Indicators

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INDICATOR, LUBEC
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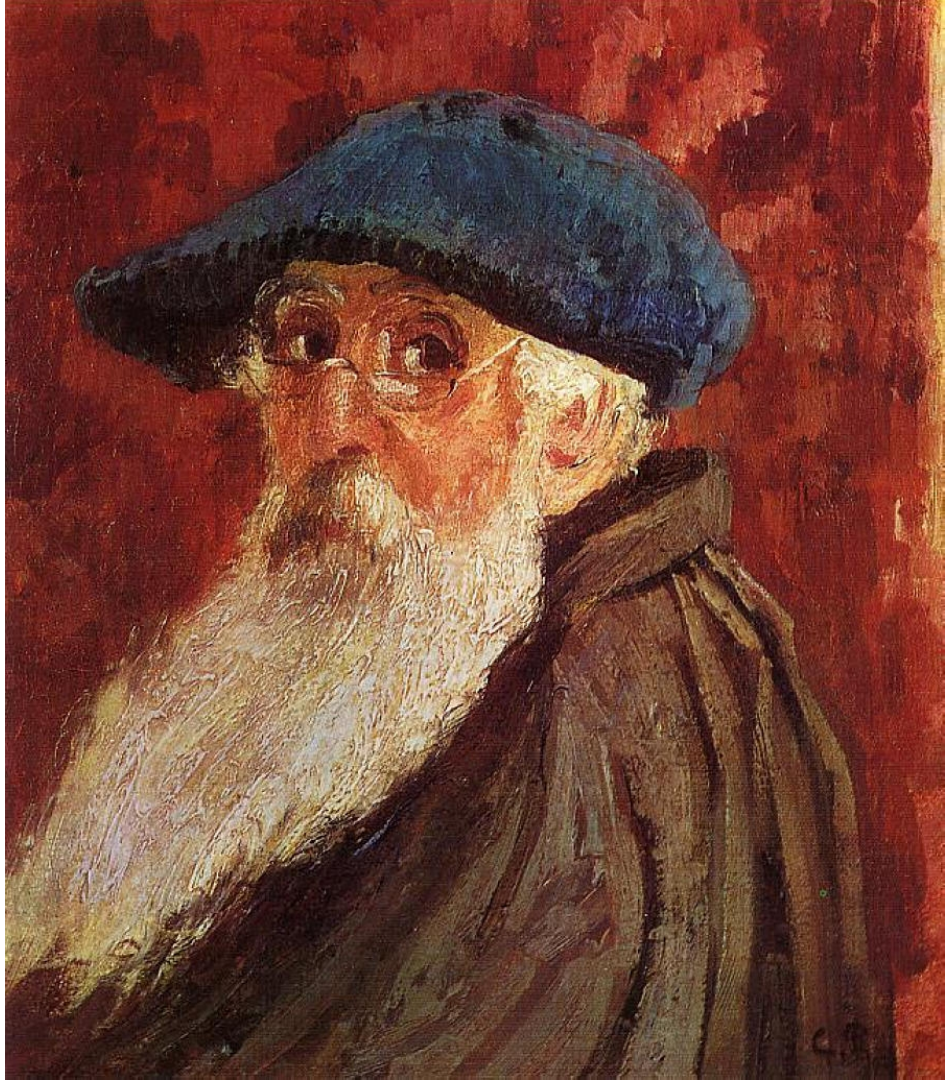
Index or Indicator?
Real or Not?

WHY?

Reality



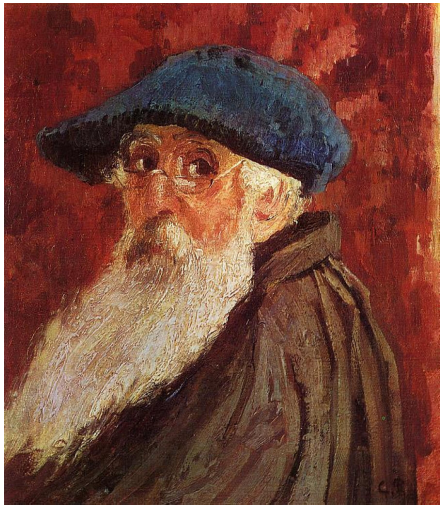
Realities

Single Indicator

Finding the right balance...

