# Heart-Centered, Data-Powered

Making decisions guided by values & informed by data

Alexandra Mannerings, PhD

Thank you so much for joining me today! My name is Alexandra Mannerings. I am honored and thrilled to be able to geek out with you about how we can be both heart-centered AND data powered. By the end of this interactive session, we will work through not only my values-based decision-making framework together, you will have also completed a full example of the framework on a real-life decision you are facing. In the vein of the coming Halloween holiday, I'm going to start today with a bit of a gruesome story that will set the stage for why values are SO important when it comes to making decisions.
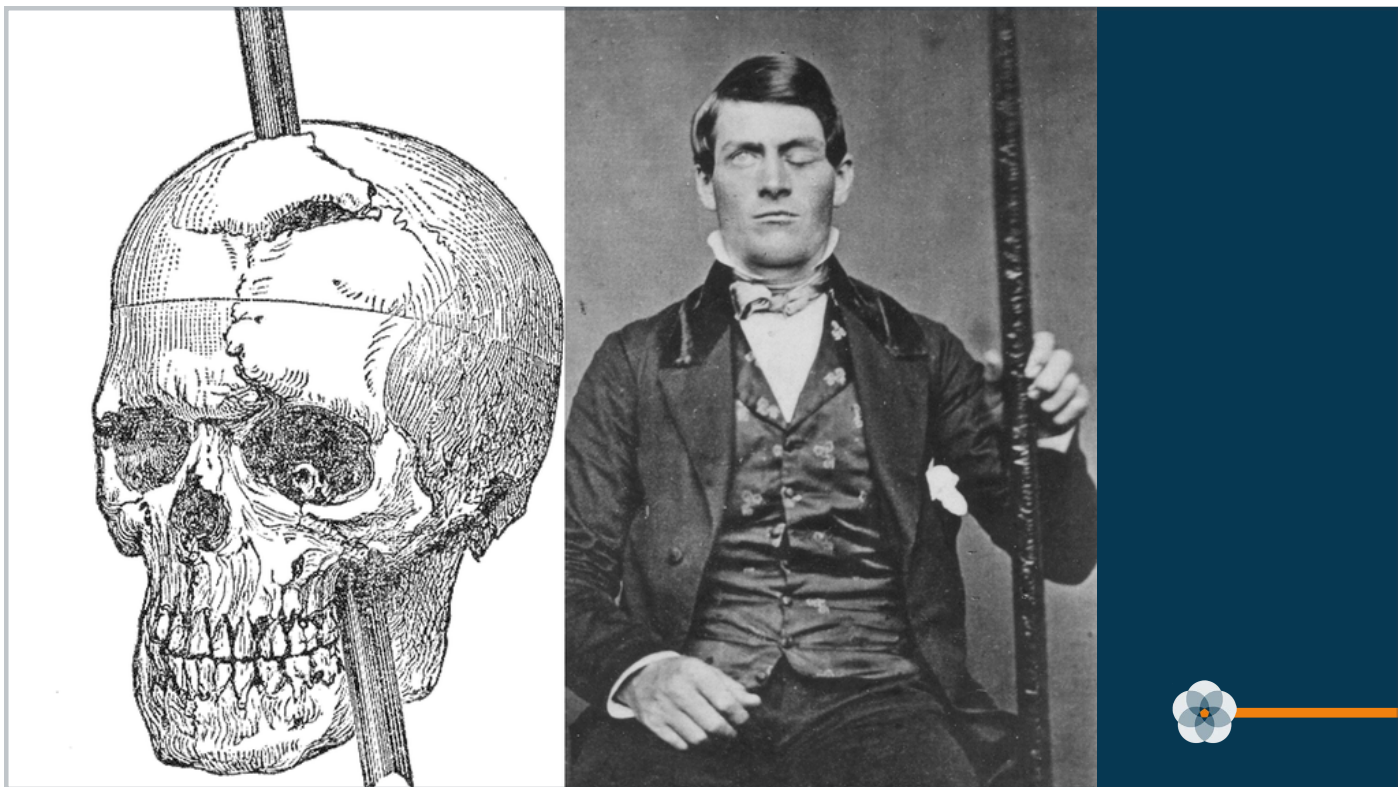
So this poor soul is Phineas Gage. He was a skilled railroad worker and team manager.

One day, as he was setting up a blast hole to remove rock for a new track, someone called his name. He turned away from what he was doing, and missed that his assistant hadn't added the sand to cover the gunpower he had just laid down. He began to tamp it with his iron rod, and within seconds a spark ignited the power and blasted his iron tool straight through his skull.

According to reports, the iron entered Gage's left cheek, pierced the base of the skull, traversed the front of his brain, and exited at high speed through the top of the head. The rod has landed more than a hundred feet away.

Why terrorize you with this, other than to get you in the mood for Halloween spooks?

Because Gage survived, with his frontal lobe heavily damaged. His cognative function and knowledge remained completely intack - but he lost all sense of emotion and values.

He had been well-liked and highly successful. But after the accident, he no longer showed respect for social convention or ethics; and worst of all, he seemed unable to make effective decisions. He was capricious, self-destructive, rude, and utterly undependable.

> One might venture that either his value system was now different, or, if it was still the same, there was no way in which the old values could influence his decisions.

Damasio, Antonio R. Descartes' Error : Emotion, Reason, and the Human Brain. New York :G.P. Putnam, 1994.

even though he could remember everything he knew before, without his sense of value, a sense of what mattered, he could no longer make choices that achieved a meaningful goal.

> A reduction in emotion may constitute an equally important source of irrational behavior [compared to loss of cognitive function].

Damasio, Antonio R. Descartes' Error : Emotion, Reason, and the Human Brain. New York :G.P. Putnam, 1994.

What modern neurologists reading his case realized was that counter to our typical training, logic and knowledge alone is not enough to make effective decisions.

To know but not to feel leads to the same inability to make effective decisions and succeed in everyday life as not knowing at all.

