

Social Impact: Designing with End Users in Mind



Funded by:



IKEA Foundation

**energy
saving
trust**

Assessment Criteria

Innovation



- How well have you considered who will be using the design? How well have you understood their needs?
- What is the likely potential of the design to improve quality of people's lives? How does your design improve the desirability of your target end-user? Consider what their livelihood was before and the improvement your design will bring to them.

production costs compared to existing alternatives? Consider materials used, price of components and cost of assembly.

- What is the potential of your design to improve usability compared to existing alternatives? Consider its ease of use, reliability and safety.

Sustainability



manufacturing, distribution and operating) and its scalability.

- How does your design contribute to the Sustainable Development Goals (SDG), in particular SDG7 – Affordable and clean energy? How well have you demonstrated you understood the potential connections with the other 17 SDGs and its associated targets? Consider how the different areas of this assessment framework are contributing to this.

Social Impact

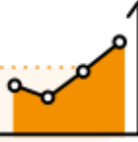


What difference does your design make to people's lives?

Judges will want to see how you have researched the needs of the people your solution could benefit. They will want to understand why you think your design will improve people's lives, and how you have considered social inclusion and equality in your solution.

- How well have you considered who will be using the design? How well have you understood their needs?
- What is the likely potential of the design to improve quality of people's lives? How does your design improve the desirability of your target end-user? Consider what their livelihood was before and the improvement your design will bring to them.
- How well has your design considered the Sustainable Development Goals' commitment to 'Leave no one behind'? In particular, consider gender equality and disability inclusion.

Scalability



How feasible is it that your design could get to market at scale?

Judges will want to see that you have considered the business case. Including considering the market opportunity, including market size, for your solution, and demonstrated how people will be able to access and afford this.

- How well have you considered the potential market for your product? Consider the target customer, size of market and customer value proposition.
- How well have you considered how people will be able to access and afford your product? Consider affordability, potential customer payment models and existing financial models.
- How well has your business model considered affordability, payment models, existing supply chains, manufacturing, distribution channels, local partners and services associated? Consider the pricing and costs strategies to make your business model commercially viable.

Agenda

- Introductions
- Guest Speakers
 - **Jon Leary**
 - **Kinya Kimathi**
 - **Ivy Langat**
- Q&A
- Survey and Closing



Meet our speakers



▶ **Jon Leary** – Modern Energy Cooking Services



▶ **Kinya Kimathi** – Kijani Testing



▶ **Ivy Langat** – 60 Decibels



Jon Leary– Modern Energy Cooking Services

13 minutes

EFFICIENCY FOR ACCESS

Global LEAP Electric Pressure Cooker (EPC) Usability Testing

Dr Jon Leary
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Melinda Barnard-Tallier, Karin
Troncoso, Elisa Lai, Wendy Hado, Abi
Kura, Bridget Menyeh, Mike Spiak,
Mourine Chepkemoi



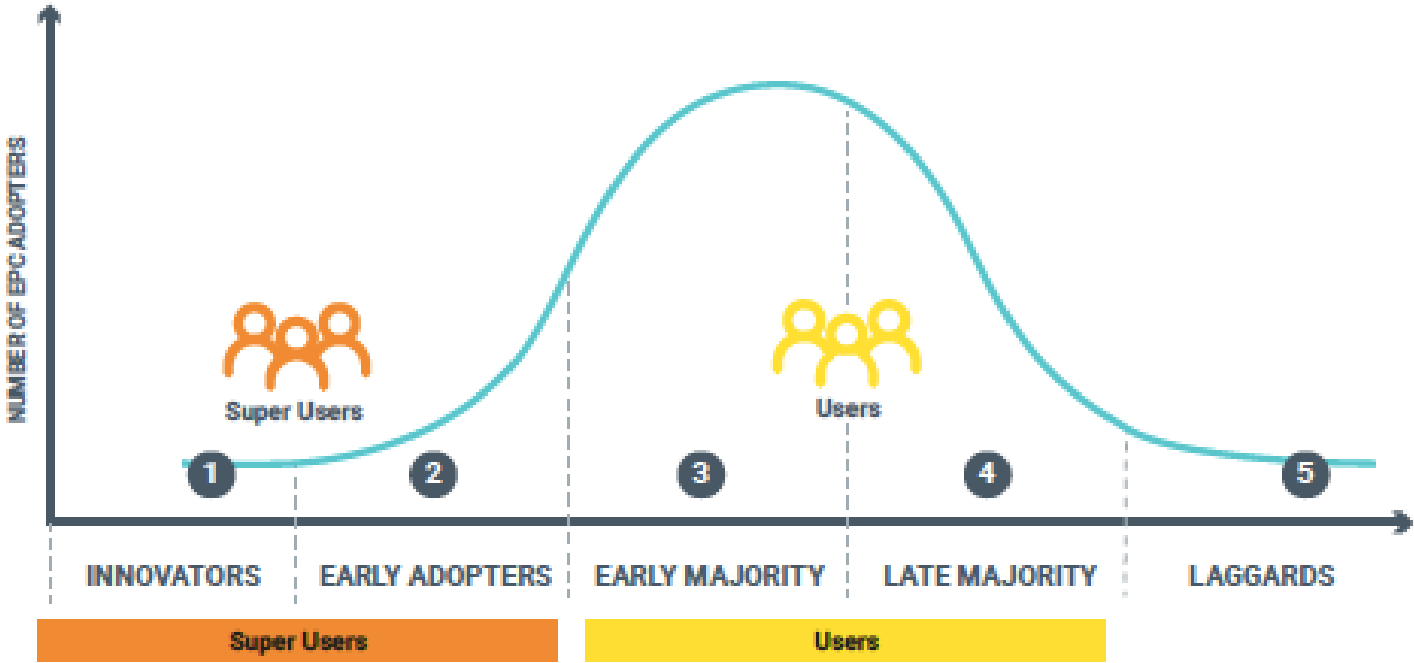
What is an end-user and how can I identify one?