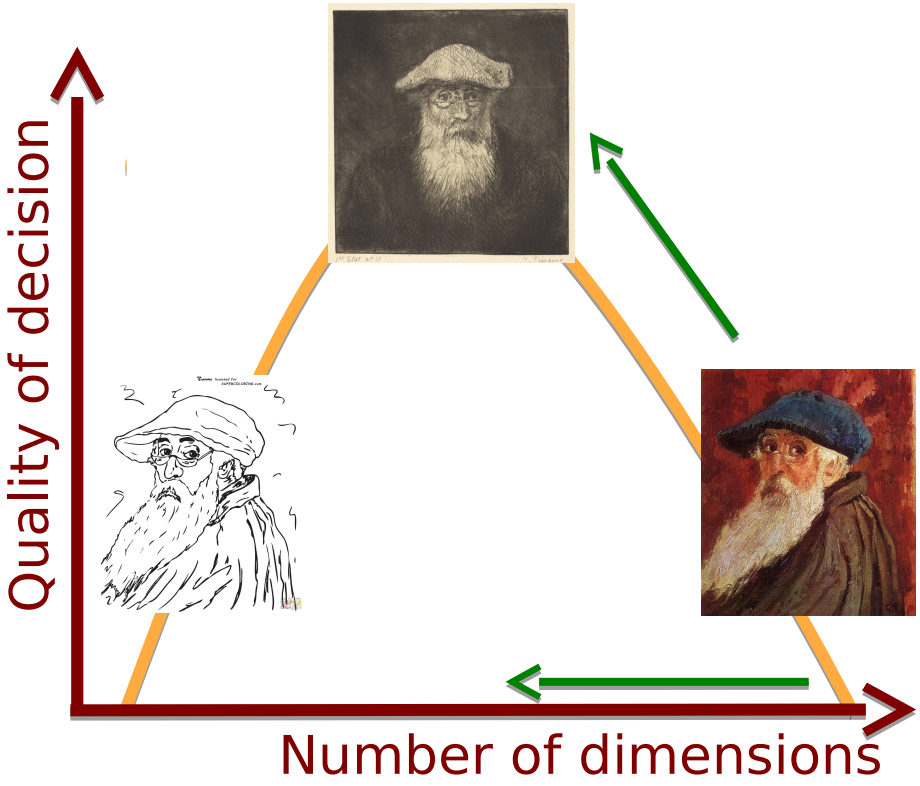
One indicator
Too simplistic

Index or
Cluster of indicators



Reality
Too complicated

… For an informed decision



The state: something we want to measure

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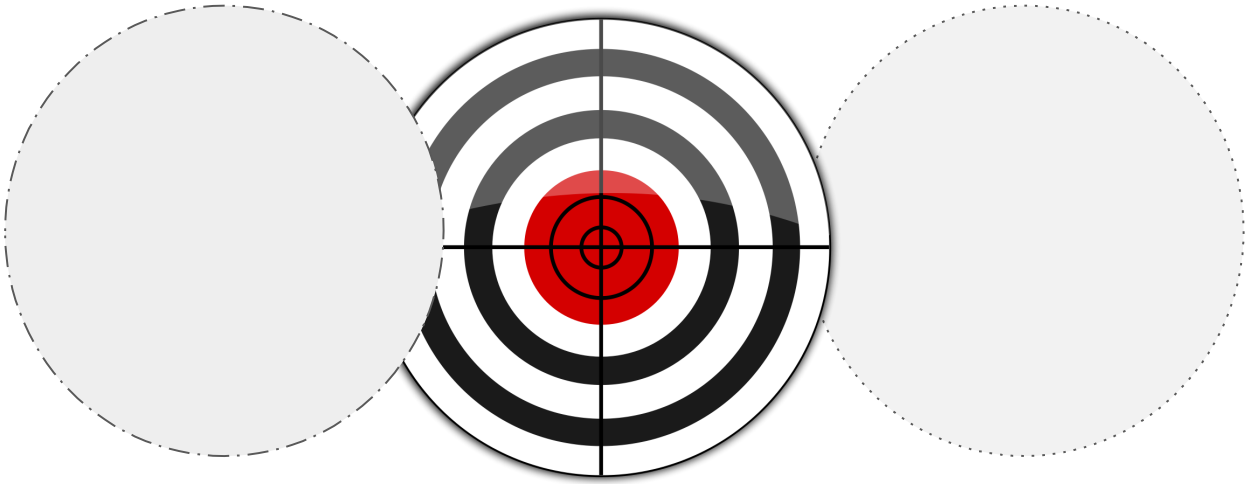