Who I Am

SCHOLAR

PhD from the University of Cambridge, UK

SCIENTIST

Researching across multiple continents and diverse fields

ENTREPRENUER

Founded and run Merakinos, an analytics education and data services company for nonprofits

Alright, so now that we've been a bit shocked out of our post lunch stupor, who am I that I get to talk with you about data and values?

My name is Alexandra Mannerings. By training I am an epidemiologist - I earned my PhD chasing fruit bats across Ghana to see what risk there was of disease spilling over from the bats into the people who lived around the bats and hunted them. Through those experiences, as well as research I did in India on science education, and Kenya on ecological degradation, I learned early on how to ask AND creatively answer the questions that really were going to matter and make a difference - because I had few resources at my disposal. I had to focus on the few things that were really going to move the needle, and ignore the rest that I just didn't have capacity for.

Since then, I've moved from a scientist working in the field to a scientist working with data. For a decade I applied my research skills to exploring everything from healthcare claims to income statements. But my passion lies in leveraging data plus people to transform the world. That's why I started Merakinos, a data services and analytic education company devoted to helping nonprofits and social enterprises amplify their impacts through data.

How would you greet a client who came to your organization?

We're going to kick off the interactive part of this presentation with this question:

Someone you've met before comes to your food pantry, visits your park, shows up at your career counselling.

This is a micro decision that we likely have to make regularly.

A handshake? By name? With a bow?

You said, "by name" - how did you decide that?

How would you greet a client who came to your organization?

Goal

What is your goal in the greeting? If you want to avoid getting sick, you would avoid contact. If you wanted to generate loyalty or honor identity, you would do whatever their preference was.

How would you greet a client who came to your organization?

Goal

Values & Constraints

What else matters in this consideration?
Did you consider constraints? Maybe there are rules or laws against contact (eg you work with kids) and you want to uphold them. Maybe you're fearful of making a mistake and want to avoid being embarrassed. Maybe the person doesn't have arms, or is in a wheelchair.

Or maybe you want to honor the person's preferences, or cultural norms. These values are outside of your original goal, but they influence the final choice you make.

How would you greet a client who came to your organization?

Goal

Values & Constraints

Data

What data do you need? My past experience and biology class taught me that contact passes germs. I've been yelled at before when I try to hug strangers. Half the time when I greet someone by first name, it makes them smile.

This may seem silly to think this deeply about such a simple question.

But part of my point is your subconscious made all those assessments already, unconsciously. I want to make this decision-making framework conscious and intentional.

Economists have an ideal human they call an 'econ' - someone who make perfectly rational decisions based on the proper math. Deciding to make a bet or take an new job is simply a calculation of probability and return of each outcome, and I chose what gives me the highest expected return.

I want to argue today that we CANNOT function as perfectly rational creatures. We could not make decisions.

And whether you are aware of it or not, you are using values and some kind of data every time you make a decision. We are going to bring that process into the light and frame it to give us the best chance at succeeding

A <u>FLAT</u> DECISION-MAKING LANDSCAPE

a patient with similar frontal lobe damage from a brain tumor. The tumor had been successfully removed, and all his cognitive function seemed perfectly intact. But the gentleman could no longer be counted on to make appropriate decisions about anything in his life.

His doctors ran battery after battery of tests. One such test involved considered different social situations and choices about how to handle them. "At the end of one session, after he had produced an abundant quantity of options for action, all of which were valid and implementable, Elliot smiled, apparently satisfied with his rich imagination, but added: "And after all this, I still wouldn't know what to do!"'

Not having values produces a flat decision-making landscape, where nothing can be distinguished from anything else.

A **FLAT** DECISION-MAKING LANDSCAPE

It's NOT about following the numbers...
where are you even trying to get to anyway??

This is the Cheshire Cat syndrome - Alice asks which way to go, the Cat asks her where she's trying to get to, and when she says she doesn't know, the Cat responds, "then it doesn't much matter which way you go, does it?"

What should I eat this morning? If I care about looking like a super model, I'm going to choose something very different than if I want to celebrate an important day or if want to maximize my emotional wellness and savor a delicious meal. But if I don't know what matters, if I have no way of weighing outcomes against each other, how would I choose, even something as simple as breakfast?

A **FLAT** DECISION-MAKING LANDSCAPE

- Values are required to give differential weight to options
- Decisions <u>cannot be made</u> without values
- The goal/value may not be explicitly stated or acknowledged...

WE'RE ALSO LOST WITHOUT DATA

- How do you know you are achieving your goals?
- How do you know if you within your constraints?
- How do you effectively evaluate options?

Okay, so I will take a second now to talk about the other side of the equation. As members of the nonprofit sector, I think we understand more readily than most the need to recognize and utilize values in our decision-making.

I think where we more commonly make mistakes is in failing to make the connection between those values and the data we need to give us the best chance of achieving them.

http://www.swjpcc.com/general-medicine/2012/8/2/profiles-in-medical-courage-evidence-based-medicine-and-arch.html
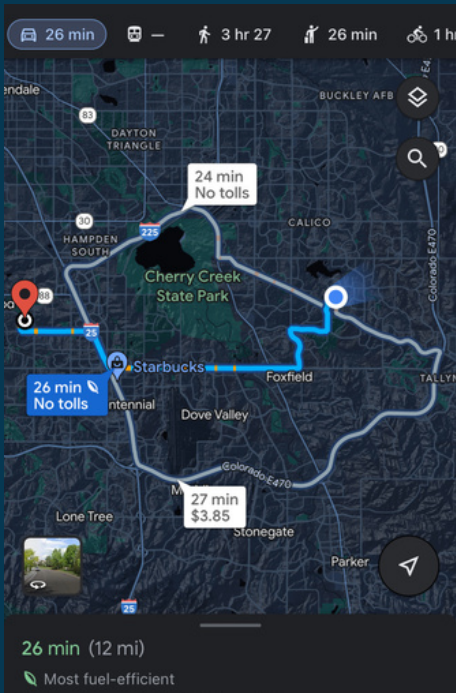
WHY WE NEED DATA

A cautionary tale...

