



How Behavioral Science Can Inform Energy Program Design

Elizabeth Palchak, PhD | Arctic Sustainable Energy Research Conference

April 21, 2021



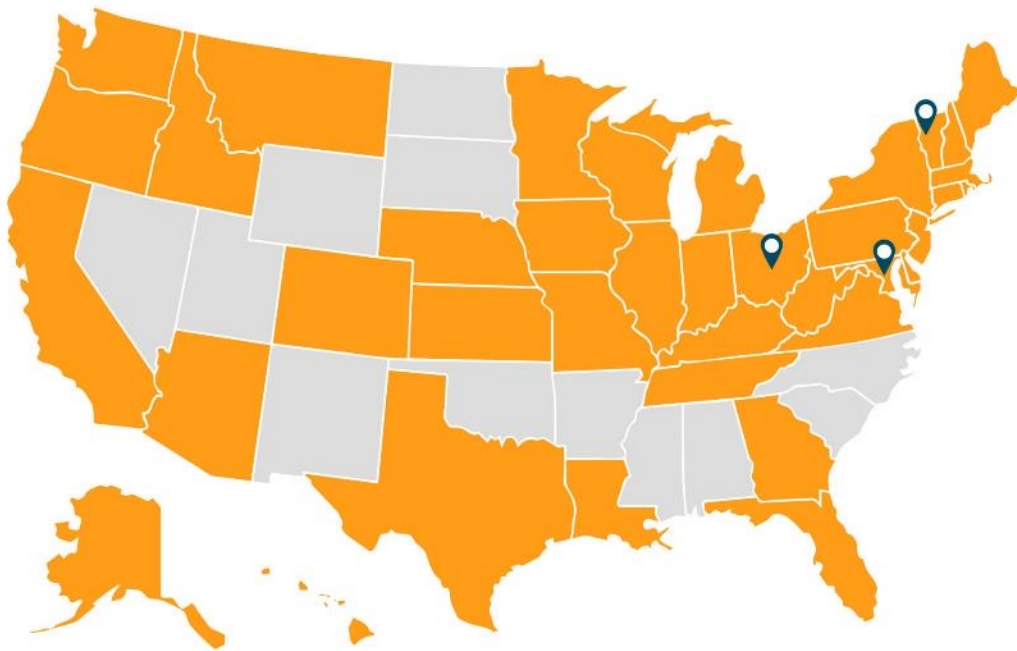
Driven by purpose, committed to impact

**VEIC is on a mission
to generate the
energy solutions
the world needs.**

- VEIC works with organizations across the energy landscape to create immediate and lasting change
- We serve as an objective partner for our clients as they navigate complex energy challenges
- Every challenge is different, but our commitment is the same: make an impact

Our footprint

National reach, local approach



VEIC offices



Where we work

Rich history

Established in 1986

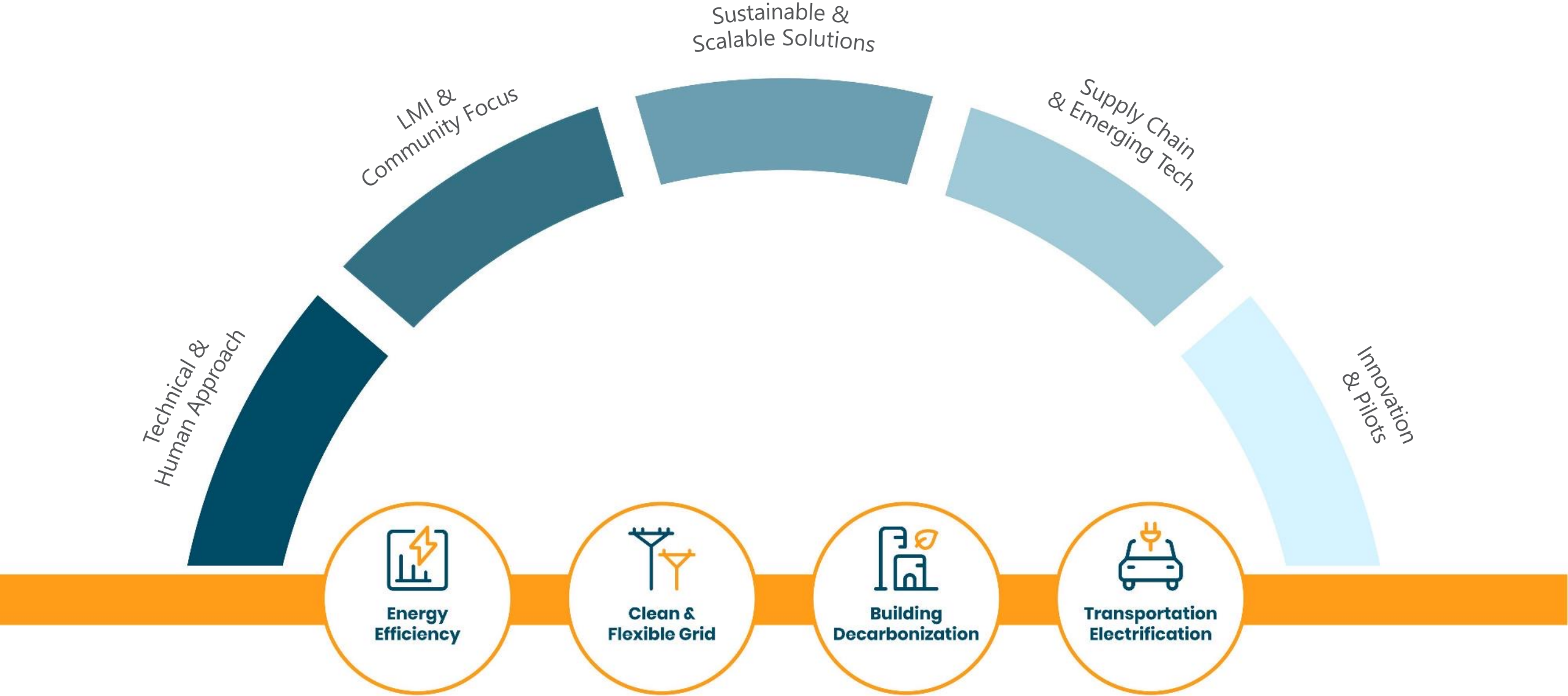
Celebrating over 30 years of delivering impactful energy solutions to the market.