- End-user = person who actually uses a product/service
- **Often different to the customer**, i.e. person who purchases the product/service.
For example:
 - An architect designs a hotel for a hospitality company, but the end-users are the guests who stay in the hotel.
 - Parents buy breakfast cereal for their kids, who are the end users as they eat it.
 - Cooking device manufacturers sell their products to wholesalers, who then sell to retailers, who then sell to customers. But the customers aren't necessarily the ones who do the cooking...
 - Male heads of household are often in control of household finances, yet in most Global South contexts, women are the primary cooks.

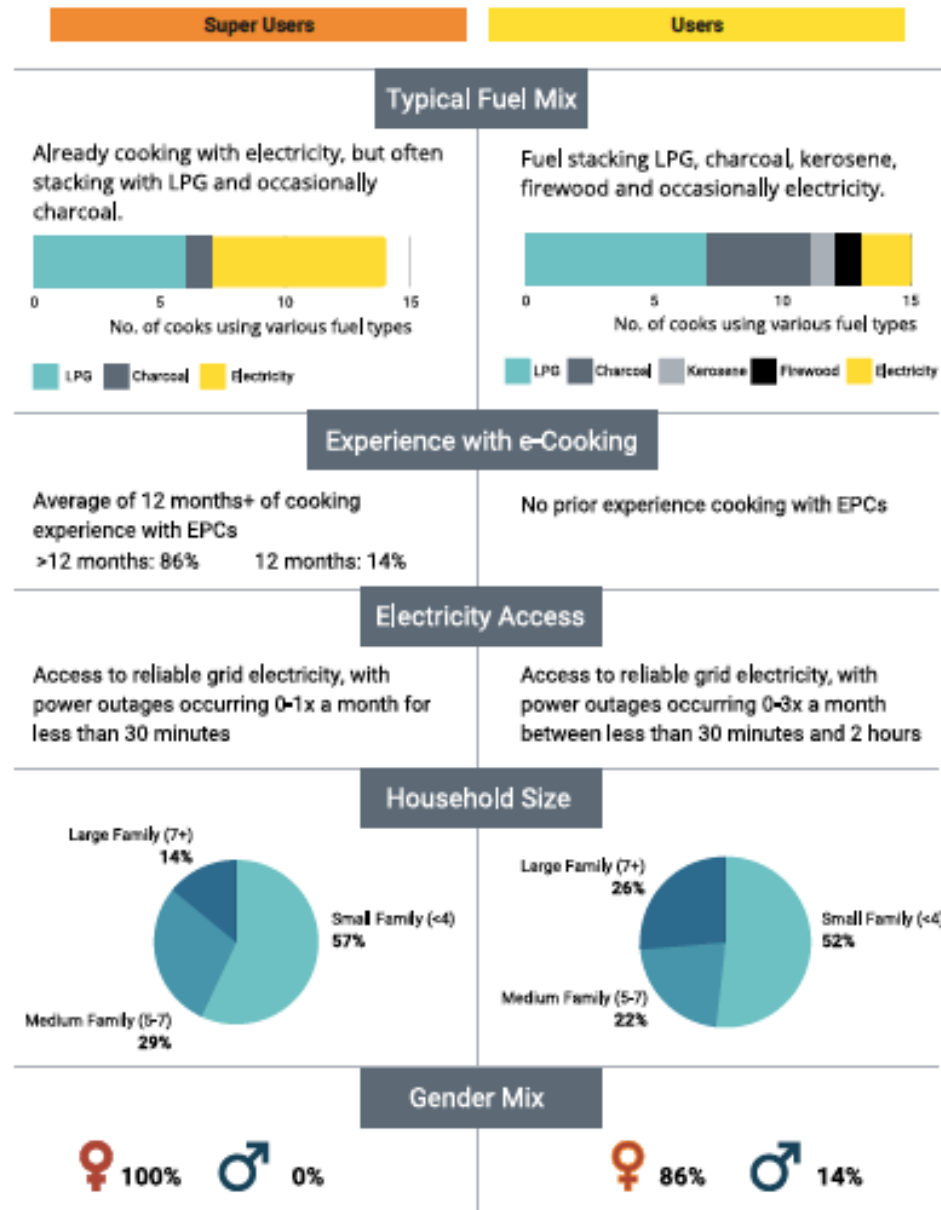
What did we want to achieve?



Who tested the EPCs?



Who tested the EPCs?

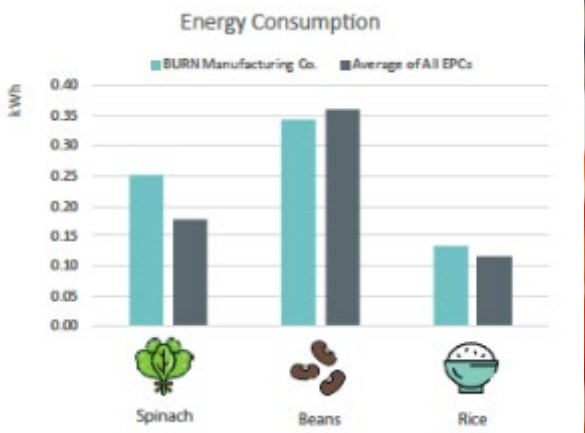
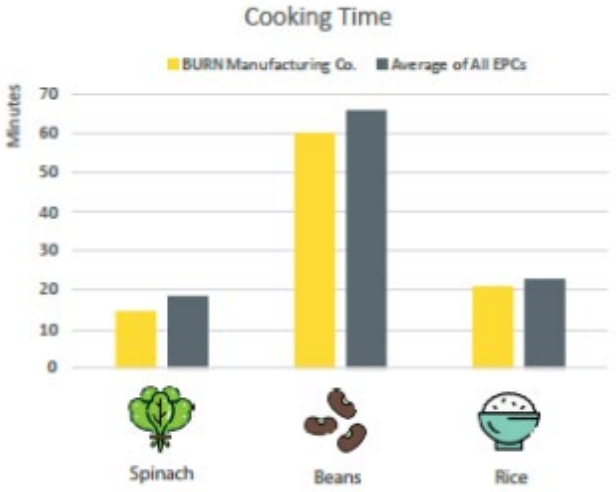


1st Focus Group: What is important on a EPC?