Which route should I take?

To illustrate how data and values are both required for effective decision-making, let's consider Google maps.

Who here uses Google Maps or Apple Maps to navigate?

What makes Google work?

✓ A destination (and options to get there)

Google has the MOST AMAZING array of data and analytics, and yet it can at most SUGGEST several route options to a destination you've selected.

Where do I want to go? You need to know a destination, based on what you want or need, and you need to know any given route will get you where you want to go.

Google maps is useless if you don't have a destination in mind. It doesn't matter how much data google has. You need to want to go somewhere for it to be helpful.

Of course, Google has to be able to offer possible routes to achieve that destination. But how are you going to pick which option to take?

What makes Google work?

✓ A destination

✓ Knowledge & respect of constraints
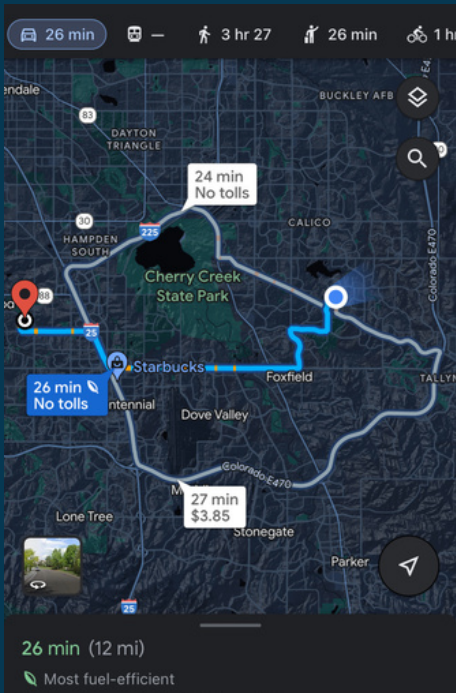
You need to know your constraints (do I have enough fuel? Enough time? Money for tolls?)

That's why Google maps got a lot better when it started giving you options that you could choose from based on what ELSE, besides just getting to your destination, mattered to you, and let you input constraints (no highways or no toll roads).

to truly succeed you need to acknowledge and evaluate your options against other relevant values: I really don't want to be late for my friend's surprise party or I want to reduce my carbon footprint.

What makes Google work?

✓ A destination

✓ Knowledge & respect of constraints

✓ All the data
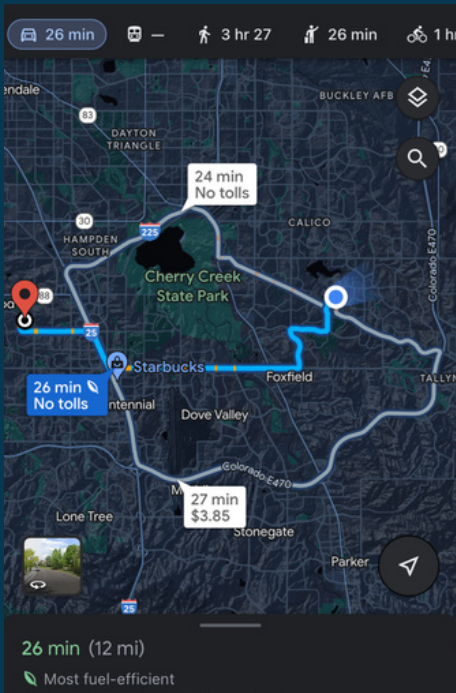
All of those first steps rely on values, with no data needed yet. But Google maps would be useless if it didn't have up-to-date traffic and navigation data, data that can tell you route A will take four minutes longer or that it's two miles shorter than route B, so that you can evaluation those factual options against the values you determined in the first place.

What makes Google work?
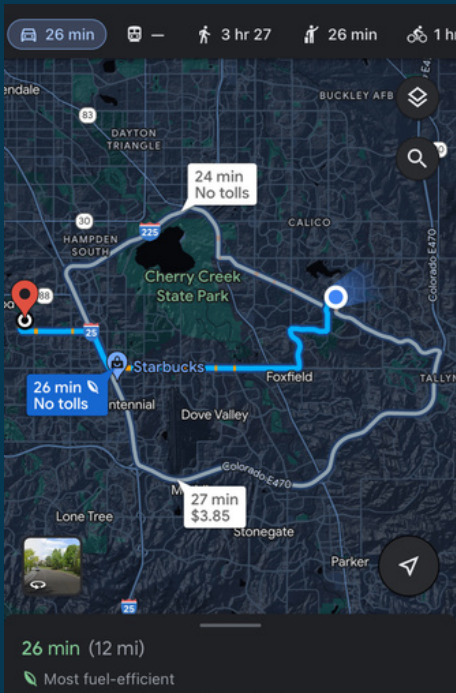
✓ A destination

✓ Knowledge & respect of constraints

✓ All the data

✓ Learning

And finally, Google is so insanely powerful because it constantly tracks the ultimate outcomes. Which routes did people choose? Did they get there when the algorithm said they would? Is that road actually still closed? Was the driver satisfied with this navigation? Why not??

