Modeled Impact of Local Sources on Residential

Diesel PM

DRAFT 2019-03-04

Legend:
- 1.0 µg/m³
- 0.8
- 0.6
- 0.4
- 0.2
- 0

+0.3 µg/m³
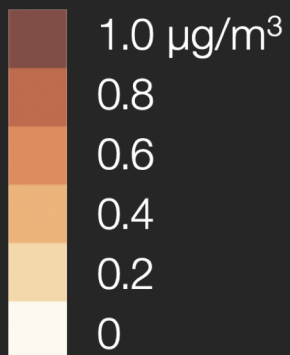
Top Contributors:

- Trucks (**49%**)
- Marine vessels (**28%**)
- Rail (**17%**)

Highway			
	Heavy/Medium HD trucks	0.056	19%
	Passenger vehicles	0.005	2%
	Light HD trucks	0.002	1%
Street			
	Heavy/Medium HD trucks	0.068	23%
	Passenger vehicles	0.005	2%
	Light HD trucks	0.002	1%
Port			
	Harbor craft	0.030	10%
	OGV (berthing)	0.022	8%
	OGV (maneuvering)	0.014	5%
	Cargo handling	0.005	2%
	Drayage trucks‡	0.005	2%
	Dredging	0.003	1%
	Railyard (OGRE)	0.003	1%
	Railyard (BNSF)	0.002	1%
	Bunkering (tugs + pumps)	0.001	0%
Rail			
	Railyard (UP)	0.024	8%
	Rail lines	0.020	7%
Permitted			
	EBMUD	0.002	1%
	Other facilities	0.001	0%
Other			
	Schnitzer (trucks)	0.010	3%
	Ferries	0.008	3%
	Schnitzer (ships at berth)	0.003	1%
	Truck-related businesses	0.001	0%

How Much is Local?
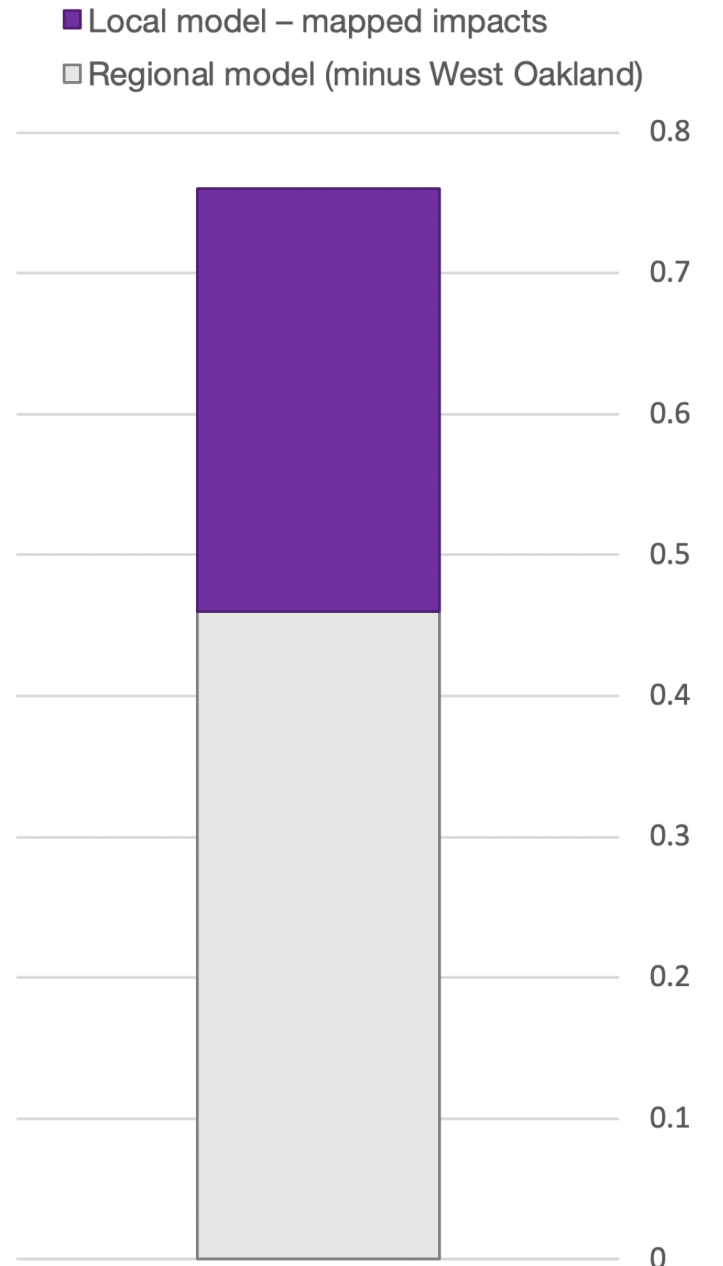
Modeled Residential
Impacts from
Local Sources