Controlled Cooking Tests (CCTs)

Recipe	Cooking Experience Rating	Food Quality Rating	User Feedback
Spinach	★★★★★ 4.0	★★★★☆ 3.3	"The EPC heats up very quickly and the digitized setting also makes it easy to make the dish."



Mobile Ethnography



Final Focus Group: Willingness to pay



If you were to buy an EPC today, which one would be your first choice?

As a group order all the EPCs in order of preference

	Ranking SU	Ranking U	Average
BURN-ECO A	4	1	2.5
DDO-LAB- Supor 1	10	10	10
VON	1	2	1.5
IP 6L	2	3	2.5
IP 8L	2	4	3
NESELTEC	8	5	6.5
SAYONA	7	7	7
SESCOM	6	6	6
SOLAGEO	5	8	6.5
TFAL- SUPOR 2	9	9	9

What is most important to users?

Rank	Attribute	Sub-Attribute	How was it assessed?			Why is it important?
			Scored in surveys during UHC	Measured during CCTs	Scored after CCTs	
1	Safety	Perception of safety	X			"I want a pressure cooker which will not cause any harm to any member of my household like some gas top pressure cookers do."
2	Size	Cooking capacity	X			"When [the] EPC is too small, then there are some meals I won't be able to cook unless I cook twice, which is not fun."
3	Service delivery / functionality	Frying heat range	X			"Some EPCs had low temperature while sautéing making the process lengthy and the onions not well cooked...this made me appreciate those that had option to add and adjust temperature."
		Ability to fry at low heat	X			
		Ease of pressure cooking	X			
		Usefulness of additional functionality	X			
		Taste of food			X	
4	Design	Perception of	X			"I would like a gadget that I would use for several

Which EPC do users really want?



Whi

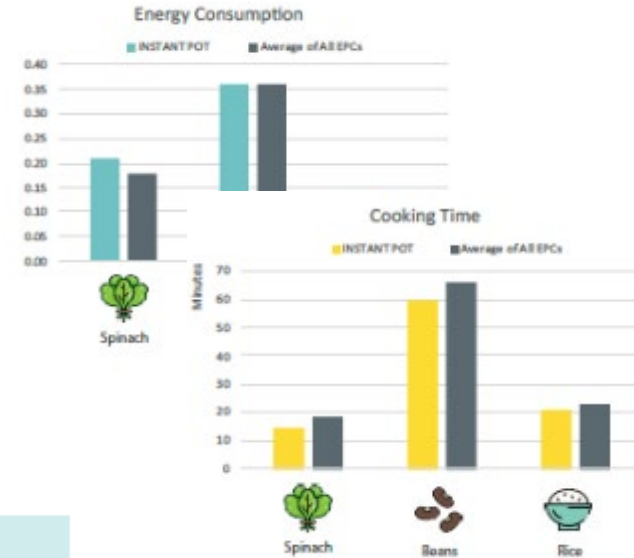


INSTANT POT DUO 80

Best User Experience
Prize Winner



ESTIMATED RETAIL PRICE \$\$\$\$
PERCEIVED VALUE RELATIVE TO PRICE Low High



Highlight Participants agreed that the IP 8L was user friendly, making cooking pleasurable.

Lowlight Participants agreed that this EPC was neither compact nor portable.

Recipe	Cooking Experience Rating	Food Quality Rating	User Feedback
Spinach	★★★★★ 4.0	★★★★☆ 3.4	"The heat could be adjusted easily, which gave me control over the cooking process."





BURN MY 8001

Best Value Prize Winner



ESTIMATED RETAIL PRICE \$\$\$\$

PERCEIVED VALUE RELATIVE TO PRICE



Recipe	Cooking Experience Rating	Food Quality Rating	User Feedback
Spinach	★★★★ 4.0	★★★★★ 3.3	"The EPC heats up very quickly and the digitized setting also makes it easy to make the dish."

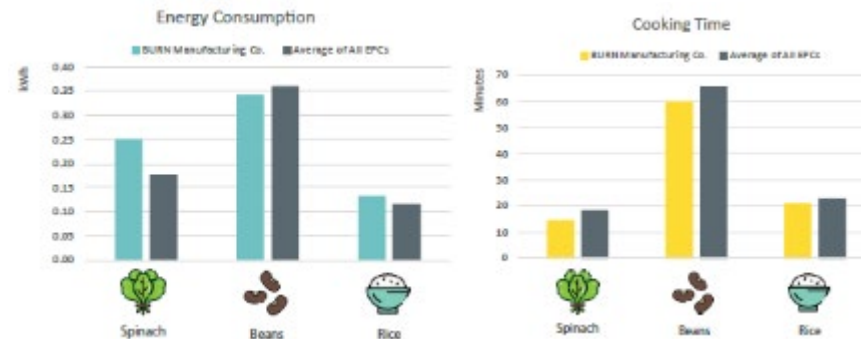


Highlight

Participants loved that the manual and program settings were for Kenyan dishes and in Swahili.

Lowlight

The EPC was not easily portable due to its larger size and bulkiness.





VON VSCP60MMX

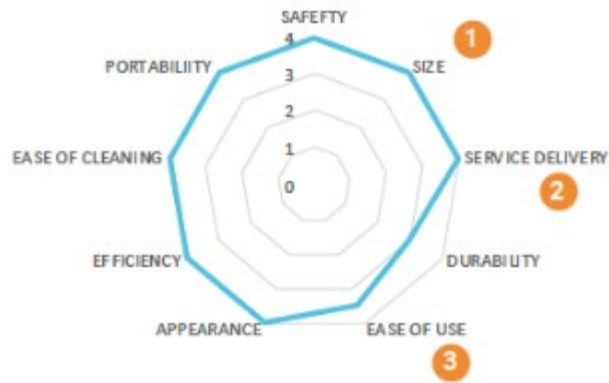
Best User Experience
Prize Winner



ESTIMATED RETAIL PRICE \$\$\$\$

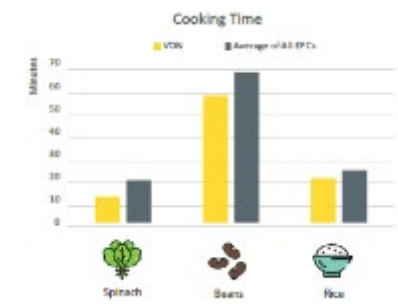
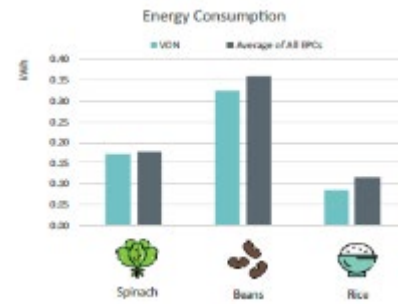
PERCEIVED VALUE RELATIVE TO PRICE Low High

Recipe	Cooking Experience Rating	Food Quality Rating	User Feedback
Spinach	★★★★★ 4.0	★★★★★ 3.3	"The pot heats up to a very high temperature (185°C), which is ideal for a quick fry."