These are the traits we will strive to achieve in our values-based decision-making framework today. I'm going to briefly introduce the phases of this process, and then as we explore them in detail, I want to invite you to follow along with me. I have paper and pens up here, so please feel free to grab any supplies you need.
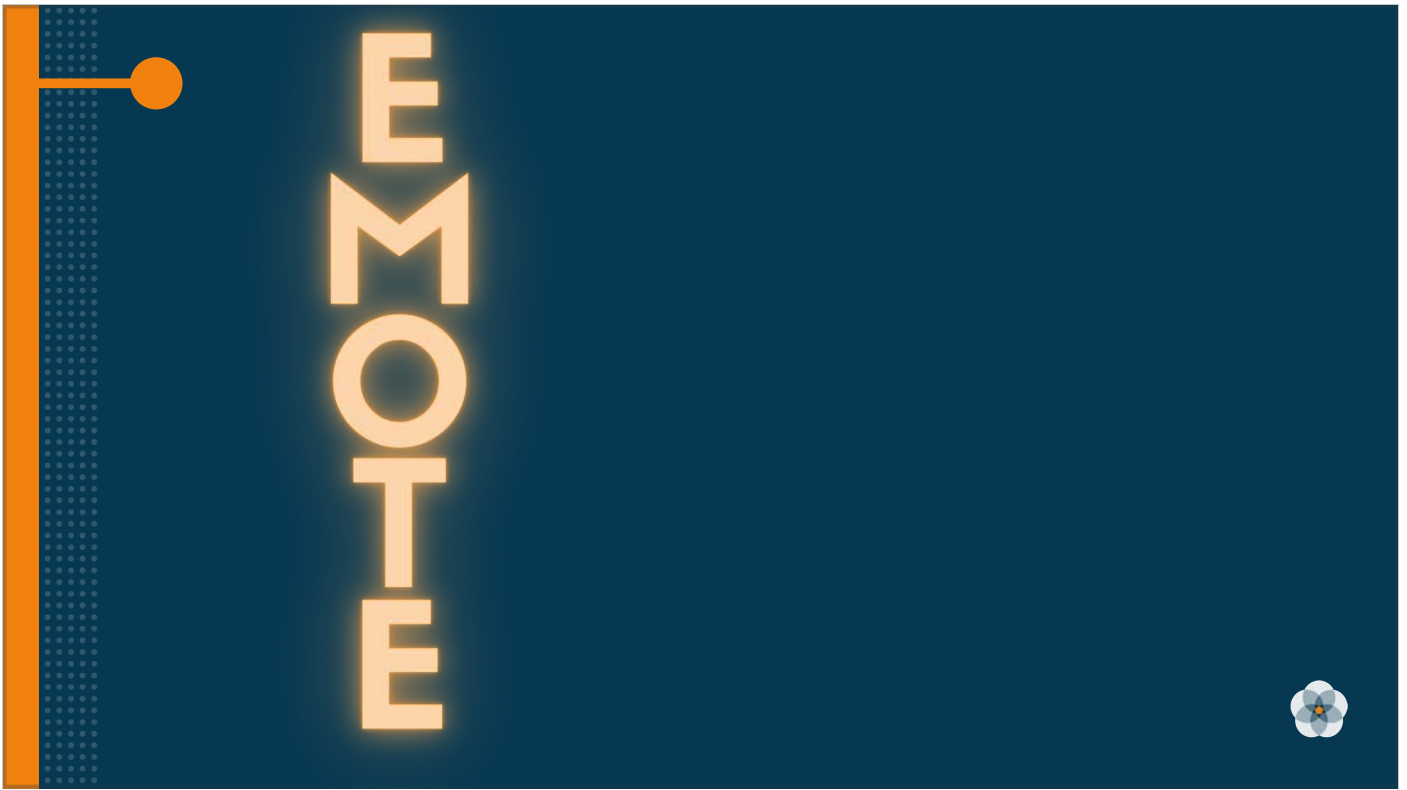
Okay! I've created a cute acronym for us to use, since 'values-based decision-making framework' is about as sexy as the DMV.

EMOTE **den**

Where ARE we trying to get to? What matters most to us as we journey? What, as Star Trek says, is your Prime Directive? No matter how little the decision, you have to have something in mind (consciously or unconsciously) about what you want most.

Right off the bat, one of the benefits of this framework is it helps us explicitly explore our answers in the most effective order.

Have we really openly considered our options, or did we start this whole process with the option we wanted, and we're picking our destination and morals based on that??

Eden
Morals/mitigate

What other values matter to you that can further help you differentiate among options? What resource or other constraints do you need to mitigate or respect?

Eden
Morals/mitigate
Options

Only once we're clear on the rules of engagement for our decision do we consider options.

EMOTE

Eden

Morals/mitigate

Options

Triangulate

"Follow the numbers" is really disingenuous because it often glosses over the first three steps.

Now that we have set the rules AND we've brainstormed or explored possible options, NOW we can map those values and goals against the data about the options to see what our most effective option might be.

E den
M orals/mitigate
O ptions
T riangulate
E valuate

The early steps we might do out of order or unconsciously, or do them in a biased way, but we do them. This last step is the one that we often completely miss.

We need to go back AFTER WE'VE MADE a decision and see whether we achieved what we hoped to!

Ok, now it's time to dive into this process and work through it together. Think about a problem you're having now, or something you're hoping to achieve

EDEN: YOUR DESTINATION

What is the perfect world you are building?

- What are you trying to achieve?
- This is chosen by what matters to you and your organization
- Data cannot tell you what this is
  - (though data will help you know if you get there...)

Just like we had an unspoken goal in our greeting method or an explicitly defined goal for our google maps, we need to define our goal for our decision.

I like to call this goal our 'Eden' to remind us that nearly every decision we make as nonprofits is to help us get closer to the better world we dream of. Whether we're trying to decide who to hire, what programs to run, what grants to apply for, or what time to arrive in the office, it's at least in some part in service of that mission. Secondly, I like the concept of Eden because it puts us in the frame of mind to think about the outcome we want, rather than jumping to how to get there.

Now, Eden can be a little misleading because we likely can't achieve utopia, and most of our decisions will require some kind of optimization or trade off. But it's nice to dream!

You try!

- What is something you hope to achieve or a challenge you are facing?
- What is the desired end-state (your Eden)?

Sometimes when we disagree on policies politically, the issue is that we aren't actually trying to achieve the same things. But more often, the breakdown is in the second step...

MORALS/MITIGATION:
YOUR VALUES & CONSTRAINTS

What are you willing <u>and</u> able to pay to get to Eden?

- The 'eco way' vs the 'fast way'
- What matters to you & your org
- What parameters or resource limits you face
  - your 'limiting reagents'

we may all want to be safer, and less likely to be the victims of, say, violent crime. But we may fundamentally differ on what we are willing to do or pay to achieve that safety.