Top Contributors:

- Trucks (**49%**)
- Marine vessels (**28%**)
- Rail (**17%**)

Diesel PM

$+$ **0.3**

μg/m^3

Note: Diesel PM from construction not modeled

■ Local model – mapped impacts
☐ Regional model (minus West Oakland)

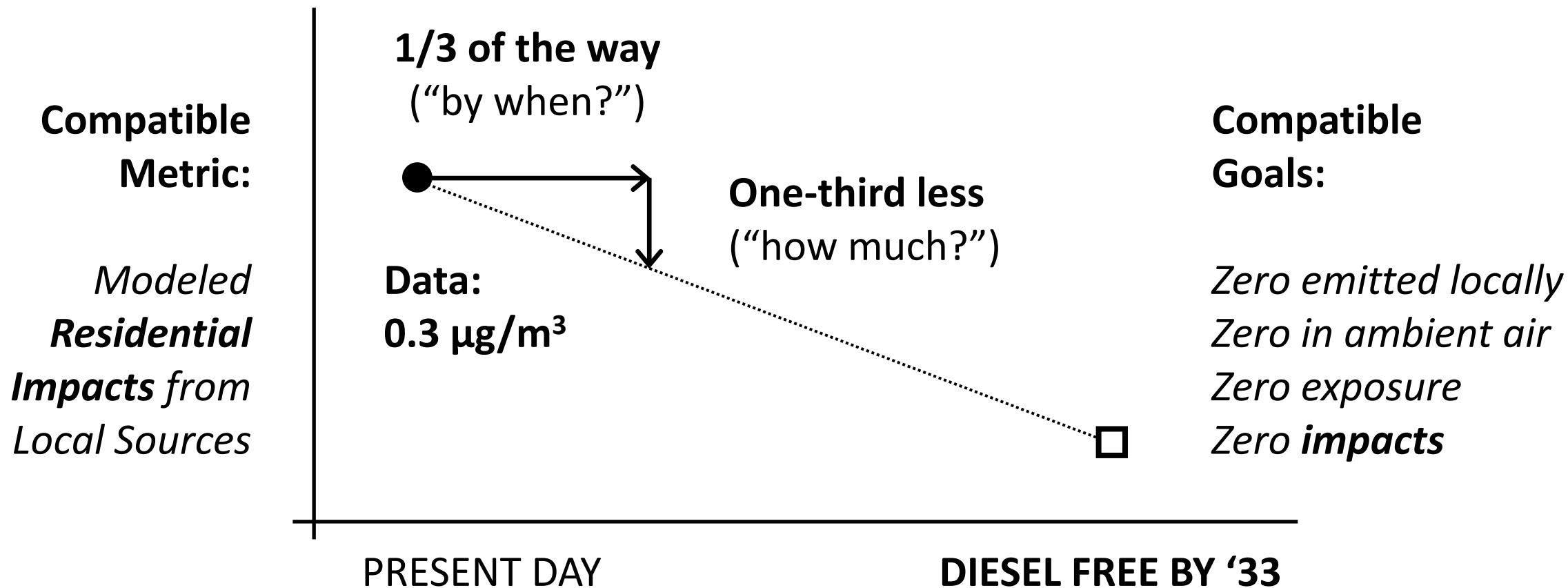|	
0.8	
0.7	
0.6	
0.5	
0.4	
0.3	
0.2	
0.1	
0	

Targets, Metrics, and Tracking

*What are we talking about
when we talk about these?*

Part I: Targets

By example

Targets: One Example

Compatible Metric:

*Modeled **Residential Impacts** from Local Sources*

1/3 of the way
("by when?")

One-third less
("how much?")

