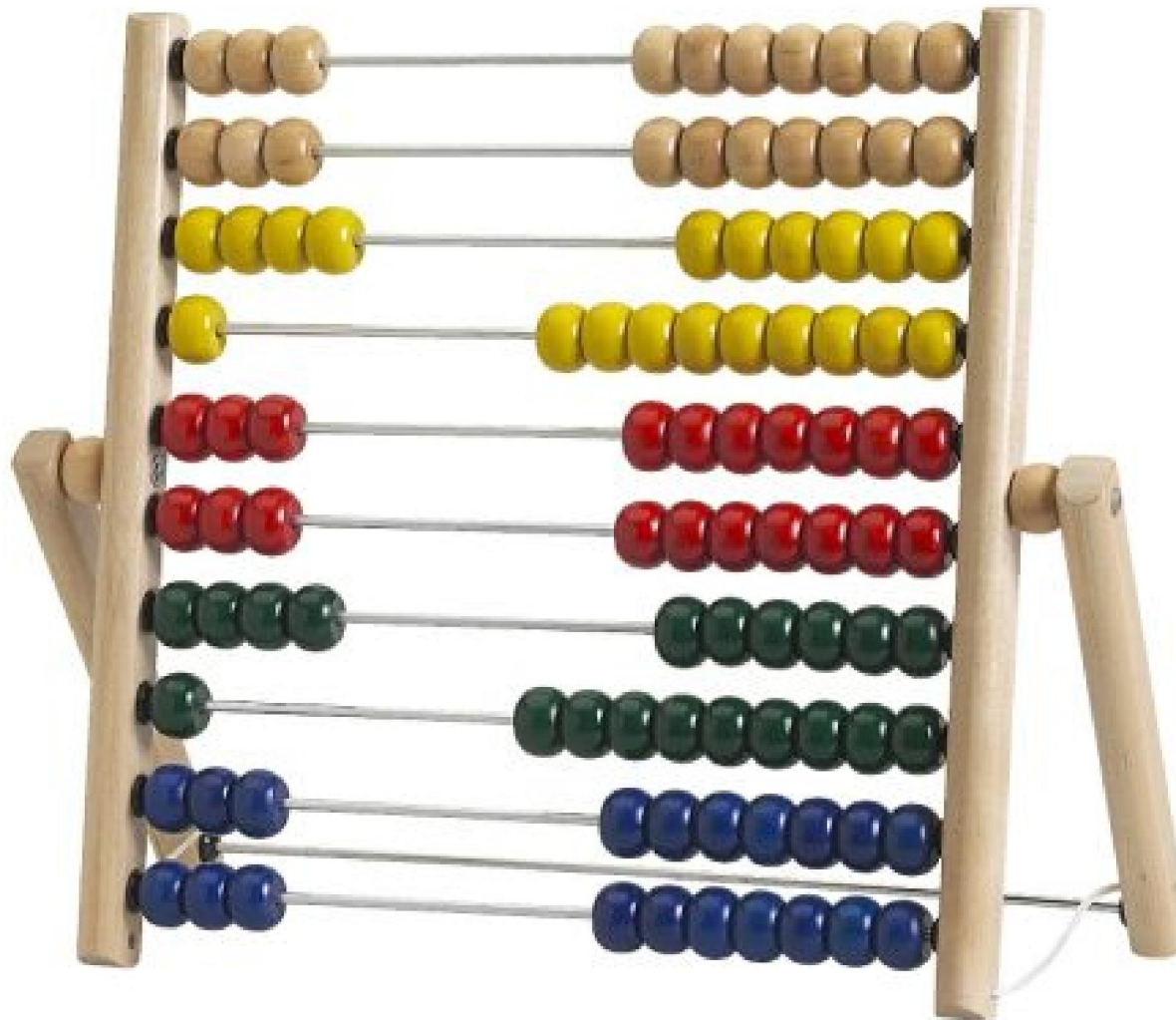




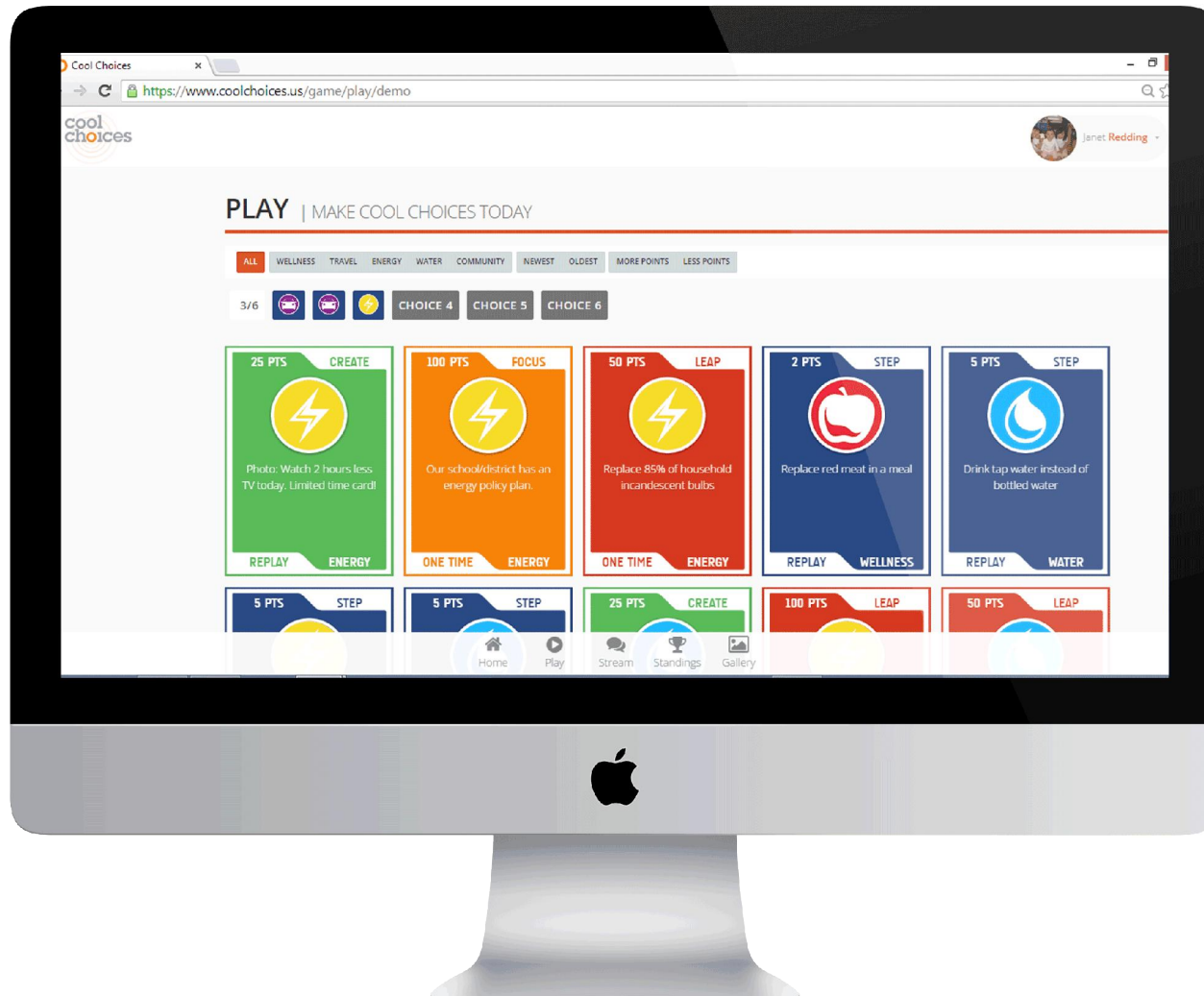
# Seasonal Habits

- Use A/C or open windows, based on driving speed
- Line dry clothing
- Bike to work
- Shovel walk instead of using snow blower

# How Does It All Add Up?



*Make Cool Choices, claim points for yourself and your team.*



# Game Basics

- Record actions daily for 8 weeks
- Emphasis on personal life
- Indicate if new action or not
  - No penalty for reporting pre-existing practices
- Transparent system
- Facilitates conversation
  - Coaching, collaboration, sharing



# Action-Specific Assumptions

- Estimated annual savings
  - Kwh, therms, water, gasoline, landfill waste
  - CO2, Dollars
- Persistence of savings

*Players don't see any of this*



# 2,600 Participants

- Two manufacturers
- Meat processor
- Law firm
- University extension system
- Five units of local government