Past

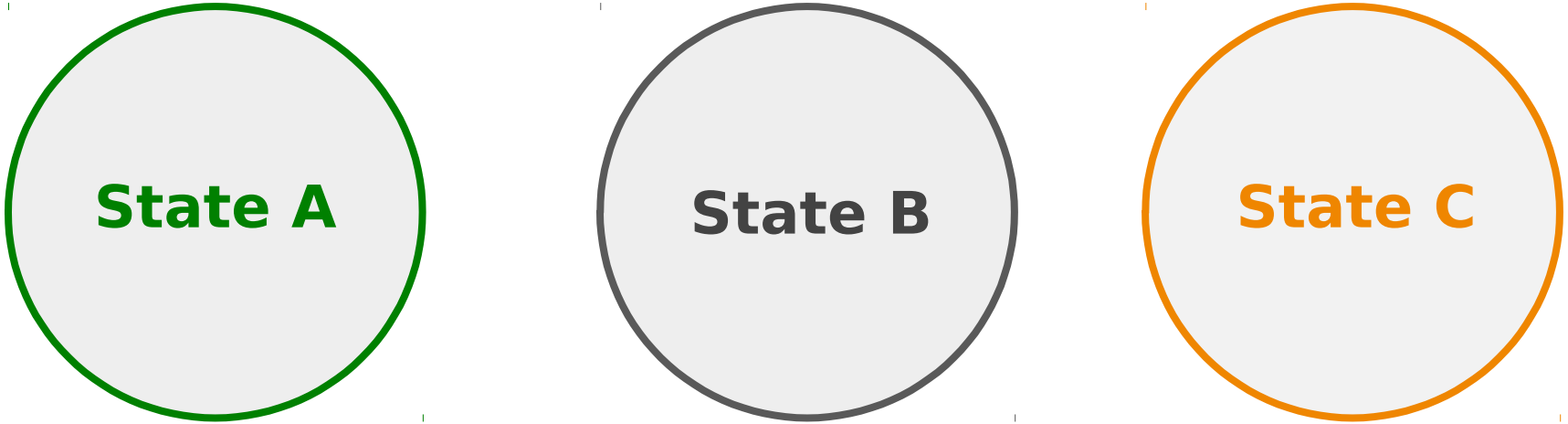
Forensic

Present

Future

Predictor

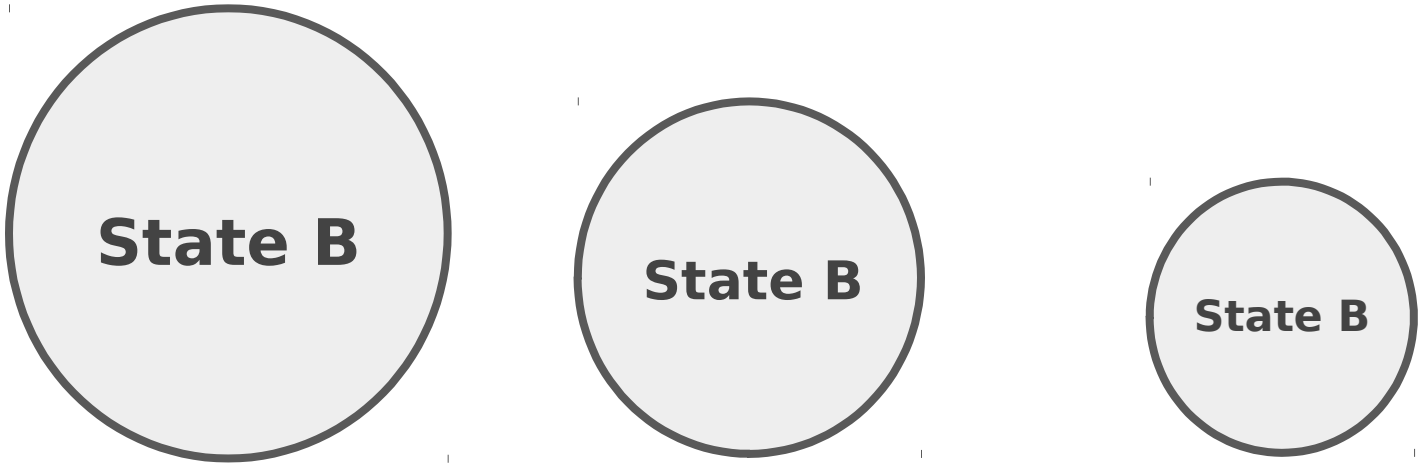
Comparing performance across units



Examples: places, people, communities, ecosystems

Changing state over time

Measuring, modeling, predicting



Past performance

Baseline

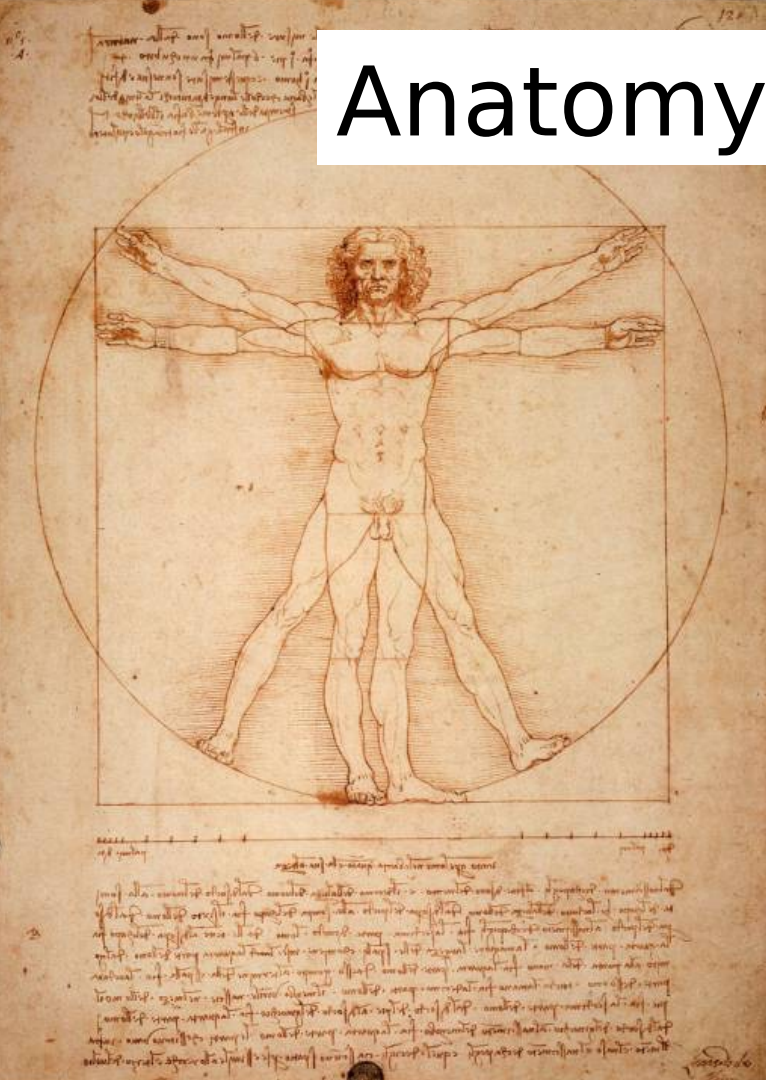
Present performance