Data:
0.3 µg/m³

Compatible Goals:

Zero emitted locally
Zero in ambient air
Zero exposure
*Zero **impacts***

PRESENT DAY   **DIESEL FREE BY '33**

Targets: Four Kinds

"5 years from now"

"33% less"

$10k

2030

Site A
Site B

2022
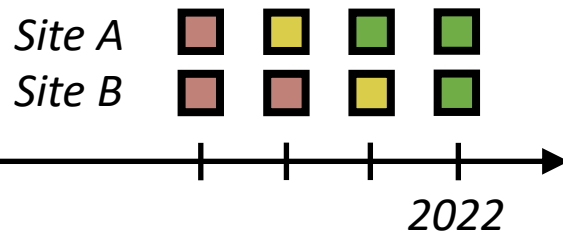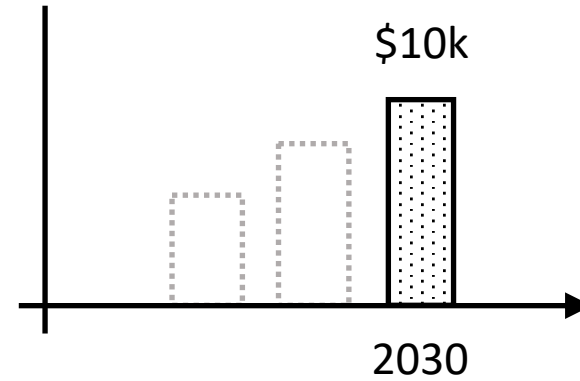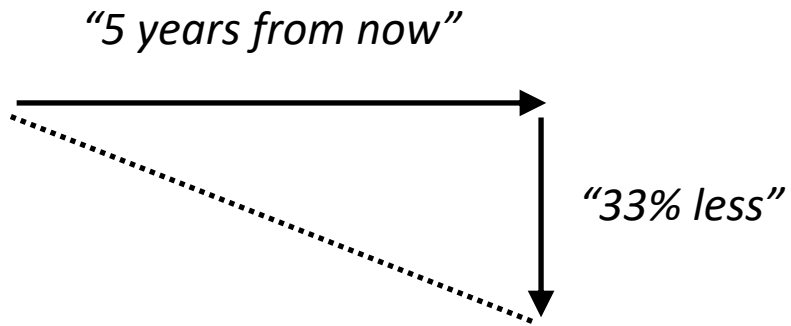
✓ *"done by 2025"*

Part II: Metrics

Putting it Together – Building up Metrics – Keeping Data in Mind – Exercise
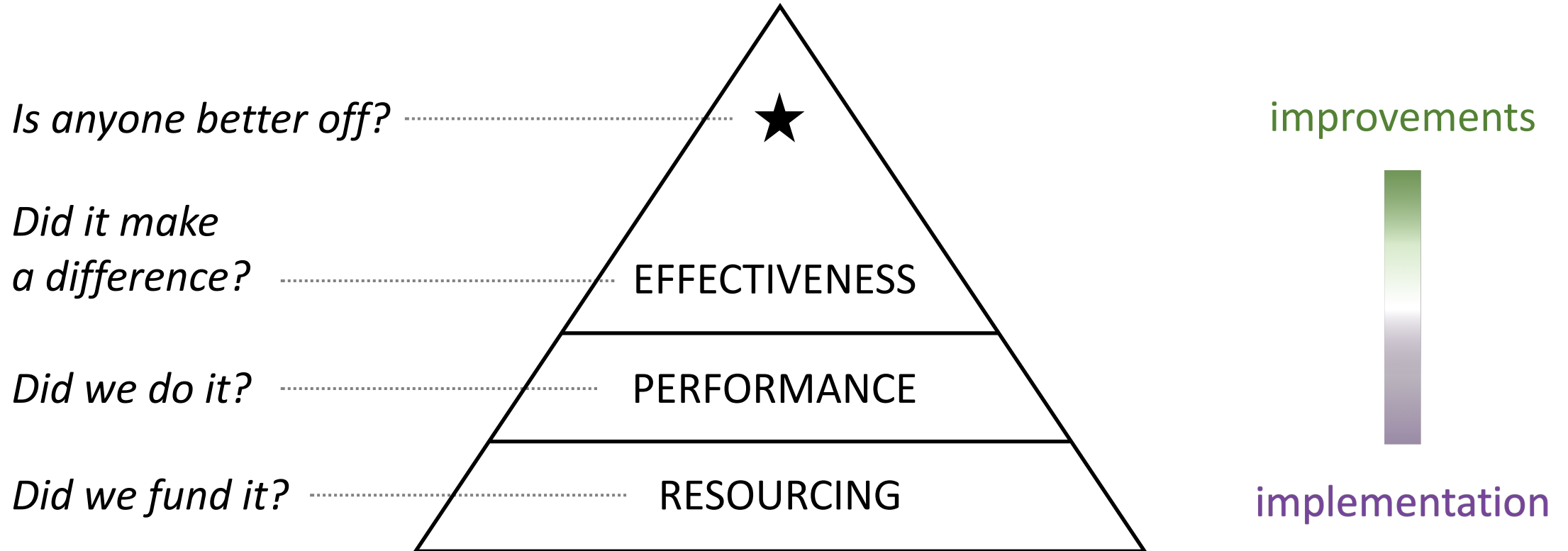
Putting it Together