When we say we would rather a guilty man go free than an innocent man be imprisoned, that is a value-based constraint on our decision-making. The EVIDENCE might suggest that we'd have much less crime if we were willing to sacrifice a few innocent lives. The point is that we are not BLINDLY following the data, nor are we DISAGREEING with the evidence. We are stating that we are willing to let go of some of our possible progress in order to uphold a value of liberty.

I had a debate with a colleague once about sugar taxes. The crux of the issue wasn't that we differed on what we wanted - a healthier population - it was around whether we felt the loss of individual choice and the use of financial incentive/coercion to get a desired behavior was worth the potential gain in obesity reduction. There was also some debate about the financial cost to implement vs potential public health savings - what the actual investment worth it?

Knowing your values isn't just about understanding what you will and won't compromise on to achieve an endpoint. It may be that different options could offer secondary benefits in service of values that matter to you. Maybe an after-school reading program doesn't only achieve your stated goal of improving literacy but it also advances equity by closing the graduation gap across different minority groups better than, say, a book drive.

You may also face resource constraints that cannot be compromised. You may have a certain grant amount or a maximum number of volunteers, or any number of other limits. In chemistry,

things that run out and stop the reaction are called 'limiting reagents'. You need to know what your limited reagents are for your work.

Getting clear on all these as soon as possible will help you navigate our next step.

You try!

- What are your organizational values that are relevant to this decision?
- What are the limits of your constraints?

What possible paths exist to get you to your Eden?

- Brainstorm first!
- Then attempt to estimate how well each option achieves your primary goal

Give a space to bring in as many ideas as possible without judging.

We can get very attached to our pet approach, and it's natural to default to, "If you want to close down the after-school program, you must not care about keeping children safe". When in fact, the issue might be that someone else might have a different option they want to consider to achieve the same goal!

<u>Data Point # 1:</u> how close each option gets us to our goal

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How do the options stack up?

Do any options fundamentally exceed resource constraints?

I move in very mixed circles, and I see this around gun control debates - surprisingly, most people I talk to on both sides of this issue are concerned about safety and reducing loss of life. The issue is that we don't always agree on the data

How do the options stack up?

Do any options fundamentally exceed resource constraints?

Data Point # 2: amount of resource usage

I move in very mixed circles, and I see this around gun control debates - surprisingly, most people I talk to on both sides of this issue are concerned about safety and reducing loss of life. The issue is that we don't always agree on the data

TRIANGUATE: MEASURE THE OPTIONS

The typical equation: cost-benefit analysis

Benefit

Cost

Data point #1   Data point #2
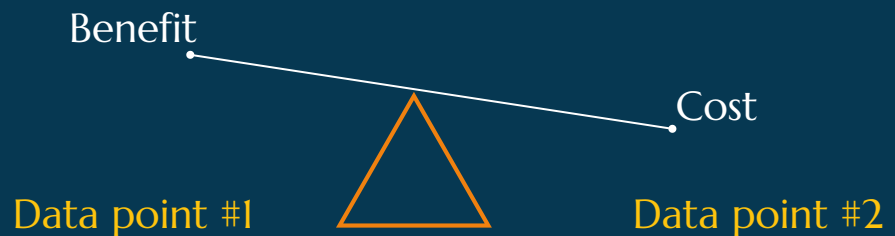
This works when the cost AND the benefit are in the SAME UNITS.

"Investing $30K into a new CRM will save us $50k in consulting fees"

"Spending 10 hours in training will reduce 100 hours of wasted troubleshooting time"

This also works if we are trying to decide between options that have the same ratio of units. For example, a food pantry costs $5 per meal provided, while meals on wheels costs $8 per meal.

But what happens when the units are DIFFERENT? Or consider the example of the food pantry to meals on wheels, what if different groups of people benefit differently from those options? In other words, I'm not JUST choosing on how many meals I can get, even though that may have been my primary goal.

TRIANGUATE: MEASURE THE OPTIONS
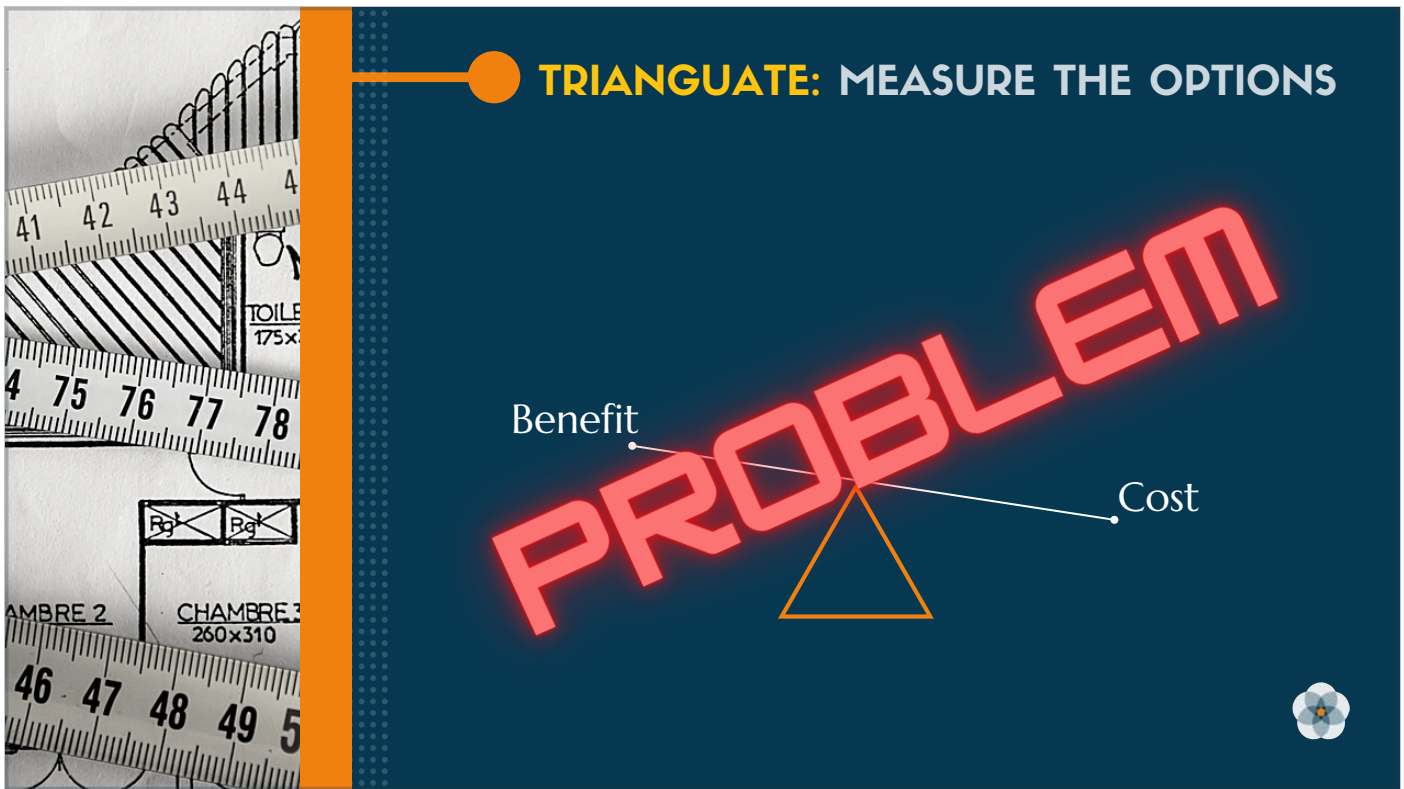
In these cases, we cannot balance a scale of two things that are different.