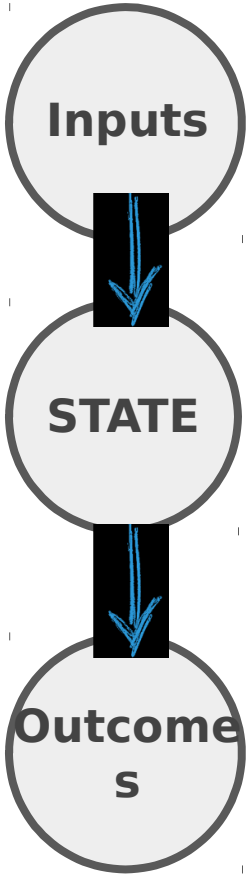
Evaluation

Future performance

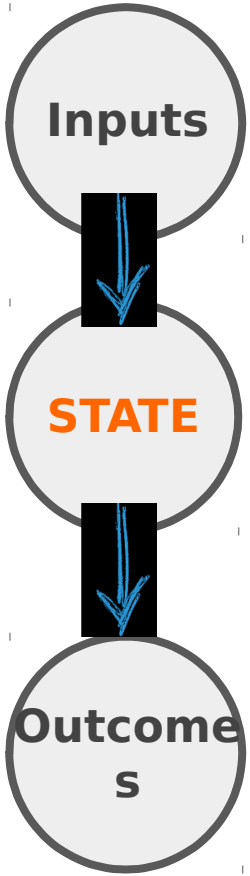
Prediction, scenario analysis

Anatomy of an indicator





Example: an estuary health

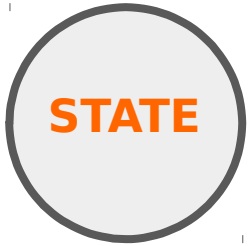


Upstream *Fertilizer use, green infrastructure*

Estuary health *Habitat coverage, micro-algal abundance, fish assemblages*

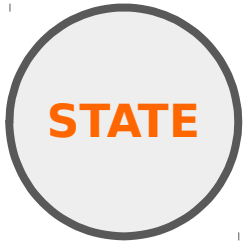