A **target** is a metric with a date.

"33% less _____ by 2023"

A **metric** is a trackable amount of something.

number of events, molecules, actions done/not done ...
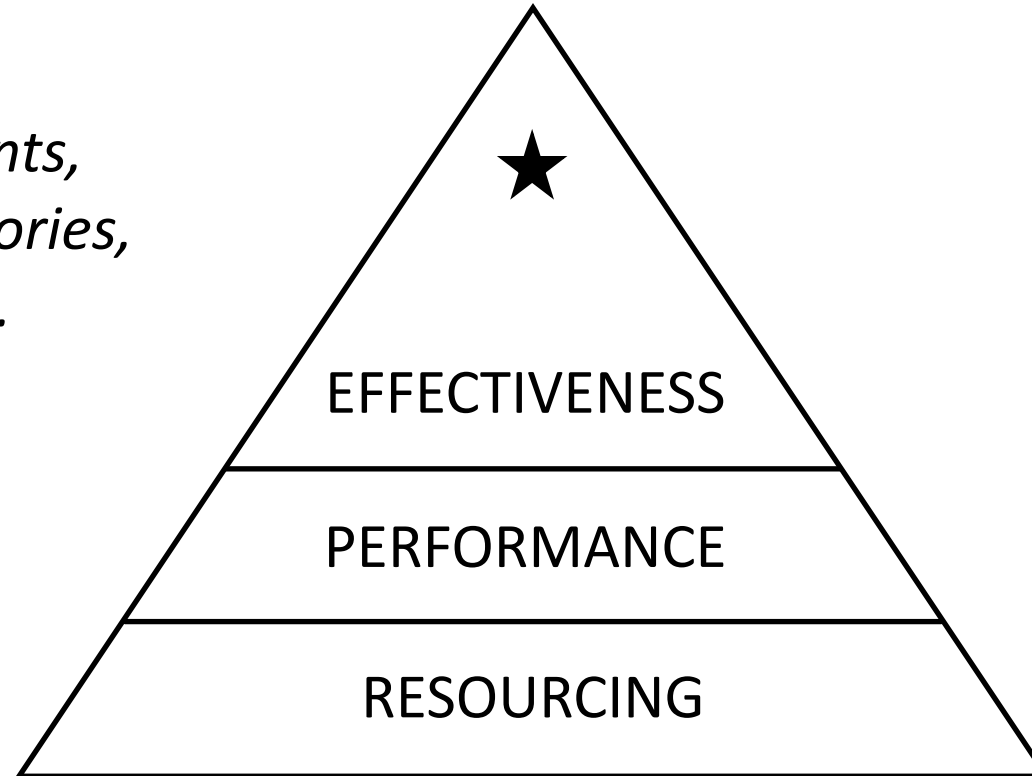
Building up Metrics

Is anyone better off? ⋯⋯⋯⋯⋯⋯⋯ ★

Did it make
a difference? ⋯⋯⋯⋯⋯⋯⋯ EFFECTIVENESS

Did we do it? ⋯⋯⋯⋯⋯⋯⋯ PERFORMANCE

Did we fund it? ⋯⋯⋯⋯⋯⋯⋯ RESOURCING

improvements

implementation

Keeping Data in Mind

Records, measurements, estimates, models, stories, surveys, interviews, …

Transcripts, photos, videos, notes, …

Agendas, budgets, letters of intent …

★

EFFECTIVENESS

PERFORMANCE

RESOURCING

improvements

implementation

Exercise: Setting Targets

"The _____ *will develop a plan to* _____."