Highlight This EPC was a favorite across both new and experienced participants, as it was easy to operate.

Lowlight The participants agreed that durability would be improved if the pot had a non-stick coating.



Find out more

Dr Jon Leary

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[globalleapawards.org/
electric-pressure-
cookers](http://globalleapawards.org/electric-pressure-cookers)

Global LEAP Awards Electric Pressure Cooker Usability Testing Buyer's Guide

As part of the 2020 Global LEAP Awards EPC Competition



References

Photo credits

- Slides 2, 3, 6, 11, 13, 22: CLASP/StoryxDesign
- Slides 1, 8, 9, 18: CLASP/GlobalLEAP Awards
- Slide 16: Karin Troncoso/MECS



**EFFICIENCY
FOR
ACCESS**



Kinya Kimathi – Kijani Testing

13 minutes



KIJANI TESTING

DESIGNING FOR THE END USER



ABOUT US

Problem: Thousands of potentially life changing innovations are launched every day, hundreds of thousands of dollars and hours are invested in these launches. Yet there are so many unsuccessful products.

Solution: We offer tailored field testing, after-sale support and advisory services for innovators/companies with new products looking to launch in the Kenyan market.

YOU DESIGN IT, WE TEST IT

END USERS

There is a saying 'the customer is always right' and this statement is one of the key driving factors behind field testing.

Customer/ Target market – A group of people with some shared characteristics – in this case a similar perceived problem which a product will solve



WHY FOCUS ON THE END USER?

Innovators are visionaries, they have an idea for a product that is intended to solve particular problems

- Problem perception might vary between innovator and end user
- Unforeseen problems might arise when solving the main problem
- There might be other problems that the innovator missed
- The market might just not be ready for a particular solution



KEY QUESTIONS

Is there a need for the product?

Should the product be built?

Is the market ready?

Can you build a sustainable business model around this product?



OUR PROCESS



Our process is iterative and involves going through the same processes over and over in short periods of time with the end user feedback being our main focus.

- Ideate
- Prototype/Iterate
- Test
- Analysis/learn

YOU DESIGN IT, WE TEST IT

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Ivy Langat – 60 Decibels

13 minutes

Lean Data: Efficiency for Access Design Challenge



The Impact Measurement Landscape

There are three major approaches used by investors and funds.

Traditional methods to understand impact.

- The Output Approach


- The Laundry List Approach


- The Academic Approach


What We Were Solving For

Our method is designed to meet these three gaps.

Each method has it's limit.

 Depth

 Quality

 Ease

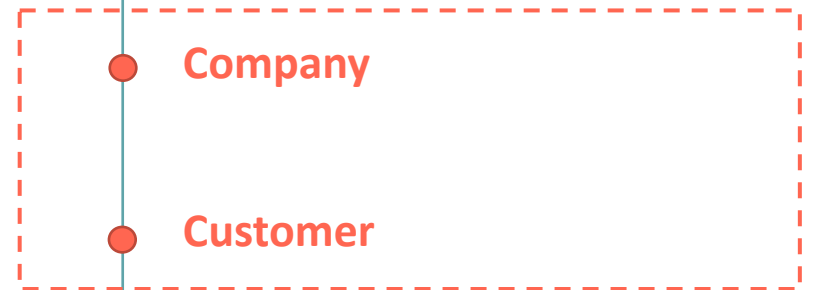
Our Philosophy

What matters most to us.

From top-down Compliance...

Impact Investor

Donor



...to bottom-up Accountability.

About Lean Data: In Numbers

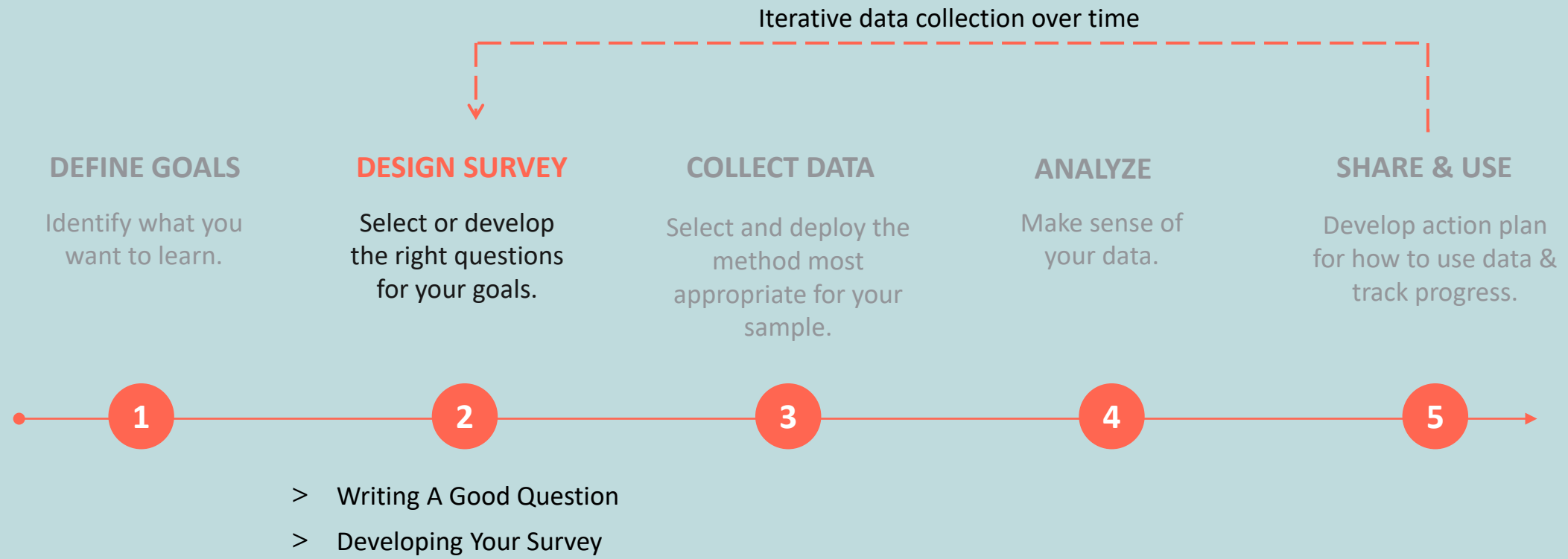
We speak directly to customers in their local languages, dialects and accents mainly by phone or online.