Imagine receiving an unlimited grant that you could spend on anything you'd like. Would it be better to spend it on a program to improve reading literacy or a program to support science education?

Is the benefit of 100 kids learning to read worth the cost of $100,000? $1,000,000?

Is the benefit of reducing carbon emissions by 10 tons worth the cost of 10% reduced earnings for a marginalized population?

We need a new approach that incorporates some kind of "equivalizer". We started this whole presentation with the idea that you actually can't do that original cost - benefit analysis without a functioning values system. It may not feel like it, but there is an implicit decision being made that the benefit is worth achieving, over all the other infinite benefits you could be working on.

It's also much harder to fit values into the 'cost' side of the equation with the typical cost-benefit analysis. What happens when a choice jeopardizes a key value? Or what happens when one option might generate a little less benefit for the GOAL, but more for a guiding value?

That is why I have the concept of triangulation in this process.

Value Weight

Optimization
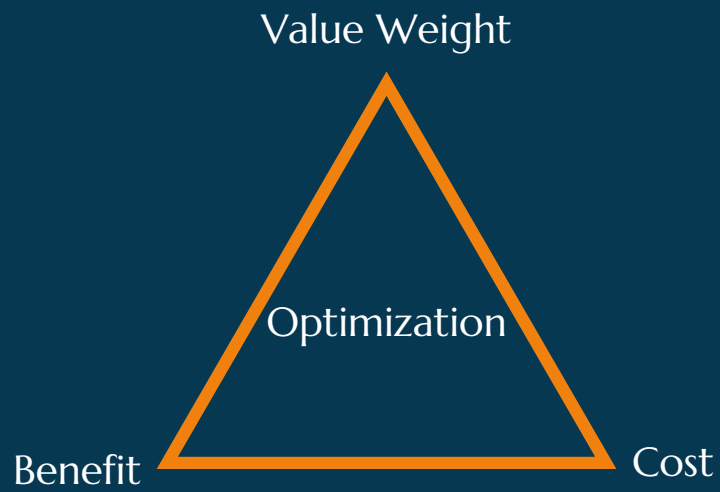
Benefit

Cost

Instead of a see-saw, we are using three points to triangulate, or find our position. The third point is the value weights related to both our costs and benefits. Our values are THE ONLY THING that can help us understand whether a benefit in one unit is worth costs in other units.
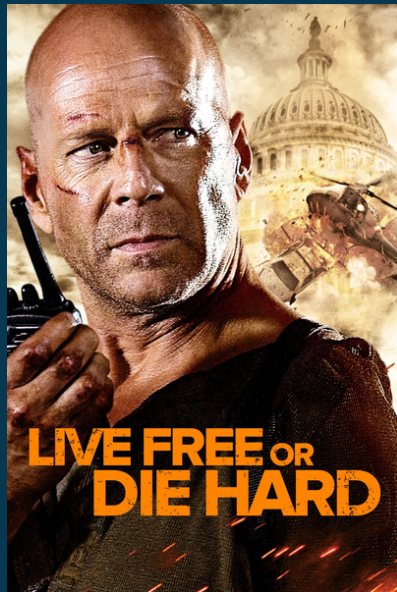
Some of you may remember the fourth in the die hard series with bruce willis was called live free or die hard, a reference to the revultionary sentiment of give me liberty or give me death!

This movie came out while I was at school in England, and i went to see it with a British friend. I laughed when I saw the listing in the British theater, because there they called it...

die hard 4.0. I pointed out that the original movie title was supposed to be live free or die hard to my friend, at which point I had to explain the cultural context of "live free or die".

She looked vaguely shocked at our founders and said, 'That seems awfully harsh...'

English culture places very little value on liberty, and so they will readily trade it for relatively small benefits. Our revolutionary fore-bearers had made the value judgment that they would rather give up their lives than live under what was arguably a pretty benevolent tyranny, and this sentiment rears up in many American debates as some people would rather not gain a particular benefit at the loss of liberty.