	RESOURCING	PERFORMANCE	EFFECTIVENESS
Compatible **targets**			

Exercise: Setting Targets

"The _____ *should consider* _____."

	RESOURCING	PERFORMANCE	EFFECTIVENESS
Compatible **targets**			

Part III: Tracking

Putting it Together – Tracking is a Process

Putting it Together

A **target** is a metric with a date.

"33% less _____ by 2023"

A **metric** is a trackable amount of something.

number of events, molecules, actions done/not done …

To answer "how much" (or "whether"), we have to rely on pieces of evidence. Those are **data**.

photos, transcripts, records, pictures, tables, maps, …

Tracking is a process of people repeatedly compiling, considering, and comparing data.

who, how, when …

Tracking is a Process

Tracking unfolds <u>over time</u>.
It doesn't only happen once, at the end.

With tracking, we don't have to just accept what happened.
We can gauge progress *while there's still time to adapt.*

Tracking is a Process

Tracking is a *social process*.
Targets don't track themselves!

- <u>*Who*</u> will compile the data, <u>*how*</u>, and <u>*when*</u>?
- <u>*Who*</u> will review that data, <u>*how*</u>, and <u>*when*</u>?
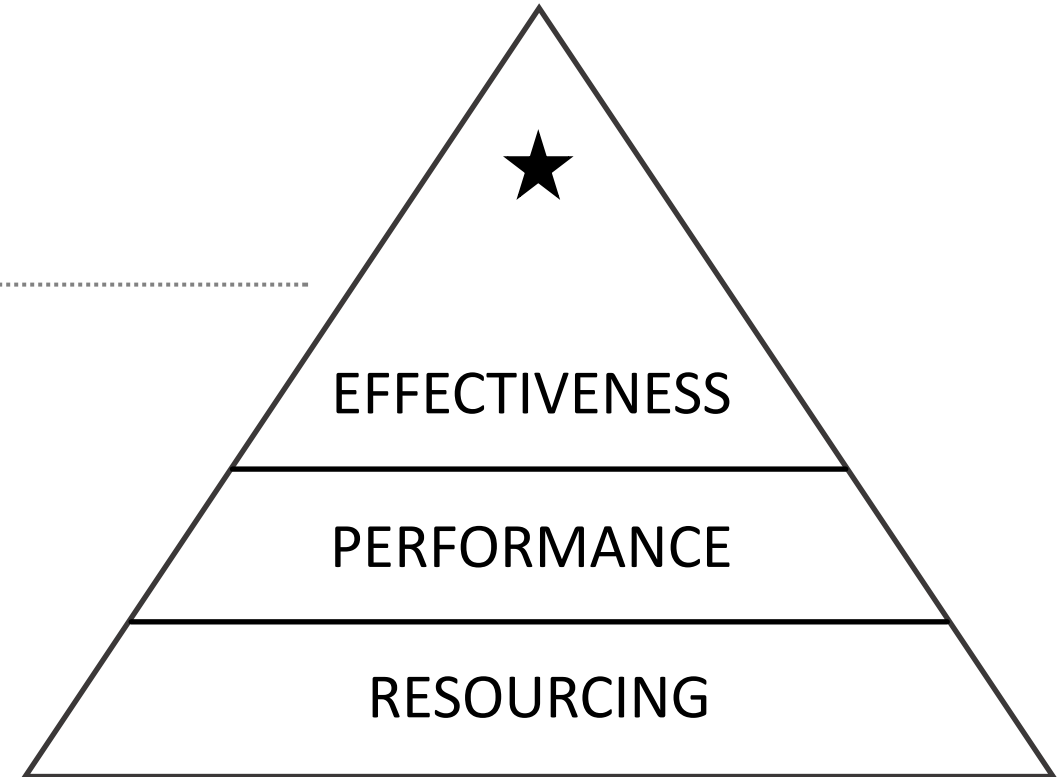- <u>*Who*</u> will decide, <u>*how*</u>, and <u>*when*</u>?