Experts that move us forward

Over 300 employees

Consultants, engineers, behavior and data specialists, analysts, program implementers, account managers, project managers, marketing, graphics and public relations experts.

Our Services



veic

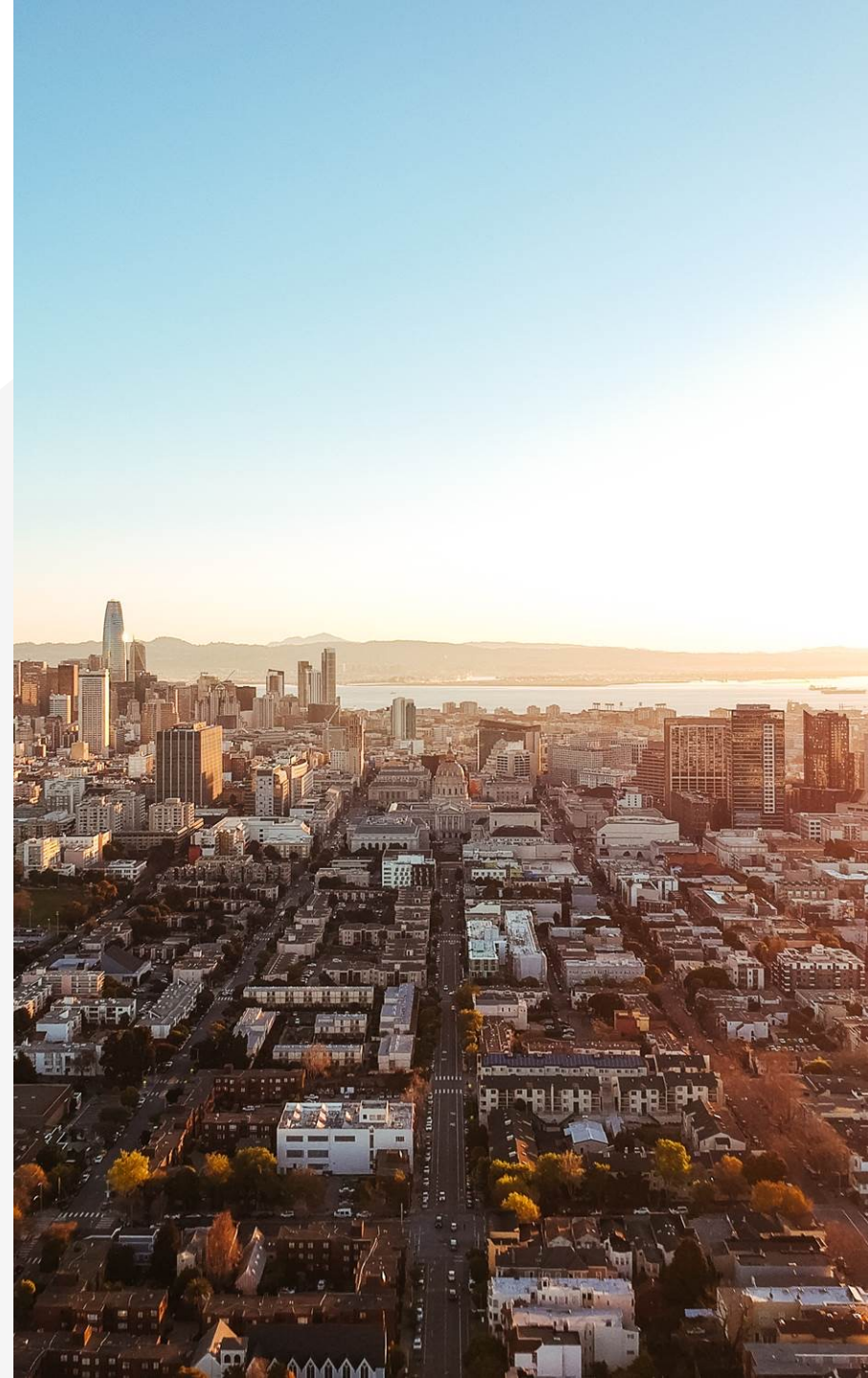
The Human Perspective



Federal Policy

Shalanda Baker, the first deputy director for energy justice at the US Energy Department recently highlighted structural racism and structural inequality that is “**baked into the energy system**” and she calls on those in the industry to examine it.