Outcomes *Seafood related illnesses*

One man’s state is another ...



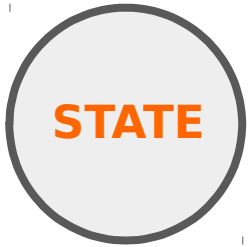
Upstream

Watershed planner



Estuary health

Estuary reserve manager



Outcomes

Public health agency

State

Proxy

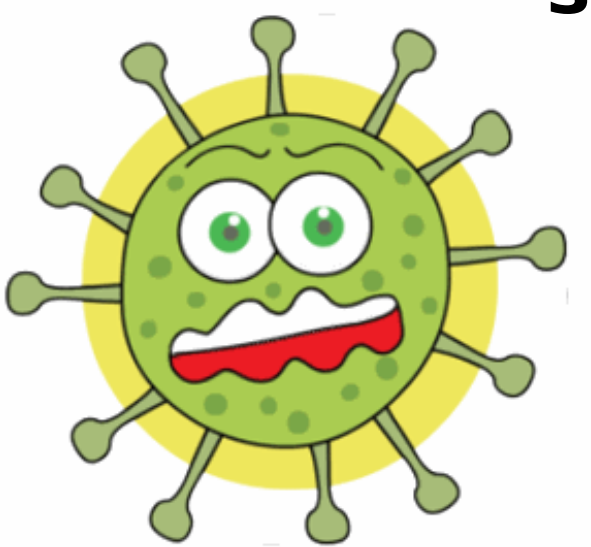
Let’s take an example

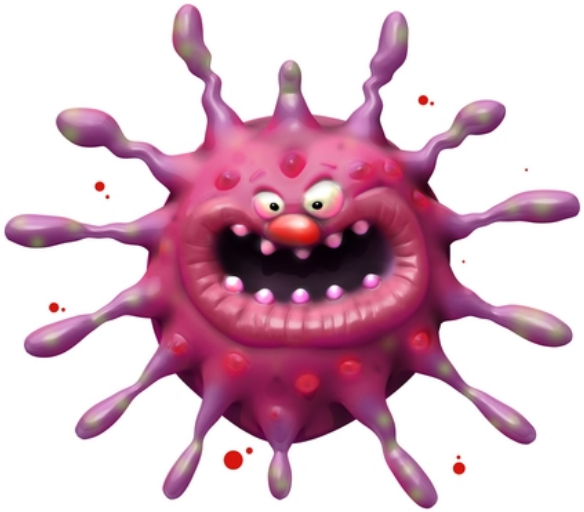
Is water safe for swimming?