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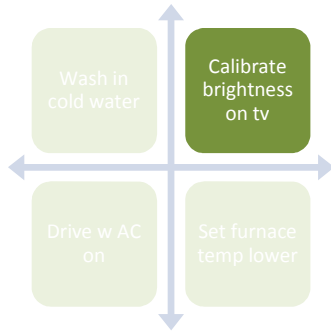
boardman  
& clark llp  
LAW FIRM



City  
of  
**Fond du Lac**

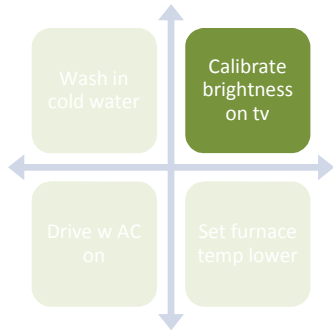


**cool  
choices**  
act today, preserve tomorrow



# Adjust Water Heater Temperature

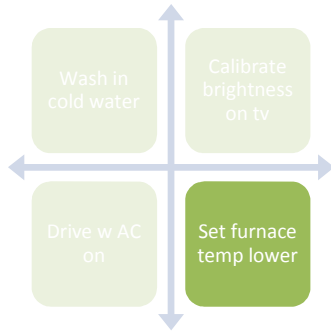
- 15 therms annually
- 7.5 years (half the life of water heater)
- 17% of players reported as new action
- Annual savings: 6,750 therms
- Lifetime savings: 50,625 therms



# Calibrate Flat Panel TV

- 55 kwh
- 2.5 years (half the life of the TV)
- 15% of players reported as new action
- Annual savings: 22,055 kwh
- Lifetime savings: 55,138 kwh



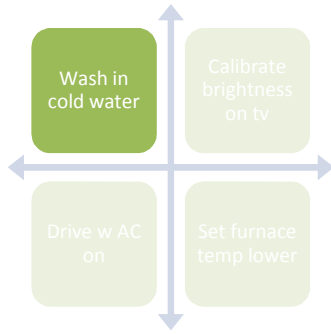


# Install a Rain Barrel

- 650 gallons of water / year
- 5 year persistence
- 1% of players reported as new action

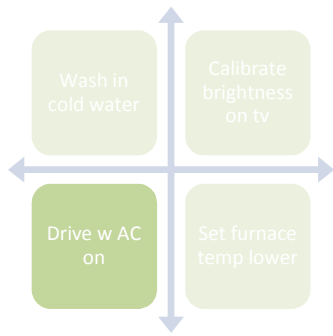


- Annual savings: 14,950 gallons of water
- Lifetime savings: 74,750 gallons of water



## Drive 65 mph vs 75 mph on Highway

- 39 gallons gas/year
- 0.5 (6 months) persistence
- 20% of players reported as new action
- Annual savings: 20,008 gallons of gasoline
- Lifetime savings: 10,004 gallons of gasoline