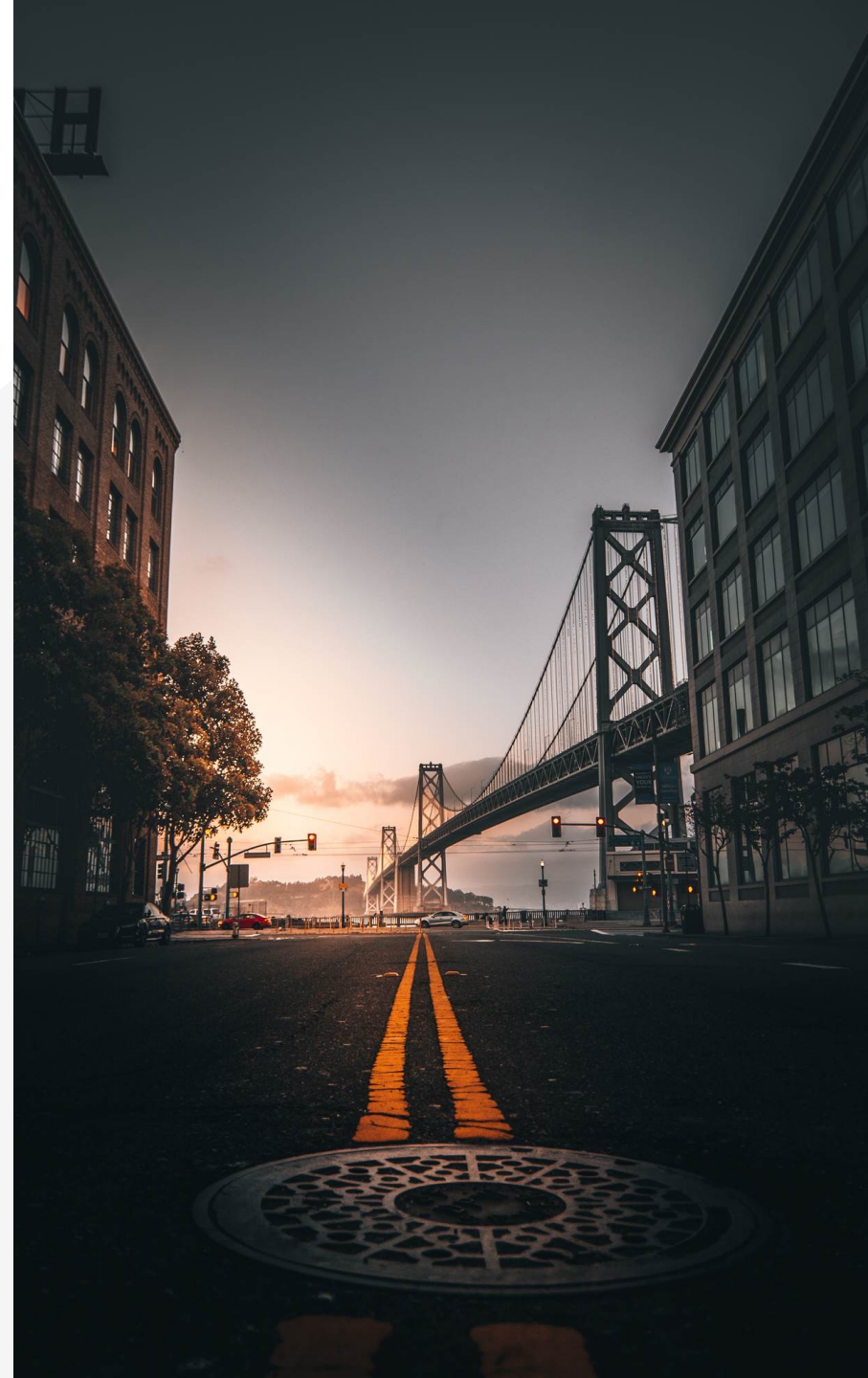
NBC News, March 9th, 2021



Federal Policy

Significant commitment to reducing energy burden from the Biden Administration in the **American Jobs Plan**:

- Strong focus on workforce development for BIPOC communities and women in the workforce
- Particular focus on driving investments in disadvantaged communities that have “not yet benefited from clean energy investments”
- \$27B Clean Energy and Sustainability Accelerator to mobilize private investment into distributed energy resources; retrofits of residential, commercial and municipal buildings; and clean transportation



“We are customer-obsessed”



Mary Powell, Former CEO, GMP

Understanding Your Customers

- Who are you trying to reach?
- What do they care about?
- What are their challenges?



Understanding Your Customers

How can you get a little bit more intel on your customers?

YOU DON'T KNOW
EXACTLY HOW THEY
THINK



What will it take to increase attic insulation in homes?

1. Offer group discounts to groups of neighbors who agree to insulate their attics
2. Offer generous subsidies (essentially pay people) to put insulation in their homes
3. Explain the environmental benefits



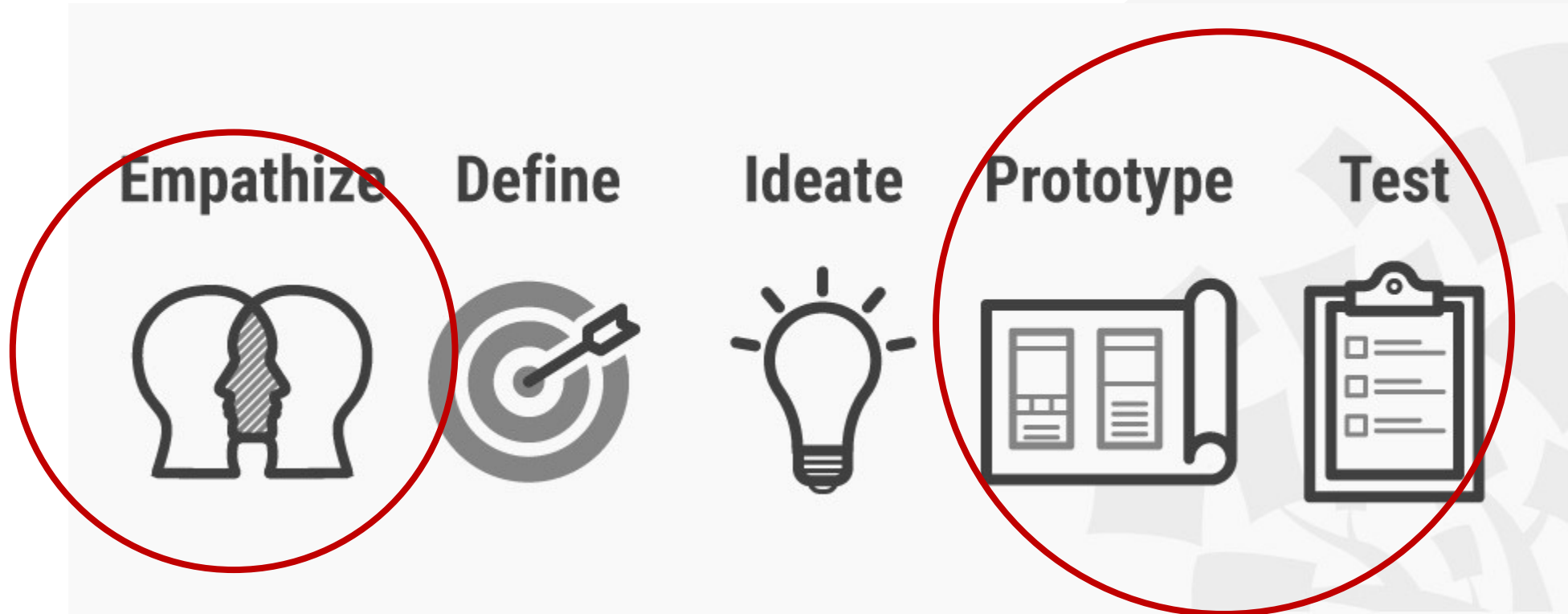
What will it take to increase attic insulation in homes?