Surfers Against Sewage UK

State

Water safeness for swimming





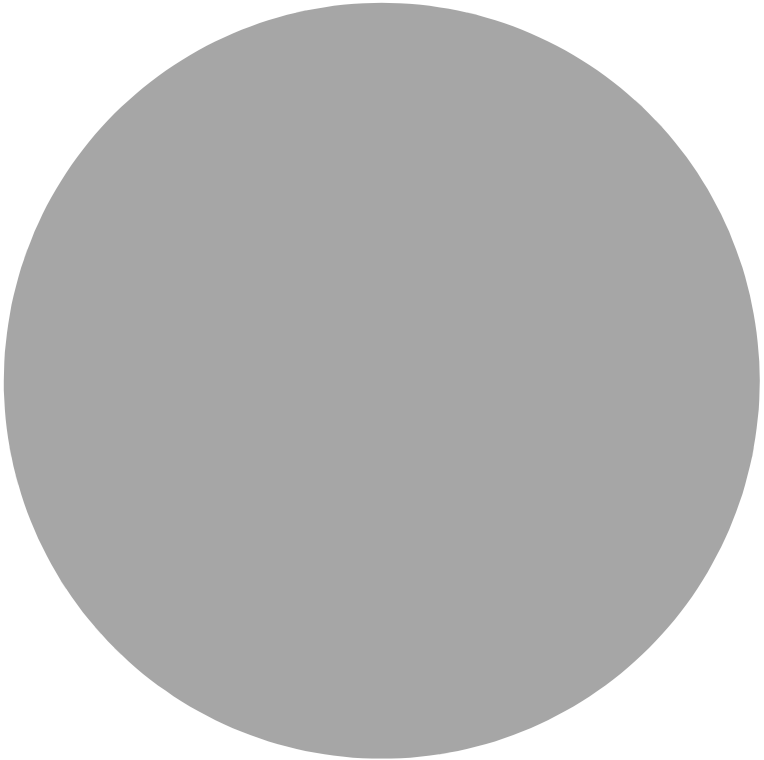
Faecal coliform

PROXY

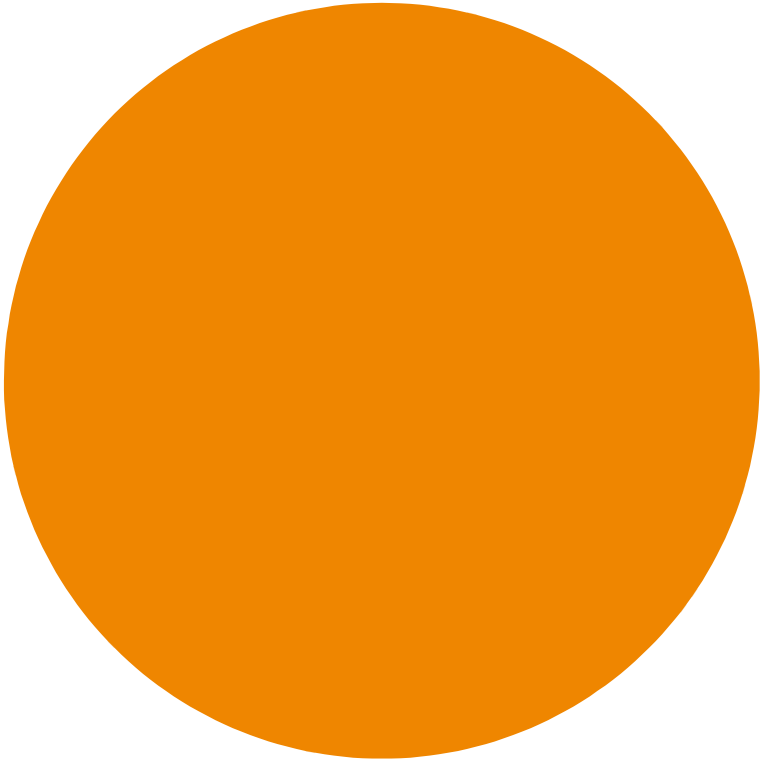
Context matters

State: Zombie safety

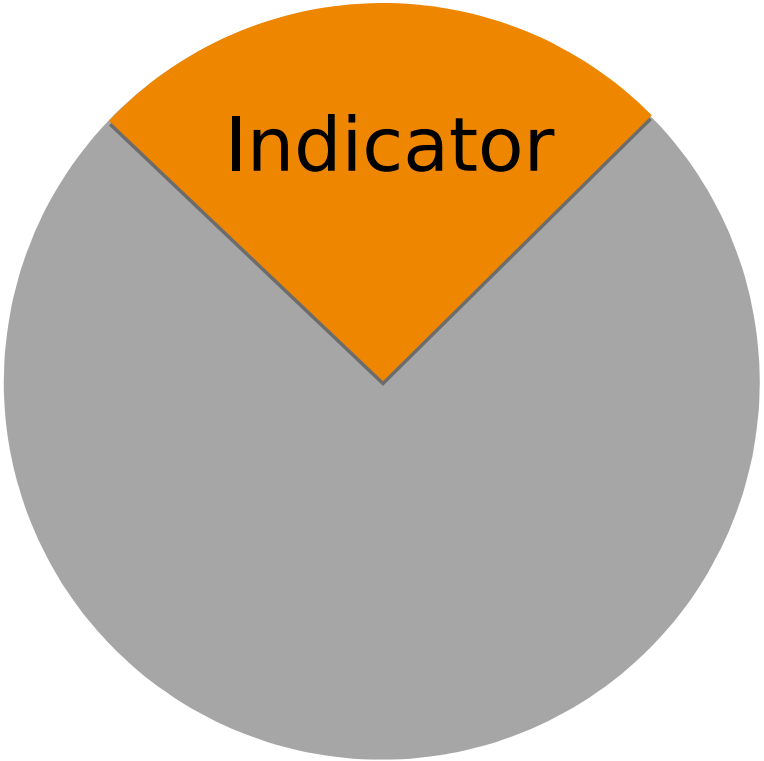