Key Takeaways

(Then break for discussion and xercise)

Key Takeaways

A **target** is a metric with a <u>date</u>.
Here are three kinds of metrics:

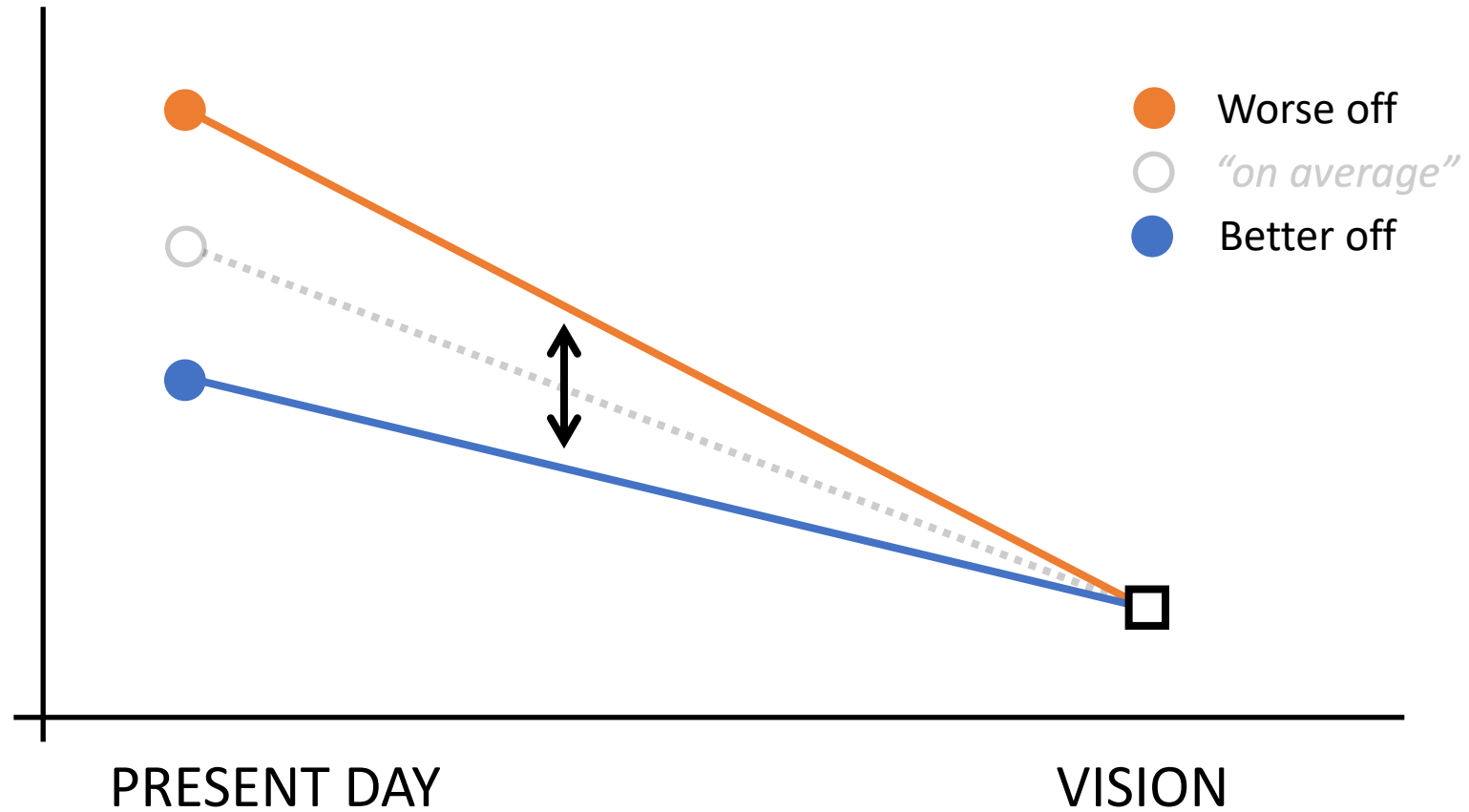**Tracking** is a <u>process</u> of people repeatedly compiling, considering, and comparing data (evidence).