1. Offer group discounts to groups of neighbors who agree to insulate their attics
2. Offer general rebates (essentially pay people to insulate their homes)
3. Explain the environmental benefits





Human-Centered Design



“

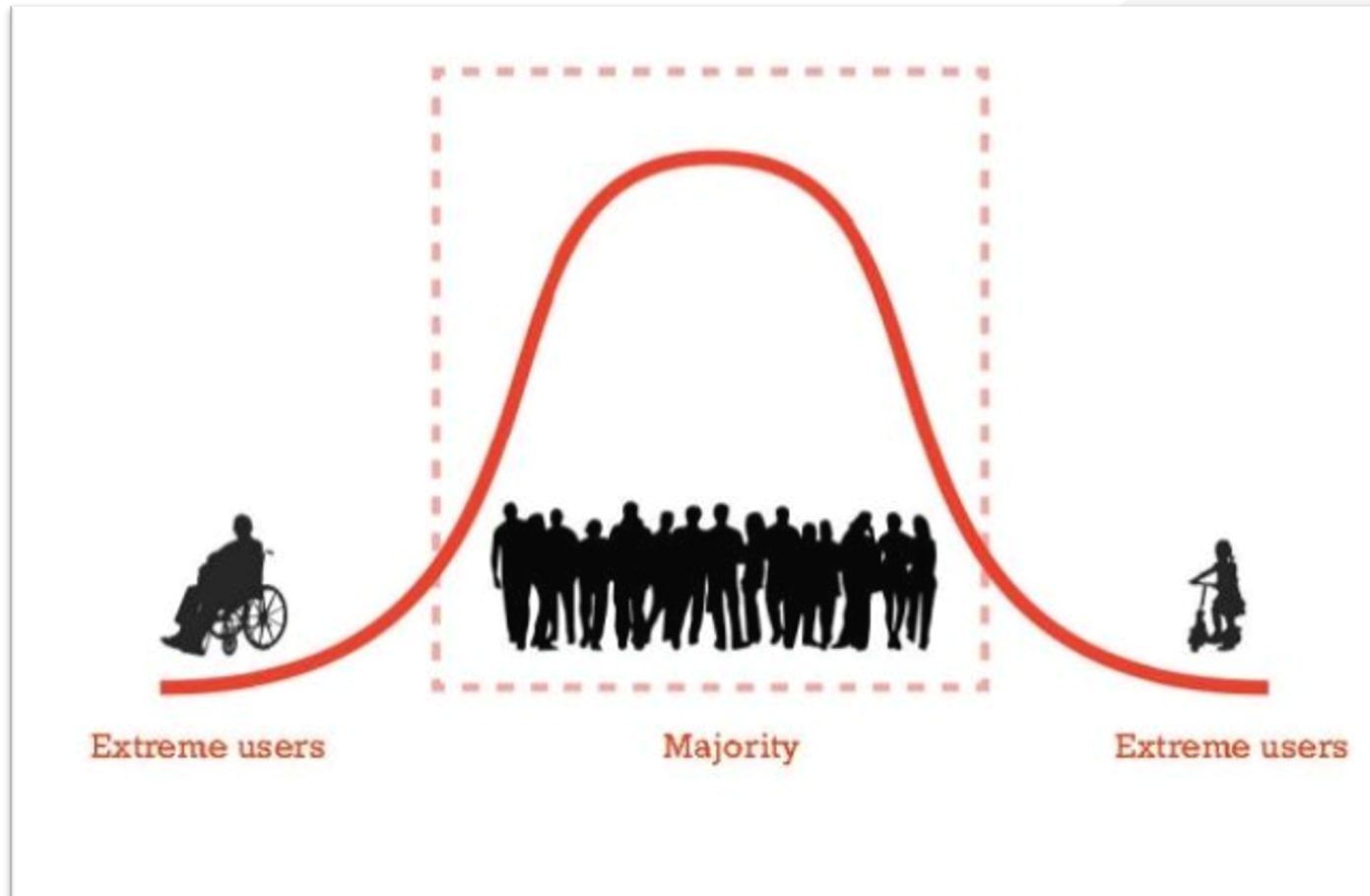
If you think good design is expensive, you should look at the cost of bad design.