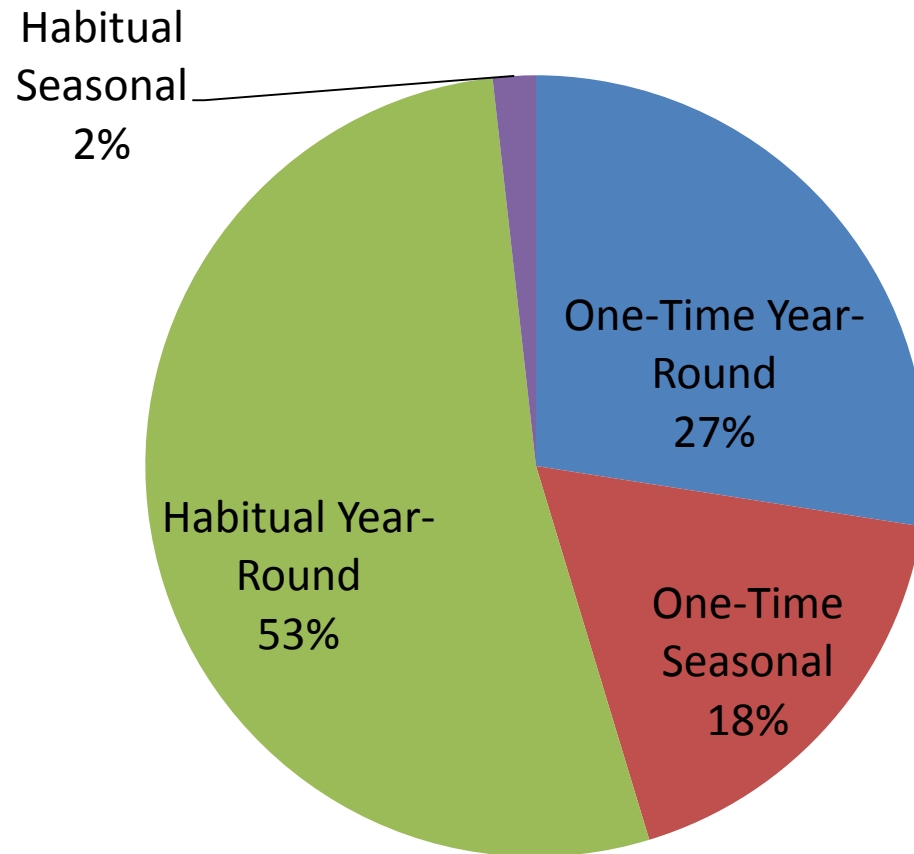


# Bike to Work

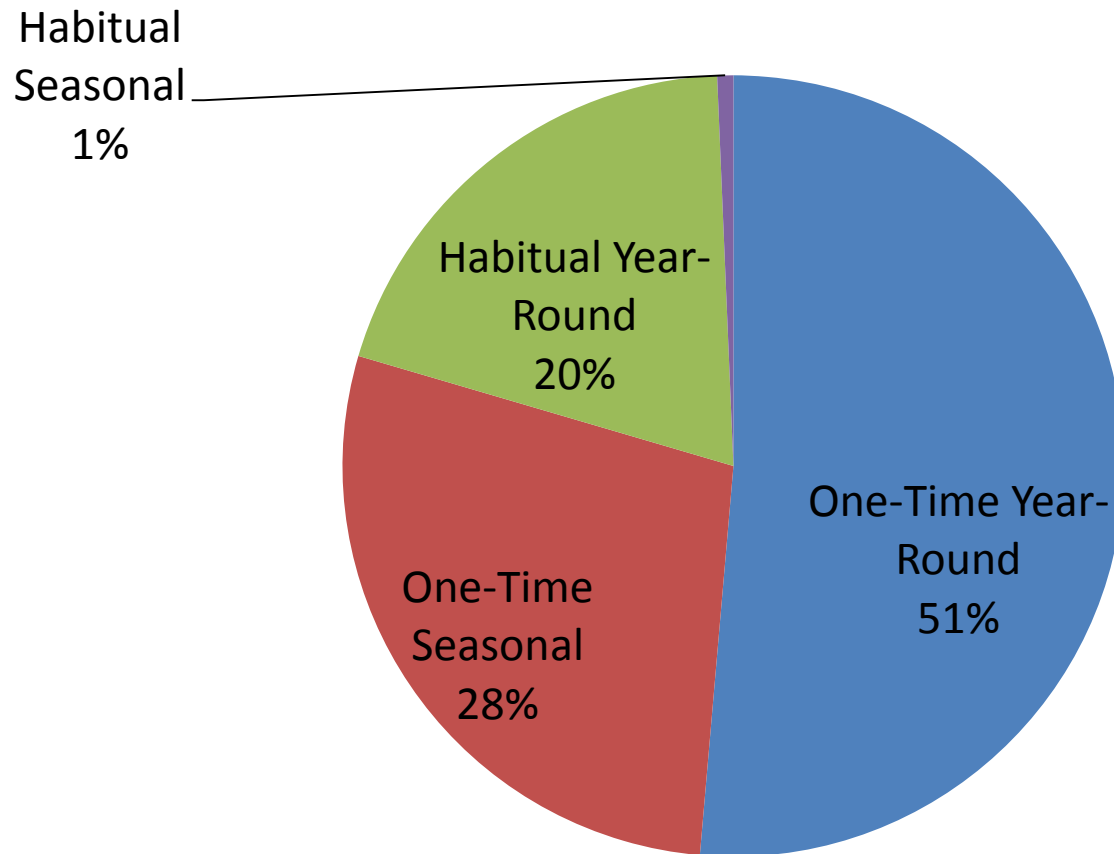
- 4.8 gallons gas / year
- 1 year persistence
- 7% of players reported as new action
- Annual savings: 3,513 gallons of gasoline
- Lifetime savings: 3,513 gallons of gasoline