★

EFFECTIVENESS

PERFORMANCE
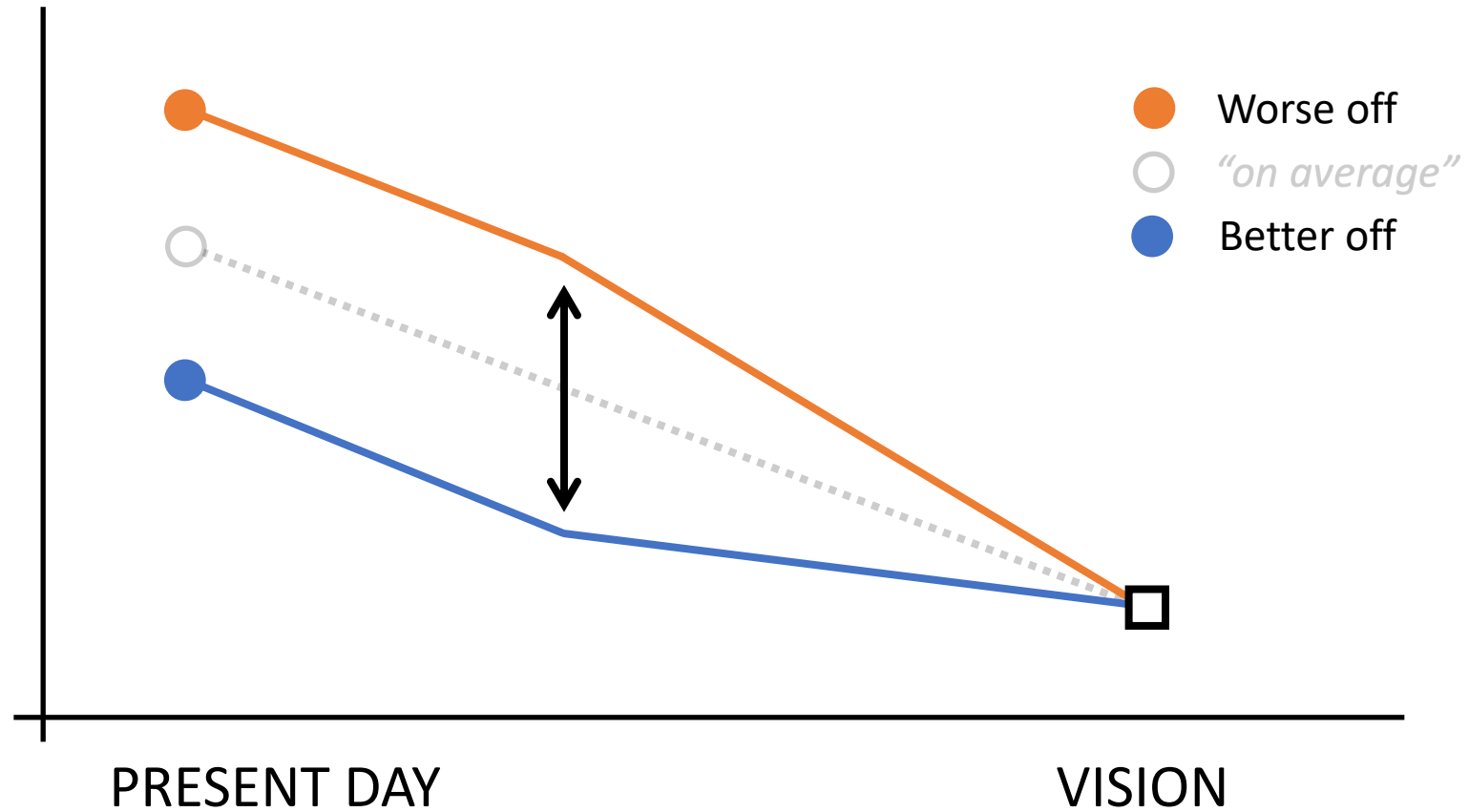
RESOURCING

Extra Slides

Inequalities – Convinced?