”

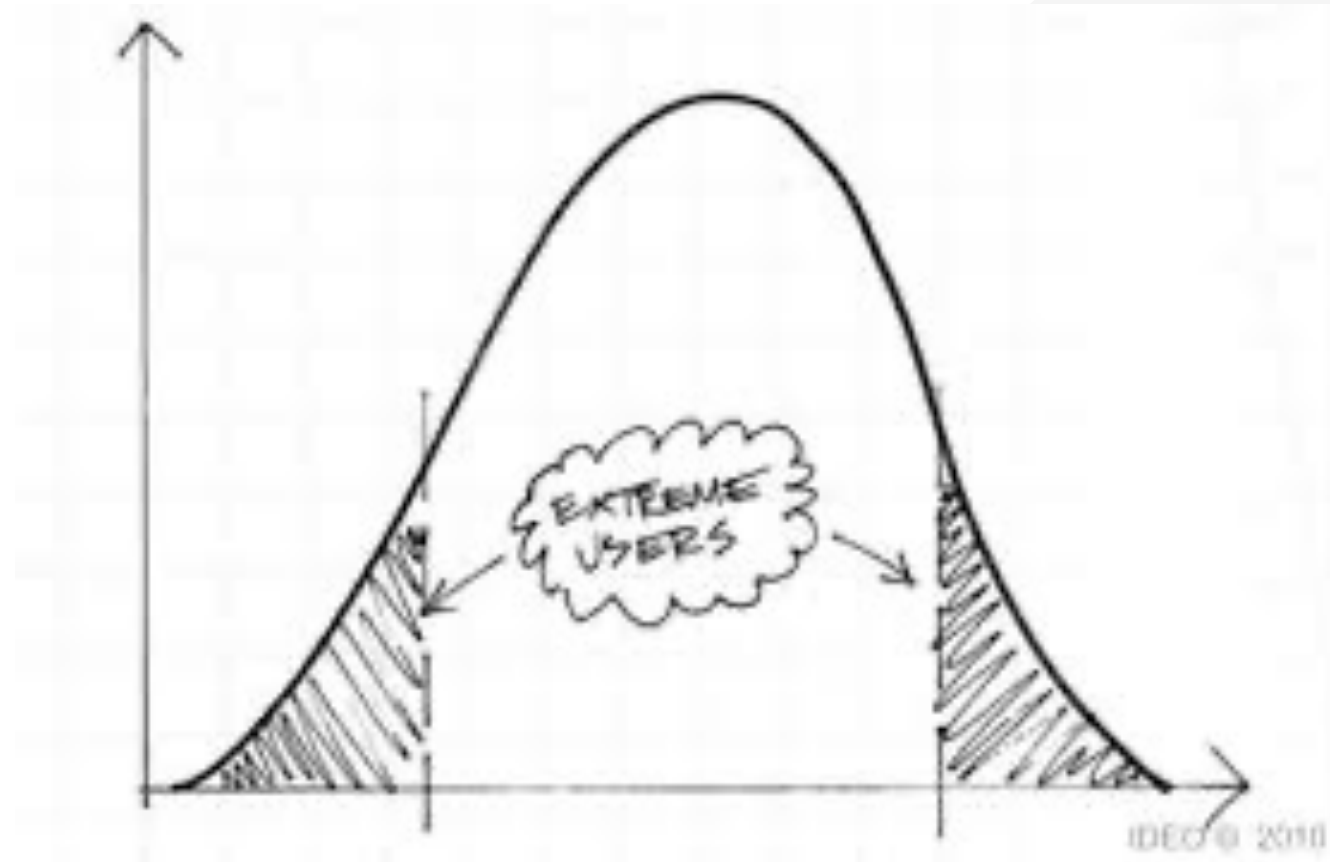
**Ralf Speth – CEO of
Jaguar Land Rover**

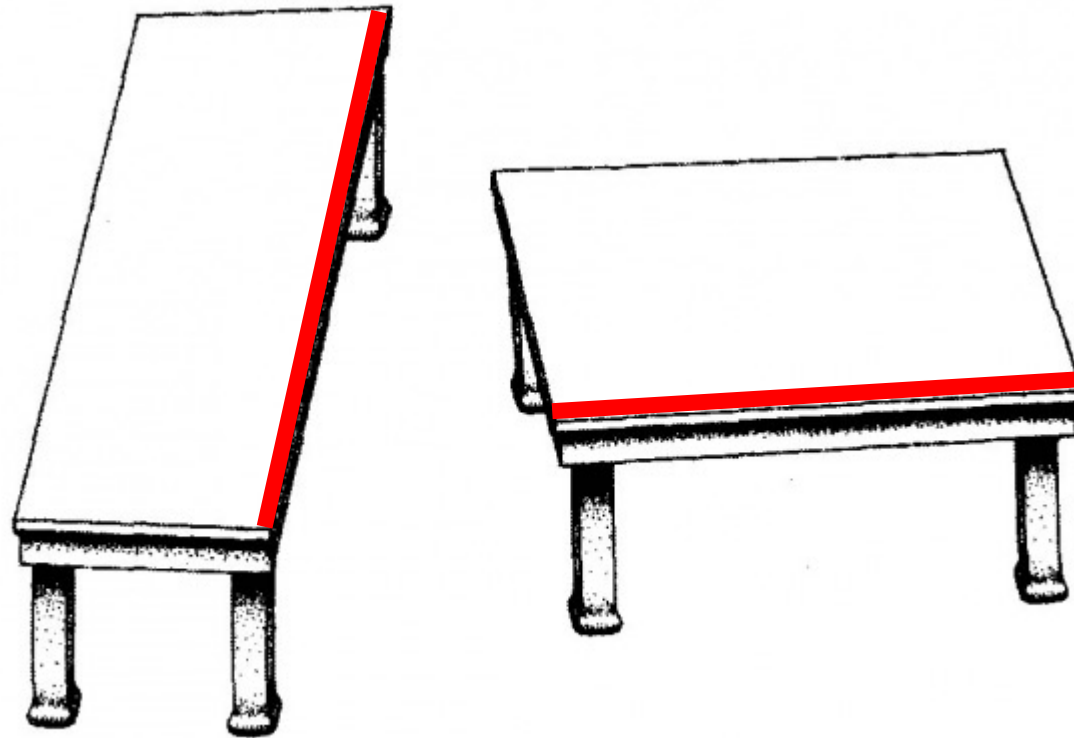


Gain Insights from Extreme Users



Who Are Your Extreme Users?