Which would you rather have...?
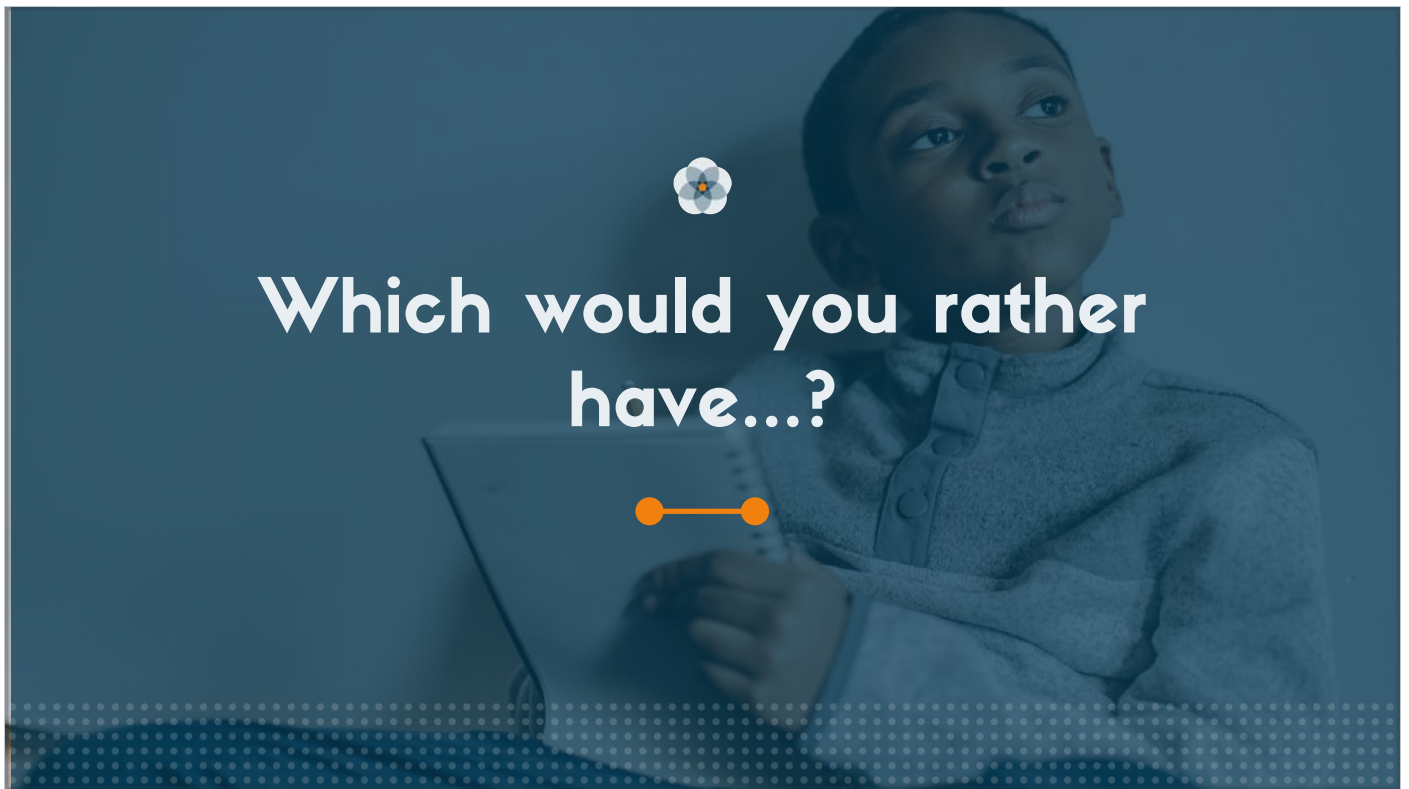
On a dare from my dad (and to the complete horror of my mom), my brother once ate an entire mound of wasabi for $20.

Why was he willing to do this? He measured up the amount of suffering he would undergo against the value of $20 to him.

How many people would make the same trade? How many people wouldn't?

What's the right answer here? How much money is a mouth-burning minute worth?

In order to truly triangulate your options against your values, constraints, and goals, you will have to create some kind of equivalency among things that are wildly different.

Would you rather teach 100 kids to read or save 10 children from measles?

What if you are faced with the choice to hire someone with a little less experience but who comes from an group underrepresented in your organization? In other words, will you trade some of the primary benefit to gain a secondary benefit for your value of equity?

Options

	A	B	C	
$ Cost				Data point #2a
Time Cost				Data point #2b
Value 1				
Value 2				Data points?!
Value 3				
Outcome benefit				Data point #1

You try!

- Take a stab at filling in your own grid for at least two of your options
- You may not have all the answers now, and that's ok!

THE TRIANGULATION GRID

A=book bags
B=tutoring
C=online class

Options

	A	B	C	
$ Cost	$10k	$50k	$5k	Data point #2a
Time Cost	50/50 hr	20/500 hr	500/10 hr	Data point #2b
Equity	↑	↑↑	→	}
Environ. sustainability	↓	↑	↑↑	Data points?!
Resilance	↑	↓	↑↑	
Literacy gained	20%	50%	8%	Data point #1

MEASURING VALUES

- Define how key values are expressed/achieved
  - This is a value judgment!
- Then find/collect key data points on those expressions from your options
  - could be qualitative or quantitative
- Consider a 'multiplier' or cut-off based on the relative weights of each value

define qualitative and quantitative

could be 'fast and dirty' estimations or longer, deliberate studies or evaluations, could be from outside work or internal

the 'multiplier' could be that you need to see more benefit of one value to outweigh less benefit in another value. Or it could be just a framework for facilitating discussions when values are in conflict around a decision.

MEASURING VALUES

- Some values may be difficult to measure
- Don't try to use the data points measuring amount of the value to settle disagreements about the weight of the value
- Others may feel inviolable, traumatic, or downright wrong to even consider as a 'cost'
  - but hiding/avoiding leads to bias

MEASURING VALUES

Avoidance ➡ Opacity ➡ Implicitness ➡ Bias

Whether you like it or not, your decisions have impacts on values and other outcomes that may feel very challenging to address, acknowledge or think about.