The ★: Better Off

Quantifying Inequalities – Setting Targets

Inequalities

Inequalities

Worse off

"on average"

Better off

PRESENT DAY

VISION

Inequalities
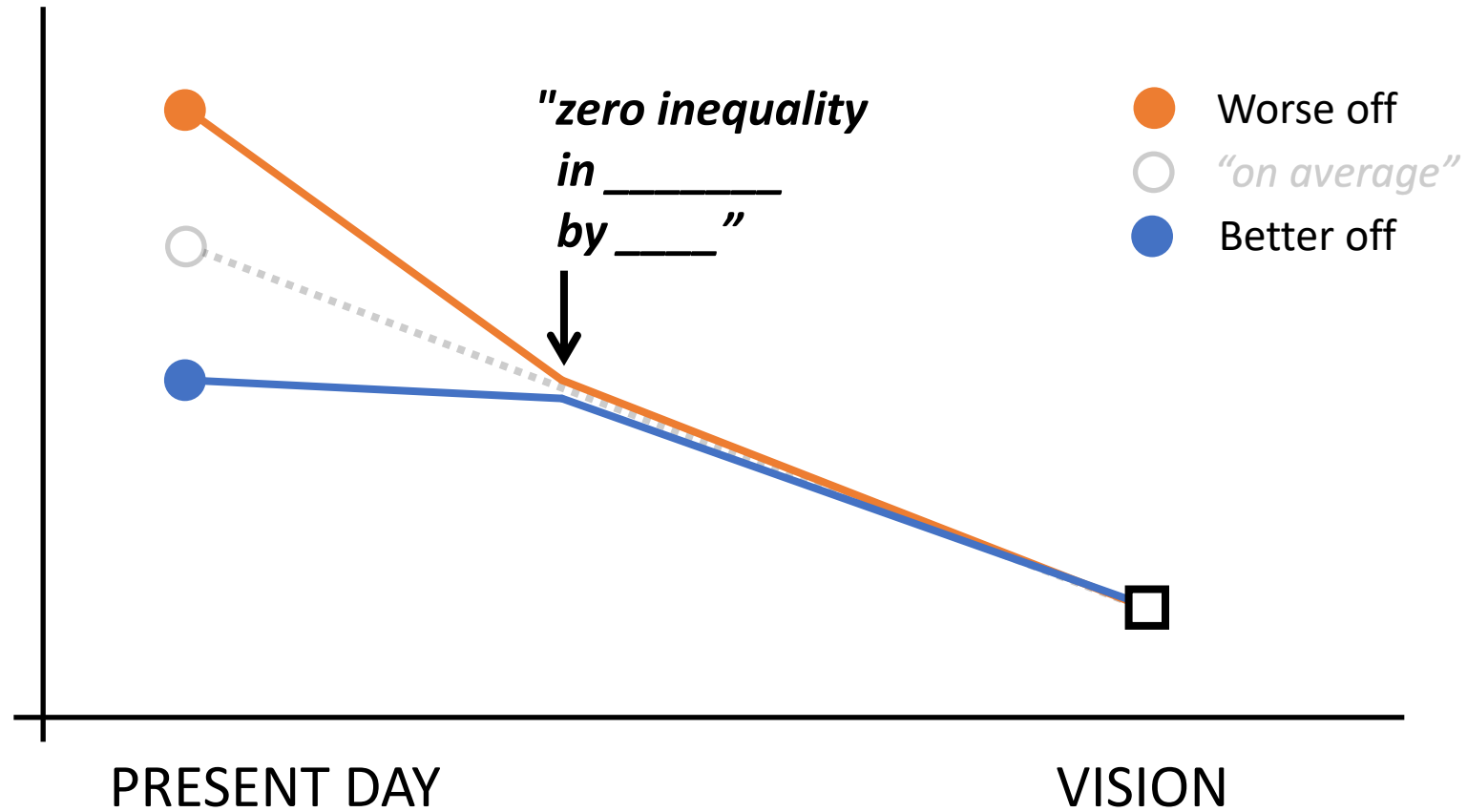
Convinced?

"Because of us" – "it changed"

Convinced?

"Because of us" is a step beyond "it changed".
Gold standard = _ruling out (or discounting)_ _competing stories_.

a) "It's just noise in the data."
b) "It's just chance."
c) "It's because of this other thing."
d) "It's because of someone else."
e) …

It's not all-or-nothing. If we can agree that "at _most_ 40% of the change was because of a, b, c, d, and e", that means "at _least_ 60% was because of us"!