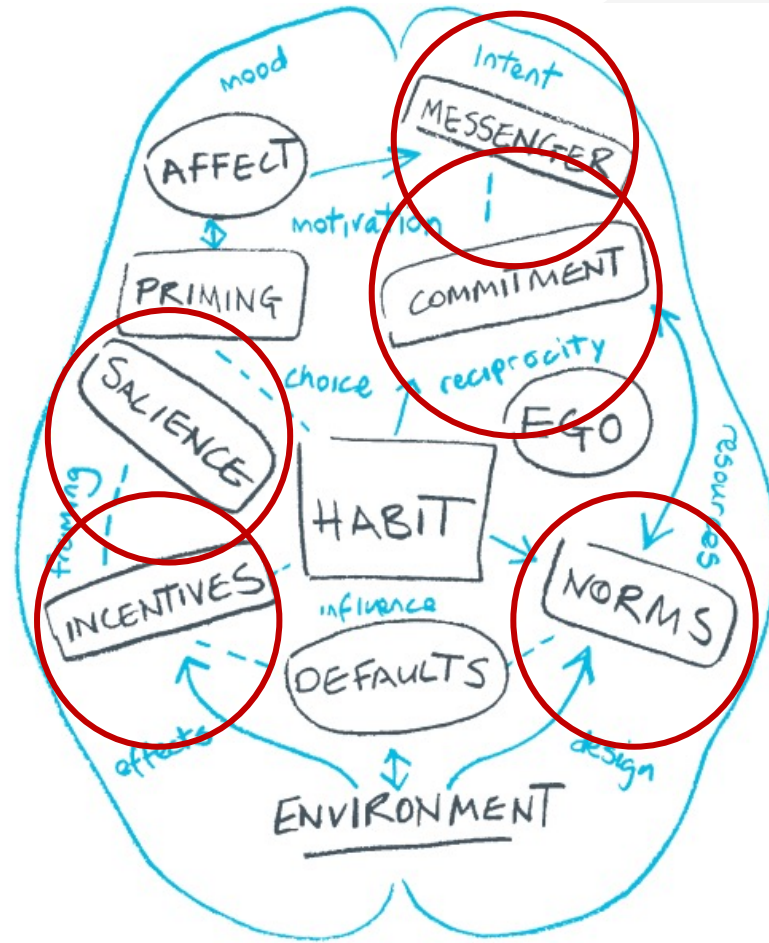










Shephard tables, 1990

Nudging with Behavioral Science

Psychology
+
Marketing
+
Energy

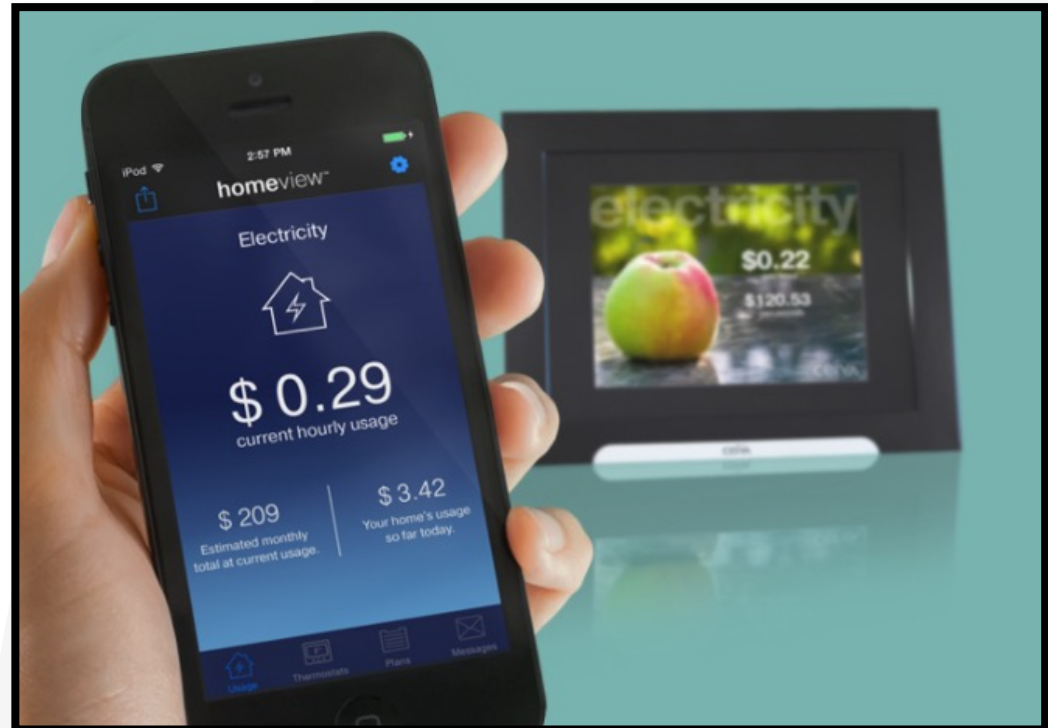


Behavior Change Evidence

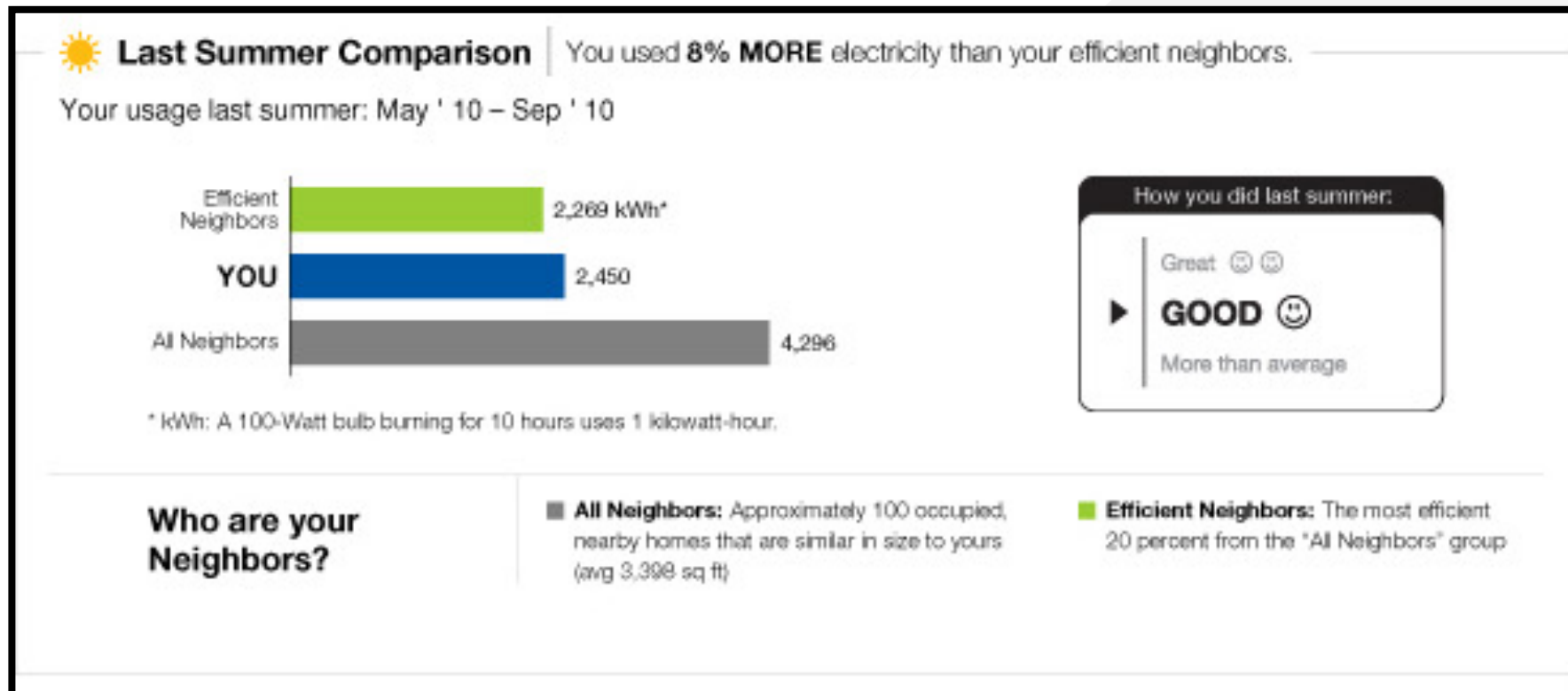
<i>Intervention</i>	<i>Promising</i>	<i>Mixed</i>	<i>Limited Evidence</i>
Commitment			
Defaults			
Messenger			
Norms			
Priming			
Salience			
Education			
Financial			

Byerly et al., 2018
Frontiers in Ecology
and Environment

Salience



Social Norms



Commitment

I plan to switch to
a heat pump and go
100% low power. Zero
fossil fuel home!
-Jake J.

I will reduce my phantom
load and explore going
Solar.
Kelli

I PLEDGE TO KEEP
WORKING TO MAKE
SOUTH BURLINGTON
A "NET ZERO" CITY
ROSANNE GRECO

I pledge to join
Community
Jessica Solar !

I pledge to do
all the suggestions
on the check list.
Helen Riehle

I pledge to do
a deep home energy
audit and to
get an electric
vehicle to go with
my solar panels
LINDA MCGINNIS

Low-Income Multifamily Behavior Program

Messenger, Salience, Financial Incentives

- New American communities
- Renters
- Raffle for free rent
- Regular feedback on usage and change in use



Energy Choices Challenge

Receive a
\$20
Gift Card

WHAT Complete a survey about your energy use and receive a \$20 gift card.
Everyone who finishes a survey in person or via mail will receive a gift card.

WHEN Weeks of April 17th & April 24th, 2017

WHO Look for representatives from Efficiency Vermont coming door-to-door.
No personal identifying information will be retained.

Not here during that time?
We'll leave a survey for you to fill out and mail back to us.

Why?
Efficiency Vermont is committed to helping Vermonters reduce the cost of energy use. This survey information will help us design better programs to help serve you, our customers.
Thank you for your help!


Questions?