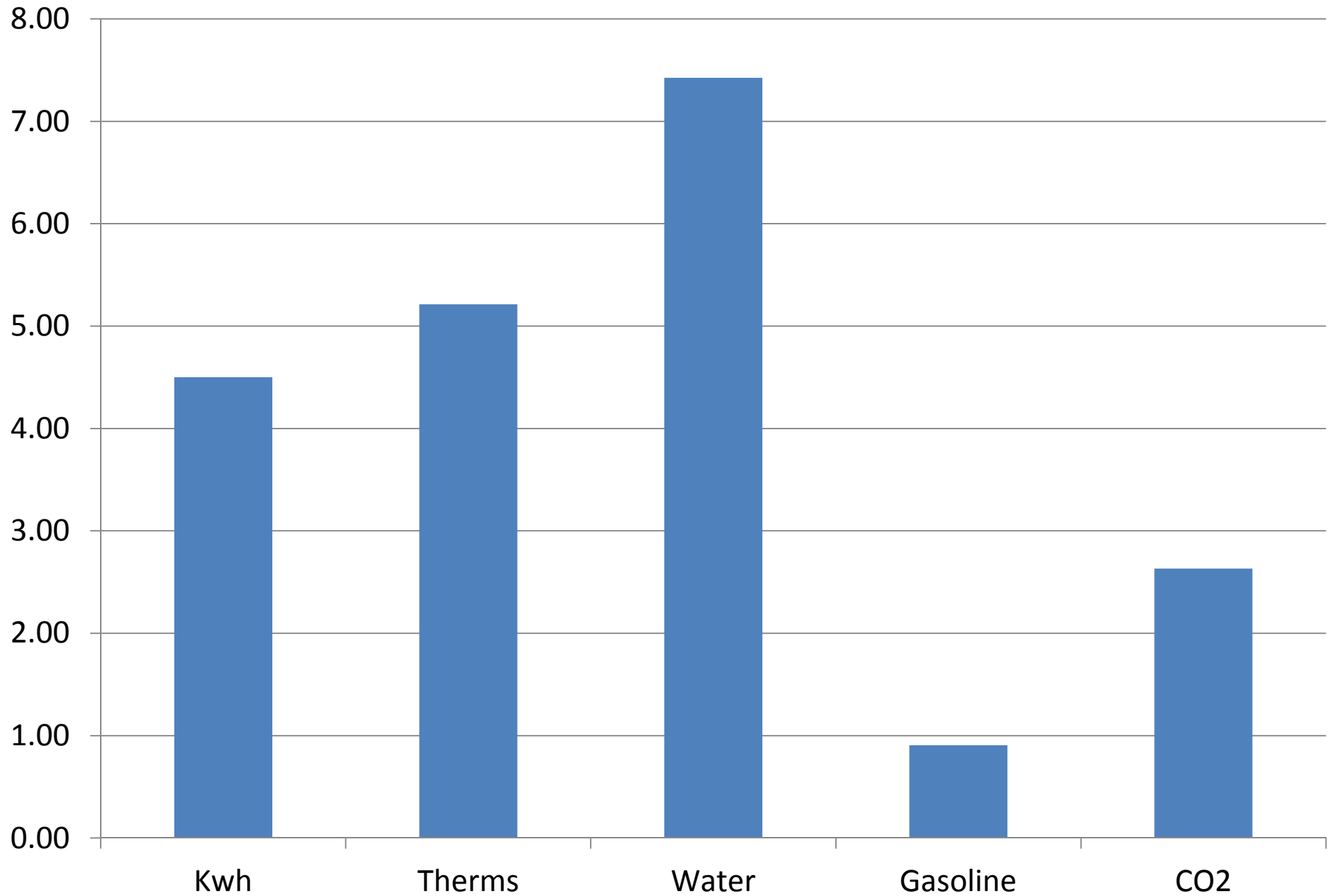
# Annual Carbon Savings



# Lifetime Carbon Savings



## Weighted Average of Persistence (in Years) by Savings Type



# Beyond the Black Box



# Thanks!

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