We provide genuine benchmarks of impact performance, enabling organizations to understand impact relative to peers and set performance targets.

It won't surprise you that we like numbers!
Here's a data-snapshot of our own work.

173,000+	Customers Surveyed
447	Companies using 60 Decibels
51	Countries of projects completed
78%	Proportion of surveys by phone call
16 mins	Average survey length
12 weeks	Average project duration
74	Net Promoter Score (from our clients)

The Lean Data Process



Survey Tip: Writing a Good Question

A good question is **not leading**.

A good question is **simple and coherent**. Avoid “brain pain”.

A good question **avoids judgement**.

A good question is **one question**.

A good question is **short and sweet**.

A good question is **fun!** Think, “would I like to answer this?”

A good question is **specific**.

A good survey has **qualitative and quantitative** questions.

A good survey **asks the most important questions first**.

A good survey has **comparable insights**.

Survey Tip: Types Of Questions

To help cover all bases in your surveys, here's a framework of question topics that 60 Decibels uses.

Customer/User Profile

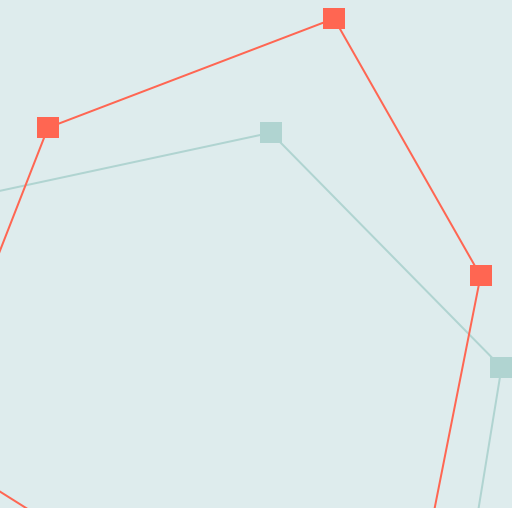
- > Who are your customers/users?

Business Insights

- > What is their experience with your product/service?

Impact

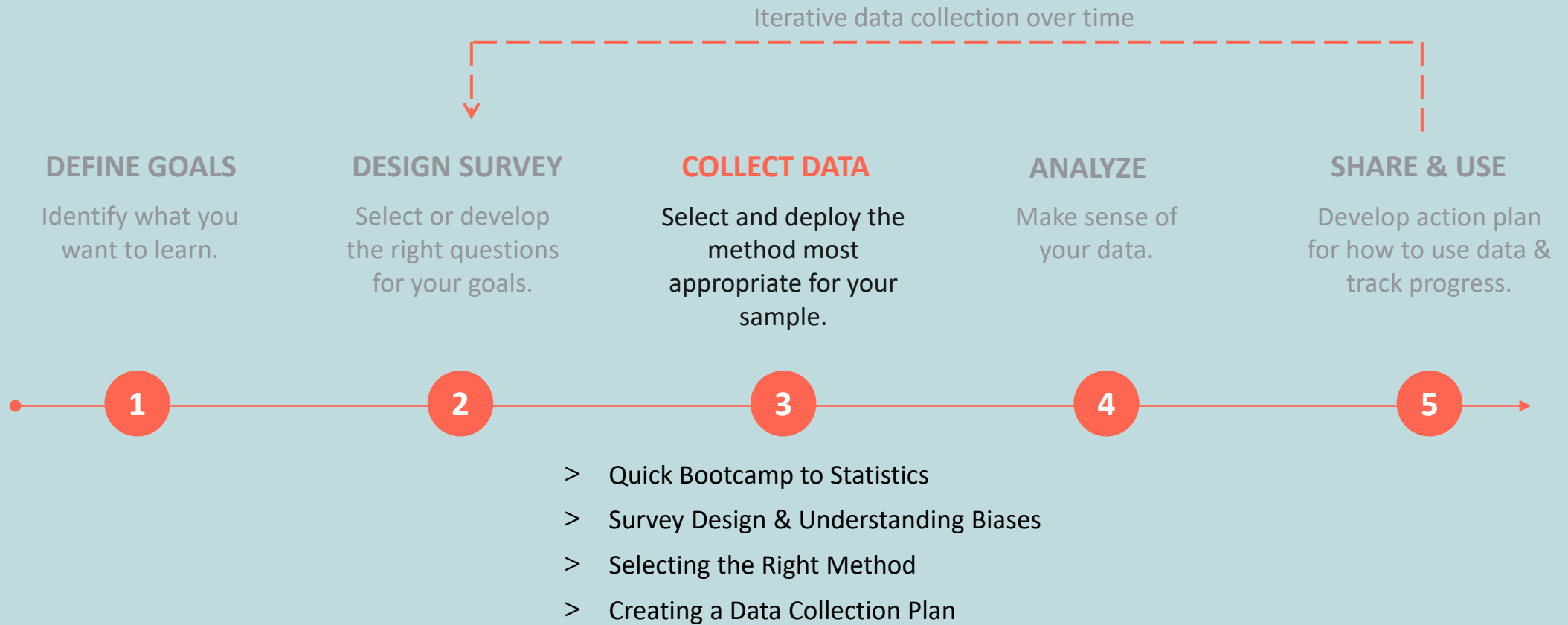
- > How is your product/service affecting their lives?



