Right Answers to the Wrong Questions?

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Choosing Research Methods Wisely

If you've spent time around young children, you know a thing or two about fielding hard questions.

Questions about planets, dinosaurs, and philosophy can challenge what we learned in school and test the limits of our knowledge and our assumptions. The most straightforward questions can be the most difficult to answer.

Our industry is facing questions that are anything but straightforward: Is the grid resilient enough to withstand extreme weather and cybersecurity threats? Is the industry prepared to mitigate and adapt to climate change? Do we have the right technologies to transition to a clean electric grid?

In this context of rapid change, new and untested opportunities to reduce, shift, or strategically electrify energy can emerge. Anxious to put new technologies and approaches to use, utilities and energy services providers quickly turn to evaluators to ask critical design questions. These conversations often include this deceptively tricky question:

"How many people do I need to engage to measure effects?"

Ready for it... *It depends.*

We know. This answer is equally unsatisfying to give as it is to receive. But it really does depend on the answer to many other questions.

Policy and evaluation practitioners have championed highly rigorous evaluations to ensure energy savings are real and ratepayer dollars are responsibly spent. Rightfully so, we value techniques that are highly defensible: randomized control trials, well-defined baselines, and high-confidence, low margin of error studies. Sometimes approaching research with the standards of evaluation can be costly and deliver fewer valuable insights; other research methods might be better suited for nascent offerings.

Do you feel like running a full-scale pilot is too much (too soon), and yet you're still not sure which research method is best suited for the task? If the answer is 'yes', then congratulations. You've saved yourself a mountain of unnecessary research.

With adequate background research, we can field a pilot with increased confidence so that customers sign up, equipment is successfully installed, customers use it, and we know where to look for savings. Just remember that **pilots should run like a program at-scale.** As evaluators, we understand the rigor needed to design a pilot and generalize from its results. By keeping those needs in mind, we can approach earlier stages of research with the right levels of rigor and flexibility to ensure the right questions are answered at the right stage of your product development.

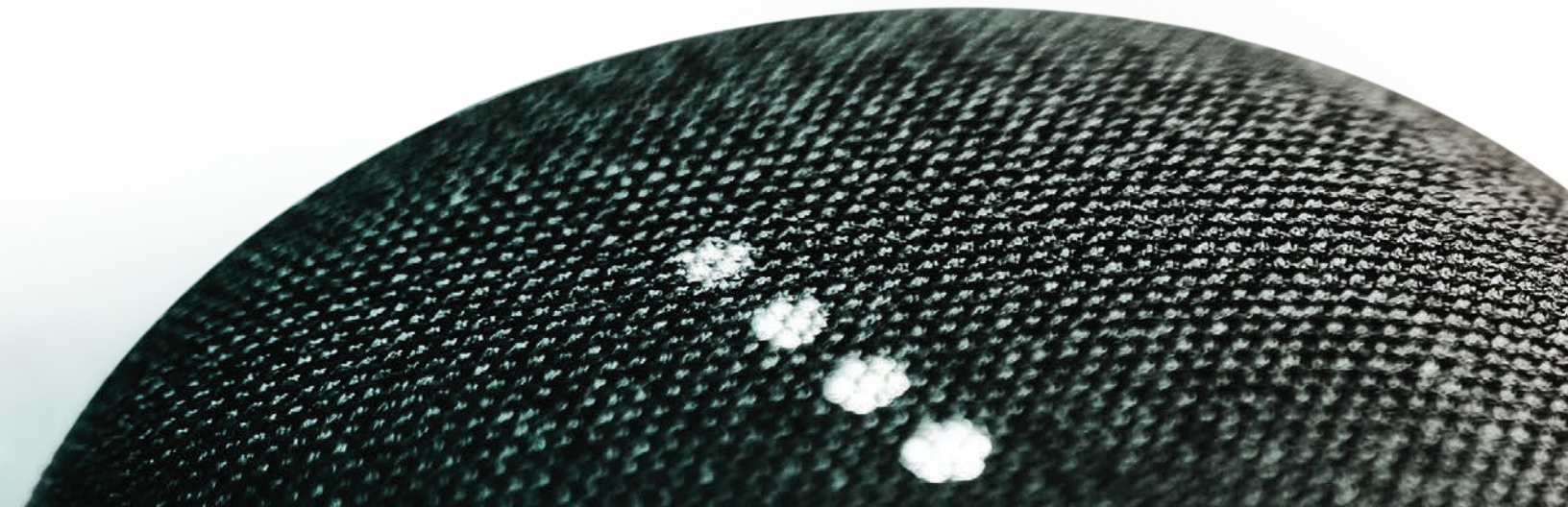
Decisions, decisions...

The challenge: Can smart speakers encourage energy savings?

Context: Smart speaker 'skills' could be a play for utilities to engage with customers. But can smart speakers really help customers save energy?

Before asking, "Alexa! How many customers do I need to test savings from smart speaker skills and actions?" here are a few variations of questions and answers to help you evaluate new equipment, new delivery channels, and new program approaches.

To help you sort through a few preliminary research methods before jumping in with both feet, we put together a Quick Start Guide so you can align questions and methods.



You want to save energy through smart speakers? Here are a few questions you should ask yourself:

WHERE, WHEN, and HOW will effects happen?

Use ethnographic research with customers in their homes to understand how they manage energy use, whether they are seeking/open to ways to change it, and what devices/behaviors COULD be controlled.

After you have a theory of how energy savings will happen, test the theory with a **small-scale demonstration** to assess the possible magnitude and variability of savings.

WHAT is the content of the skill?

If the skill is not designed, **test prototypes** with a small number of customers to provide feedback on possible approaches.

WHO is the target audience for this skill?

Use market research to identify the target market and size it. Quick focus groups, small scale surveys, or background research could be valuable here.

WHAT will the customer experience be like?

Use **small scale field tests** to better understand the customer experience, and especially, any issues that may cause frustration or dissatisfaction.

HOW MUCH budget is available for a pilot?

Preliminary research can save time and budget by providing answers to critical questions sooner. These answers also mean pilots can be much more targeted, less risky, and less costly.

CAN participants install and set up the speaker themselves? If so, will they leave it installed?

Deploy small scale field tests. Start with employees or "friends and family" to understand installation challenges and develop an approach to ensure equipment is installed correctly when rolled out to less friendly participants.