Housing Trust of Rutland:
John McKenna,
802-236-3878

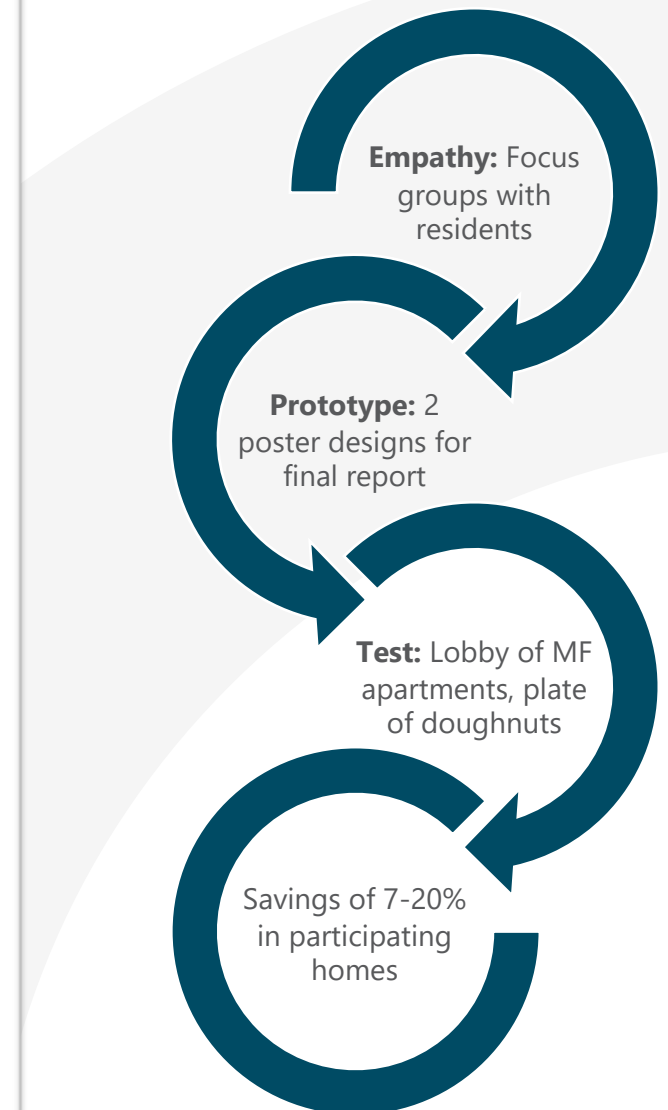

DOWNSTREET
Housing Trust
www.downtownhousetrust.org

Champlain
Housing Trust:
Anna Herman,
802-861-7395


CHAMPLAIN
HOUSING TRUST
www.champlainhousingtrust.org

Downstreet Housing:
Neil Smith,
802-477-1332


HOUSING TRUST
of Rutland County



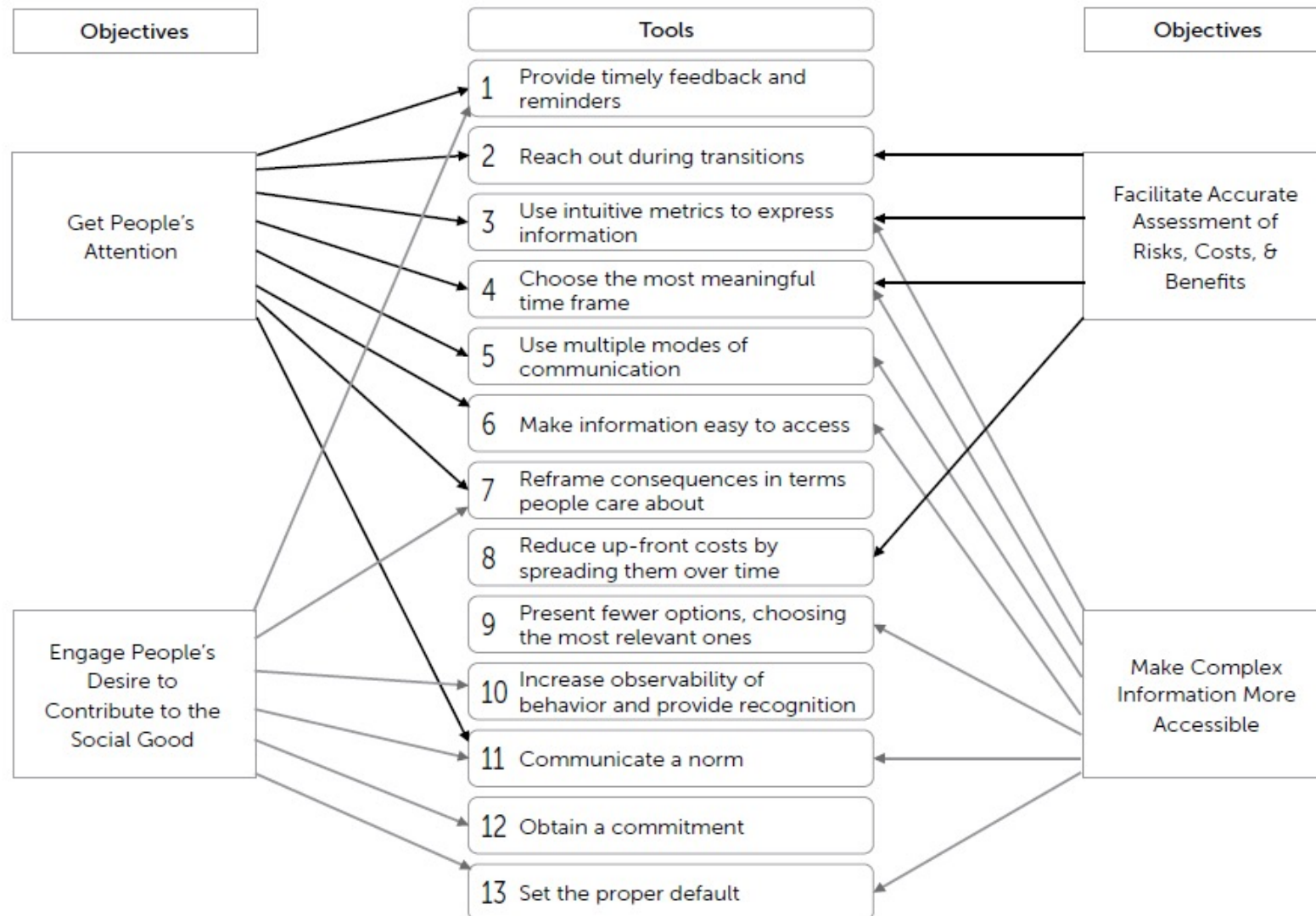
Save to Give: Focus on Energy Wisconsin

Messenger, Salience, Financial Incentives

- Rural communities
- Simple energy-saving actions
- Self-reported and energy bills
- Points awarded to local charities
- Leveraging altruistic tendencies



Key Resource for Integrating Behavioral Science



"Behavioral Science Tools to Strengthen Energy and Environmental Policy"
Yoeli et al., 2017

Key Themes

- Behavioral science and user-centered design should be integrated as often as possible
- Use a strategic approach to program selection and development
 - Define your customer markets and **listen** to them





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