Developing A Survey

- Step 1:** **Set Your Intention**
Think long and hard about why you are reaching out to your customers – are you testing a particular hypothesis?
- Step 2:** **Plan Distribution**
How may your method affect your questions? What language(s) will you use? Who are you reaching?
- Step 3:** **Design the Questions**
Are there previously tested questions you can pull from?
- Step 4:** **Order the Questions**
Does the survey flow? Are sensitive questions appropriately introduced? Are similar questions grouped together?
- Step 5:** **Test the Survey!**

The Lean Data Process



Quick Statistics Bootcamp

“I didn’t know I’d be doing math!?”

It’s alright, we promise it’s not as hard as it seems.

Hint: If you need help learning some Stats quickly, try free online courses like [Khan Academy](#) to brush up on your skills.

Here are some key concepts:

● Population v. Sample

Population refers to the entire group you wish to study, but the sample is a smaller subset you survey.

● Confidence Intervals

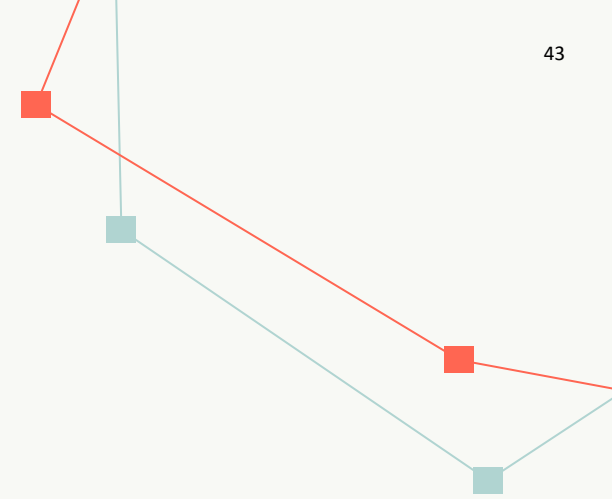
This refers to how precise your results are compared to the population. A 95% confidence interval is typically required for academic studies. 80-90% confidence intervals are sufficient for business decision-making. Increasing the sample size should increase the precision of your estimate. Use this link to [calculate your own](#).

● Representativeness and Randomization

A representative sample will resemble the population in observable characteristics. Randomization is selecting sample participants in a random manner to eliminate bias of unobservable characteristics. If you have a segmented business that you want to ensure is represented equally in your survey – we’d recommend using stratified sampling.

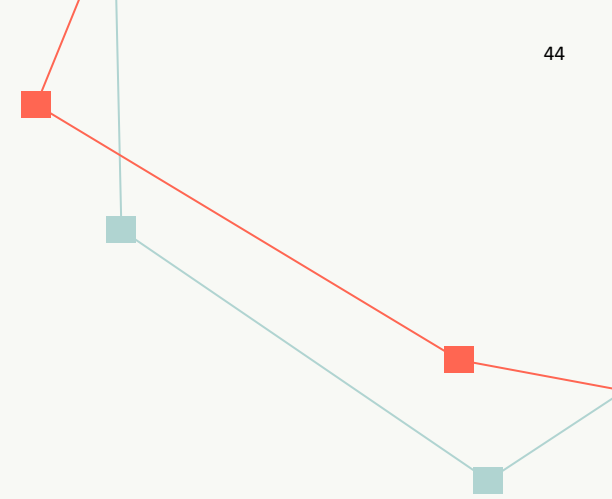
● Correlation v. Causation

Correlation refers to a relationship between two variables. Causation indicates variable X caused variable Y to happen.



Methodology & Survey Design

How to structure your study.



- **The One-Off**

Collect data at one time to get a snapshot of your beneficiaries

- **The Baseline-Follow Up**

Collect data at two points, usually the beginning and the end of a project, to track progress from the same group.

- **The Longitudinal Study**

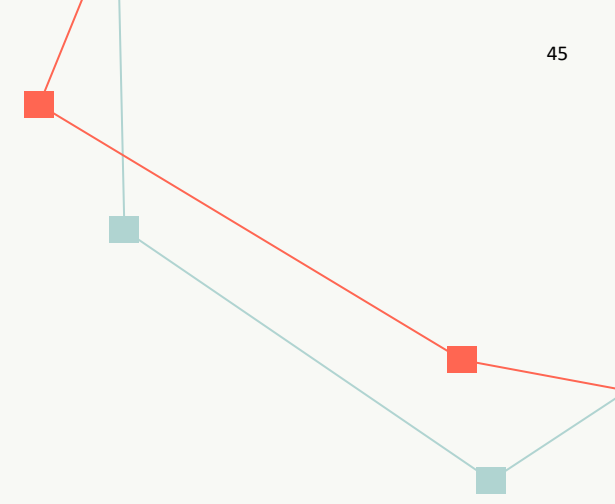
Collect the same data over time from the same group to track progress over time.