But if you DON'T acknowledge them, then those decisions live in the dark. They are never openly discusses, the reasons behind them are never shared, or challenged or updated. Which leads to those decisions being made by default, implicitly rather than deliberately and explicitly. And any time we lean on default decisions, they will become heavily biased towards either the status quo, or towards sources of power.

RULES FOR CREATING EQUIVALENCY

Judge options, not people

Respect organizational values

Optimize, don't perfect

What other voices should be heard?

Be transparent

Recognize the subjectivity

no ad hominem attacks

We went with A!
...Did it work?

- Take our best guess, and return to evaluate
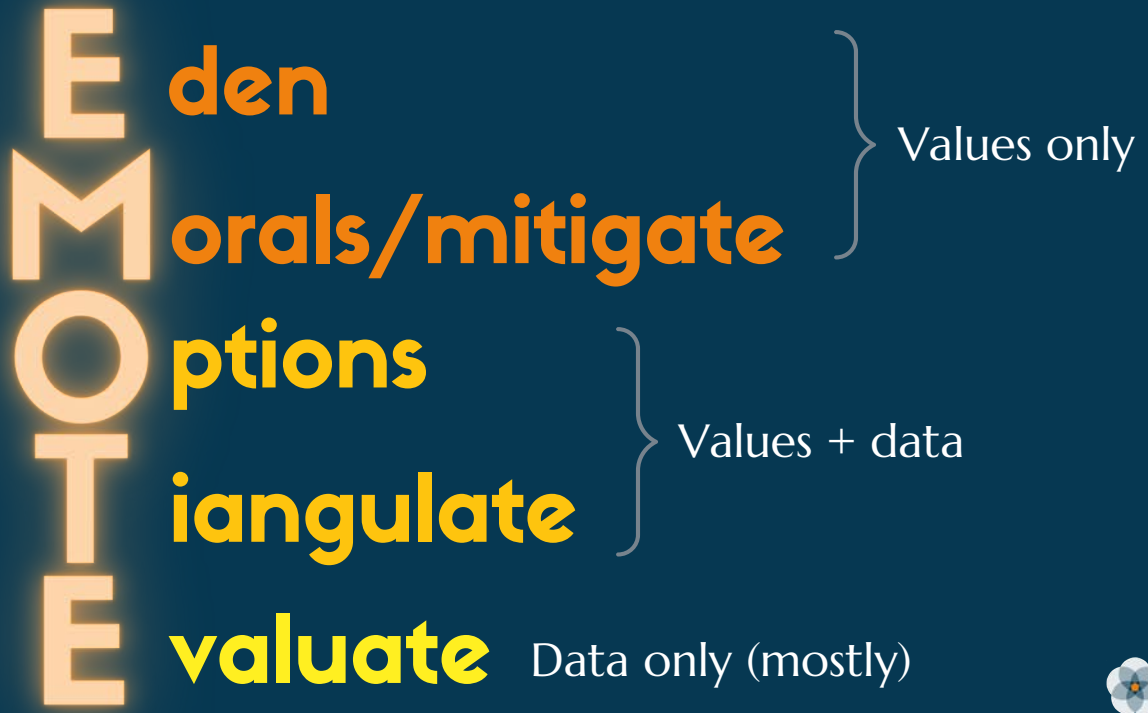 - otherwise, learning can't happen

I move in very mixed circles, and I see this around gun control debates - surprisingly, most people I talk to on both sides of this issue are concerned about safety and reducing loss of life. The issue is that we don't always agree on the data

You try!

- How could you evaluate the costs and effectiveness of your choice?

EMOTE

Eden

Morals/mitigate

} Values only

Options

Triangulate

} Values + data

Evaluate   Data only (mostly)

TIPS TO REMEMBER

- This framework is a way to argue about hard choices more effectively and respectfully

Data literacy is also necessary for the questions and decisions we face every day in our nonprofits.

How likely is a donor to respond to different kinds of appeals? Again, we need to understand probability, the likelihood that a person will do something, and causation, whether the thing I do impacts that chance.

Did this new program move us closer to our mission? This involves defining an outcome, collecting data on that outcome, and comparing to what would have happened without the program.

Are we sustainable? You need to be able to collect financial numbers, trend them over time, and predict those numbers in the future.

TIPS TO REMEMBER

- This framework is a way to argue about hard choices more effectively and respectfully
- Set cutoffs 'a priori' whenever possible (<u>before</u> you get the data points)
  - "What data would convince me or change my mind?"

The idea here is to help you avoid the "but I want this option, so I'll just change how much I weigh the outcomes or costs."

How much benefit are you looking to achieve? How much of each cost will you tolerate?

What is the hierarchy of your values?

This can also help combat confirmation bias, where we only see or only accept data that supports our already conceived beliefs or position.

Asking "what data would convince me of X or change my mind about Y?" and THEN going looking for it will make it harder to discount findings that contradict your stance.

Imagine that you really wanted to do the book bags. If you wait until you do the grid to decide how important environmental sustainability is, you may then choose to really downplay its importance so that option remains high.

Or imagine you have a program that is struggling a bit. Choosing a cutoff point before you have to decide whether to close down the program will prevent you from quietly 'moving the goalposts' each time the program is up for consideration.

TIPS TO REMEMBER

- This framework is a way to argue about hard choices more effectively and respectfully
- Set cutoffs 'a priori' whenever possible (<u>before</u> you get the data points)
  - "What data would convince me or change my mind?"
- Respect that values different from your own are NOT wrong, just different
  - Don't use data to try to change values
  - Finding common values is often more effective that trying to change differing ones

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Resources

HEART, SOUL & DATA
A podcast for community organizations getting started with data.
On all the podcasting platforms or www.heartsouldata.com.

GET THE SLIDES, RESOURCE LINKS & MORE
www.merakinos.com/CNA22

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EMAIL
aokm@merakinos.com

note that there are links to specific podcast episodes, We All Count, and more