- **The Comparison Group**

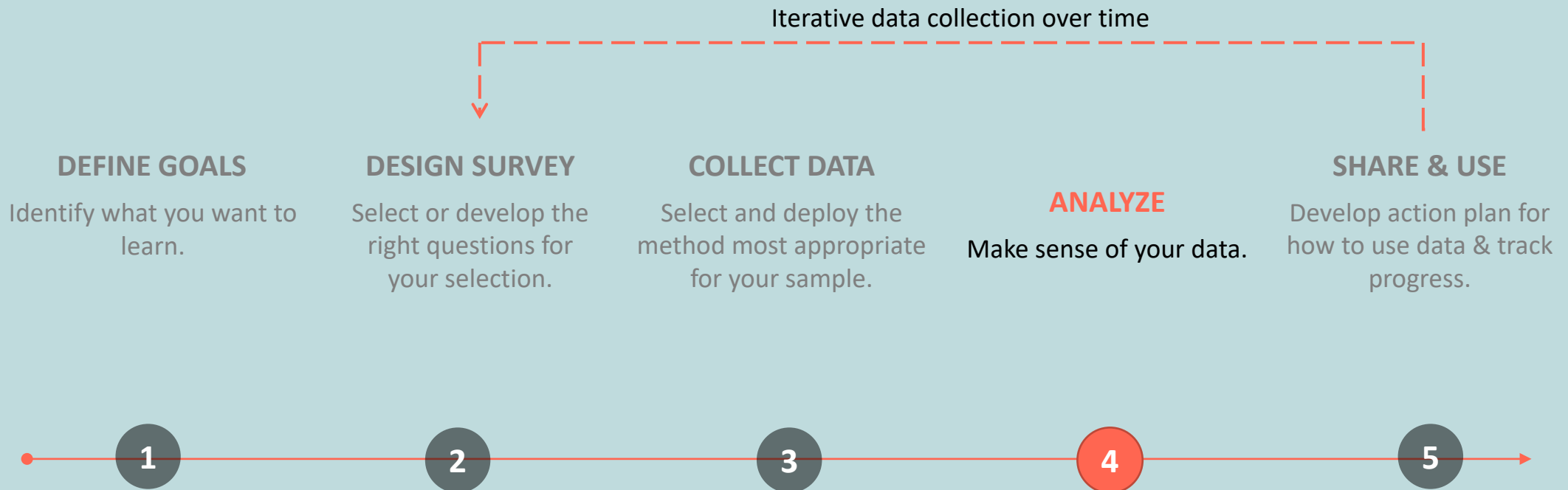
Collect data from a treatment and a control group to compare outcomes between the two, to understand impact of an intervention.

Key Steps To Getting Started

What to do and what to remember.

- 
- **Select your method.**
Online, via text message, on the phone, in person.
 - **Inform your customers that you're coming.**
Priming your respondents with emails or SMS help increase response rate.
 - **Test your survey on a few, random respondents.**
Test your questions to make sure they can yield good data.
 - **Execute your survey.**
And learn from it!
 - **Consistently quality check your data.**
Ensure the data is clean and makes sense.

The Lean Data Process



Quantitative Tools

What's out there to help you conduct quality analysis?

Survey Monkey or TypeForm

Pros: Both are easy to navigate and free, and allow you to conduct simple analysis in the same platform as you manage your surveys, also allows you to export your data to Excel

Cons: Limited functionality, allows for basic analysis

Excel

Pros: It's widely available and often free. Pivot table functionality great for simple analysis (percentages, averages, segmentation)

Cons: Requires a lot of manual work for statistical analysis. Relatively difficult to spot errors and relationships unless you know what you are looking for.

Qualtrics (Stats IQ)

Pros: Simple user interface, statistical relationships and trends within seconds, very basic statistical knowledge needed to get started.

Cons: Paid feature on Qualtrics (an online surveying provider).

Stata

Pros: Free online learning tools, STATA is relatively easy to learn and use.

Cons: Licenses can be expensive, limited to certain types of data.

Getting Started With Your Analysis

Five steps to get you on your way

- > Create a short list of **hypotheses**
- > Identify any **segmentation** that is pertinent to your business model e.g. by geography, customer profile (e.g. income level, education level, age, gender)
- > Apply any relevant **weighting** (optional) – does your survey sample more men than women? Do you want to weight their responses equally or do you want the results to represent a random sample of your customers?
- > Pull together any **external resources** (optional) e.g. Poverty Probability Index, Findex, World Bank income level data, national income lines, US zip code data, Washington Group disability prevalence data, census data
- > **Analyse your data!** – were your hypotheses correct? Why or why not?

Data Visualization: Looking Back at the Projects

Get creative here!

Bonus: Use scatter plots to show relationship between two sets of data.

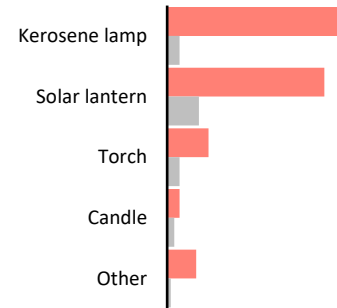
Here you can see how to display real analysis

Comparison of values

e.g. showing how many people responded in a certain way to a question

We recommend:

Column
Bar
Pie
Line

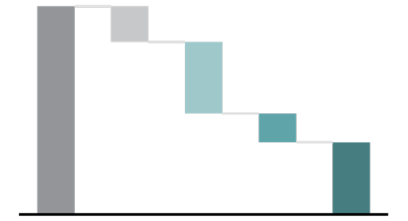


Composition

e.g. individual components as part of a whole

We recommend:

Stacked Column
Stacked Bar
Pie
Waterfall
Line

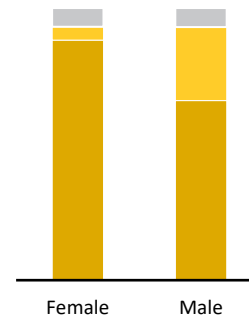


Segmentation

e.g. how did one group respond in comparison to another

We recommend:

Stacked column
Bar
Pie

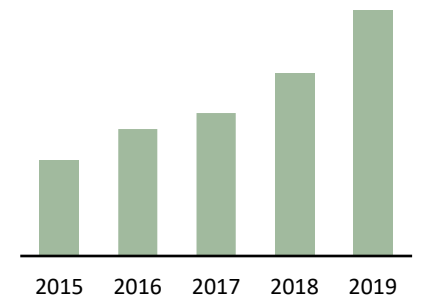


Trends

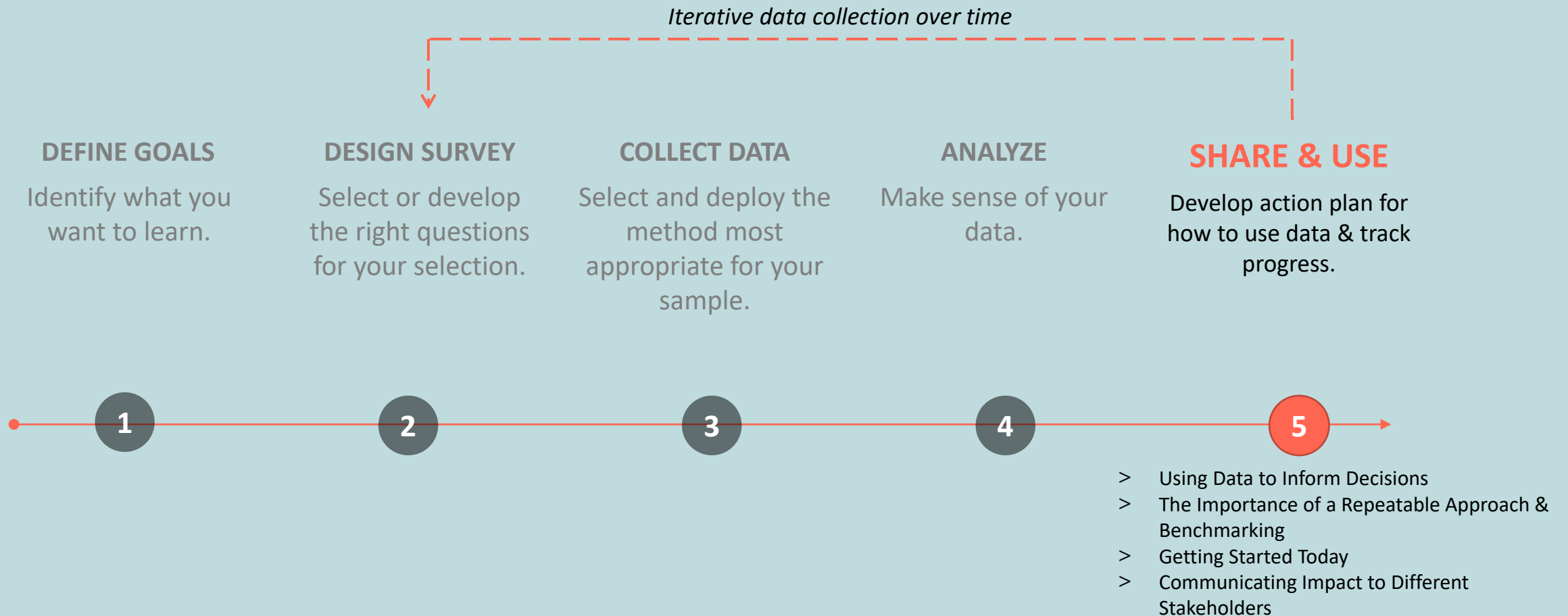
e.g. performance over time

We recommend:

Line
Column



The Lean Data Process

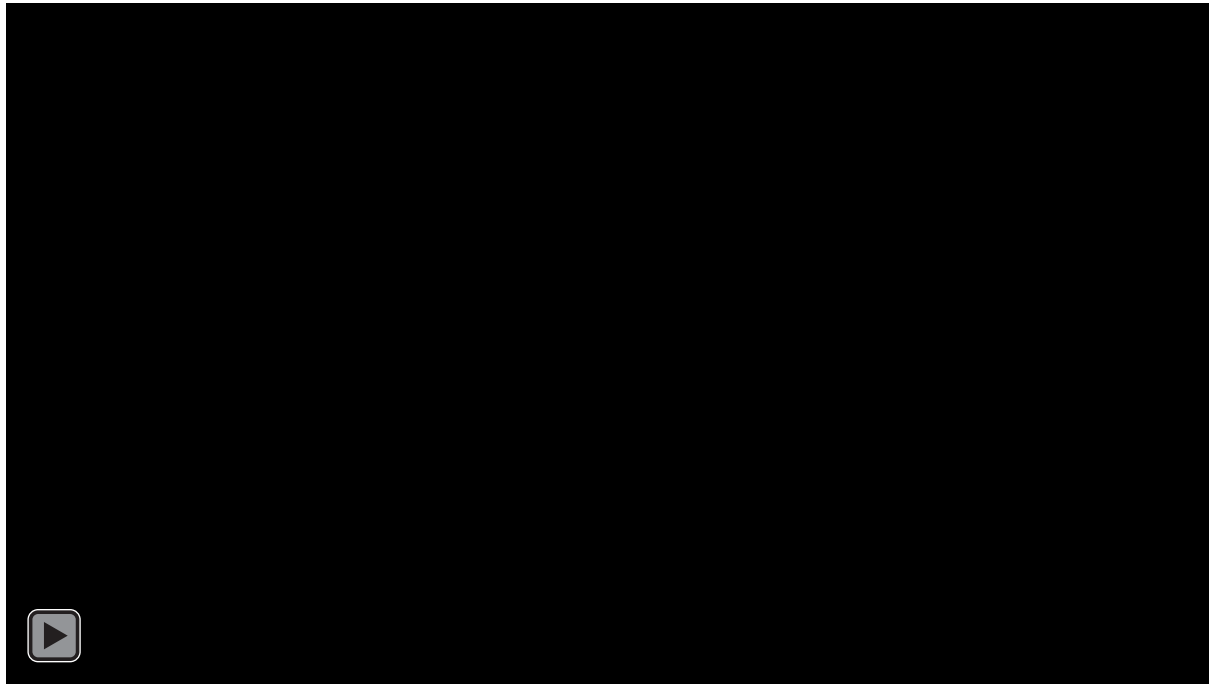


So You Have Your Data, What Are You Going To Do With It?

Beautiful charts aren't useful unless they turn into action.

-  **Does this data change your understanding of key business processes?**
Example: Train your customer service team in your new pricing model to address the challenges expressed by your customers
-  **Does this data change your understanding of your customer/beneficiary?**
Example: Your customers are using your product beyond its intended use
-  **Does this data highlight anything new about your product?**
Example: Work with the product development team to scope out a new product offering based on customer feedback
-  **Can this data be used for marketing? Are there reporting requirements you need to meet?**
Example: Develop a social media campaign based on positive customer quotes to drive new leads

Q&A





Short feedback survey



[Bit.ly/EforADCFeedbackSurvey2021-22](https://bit.ly/EforADCFeedbackSurvey2021-22)



Newsletter sign up:



bit.ly/DesignChallengeNewsletter



**EFFICIENCY
FOR
ACCESS**