Indicators, indices and others



State



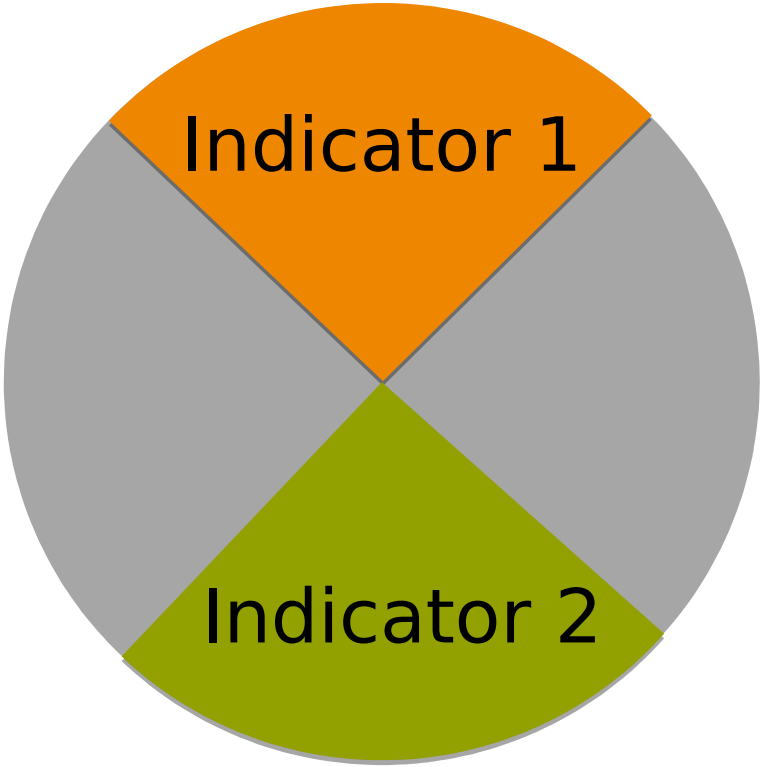
Indicator



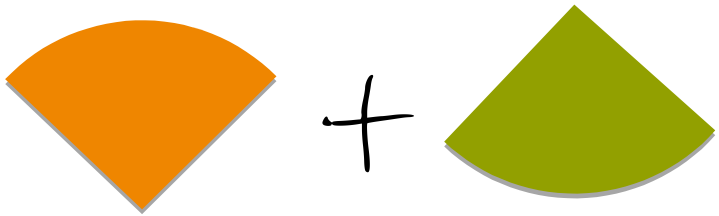
State

When, state is:

- Multidimensional
- Latent



State



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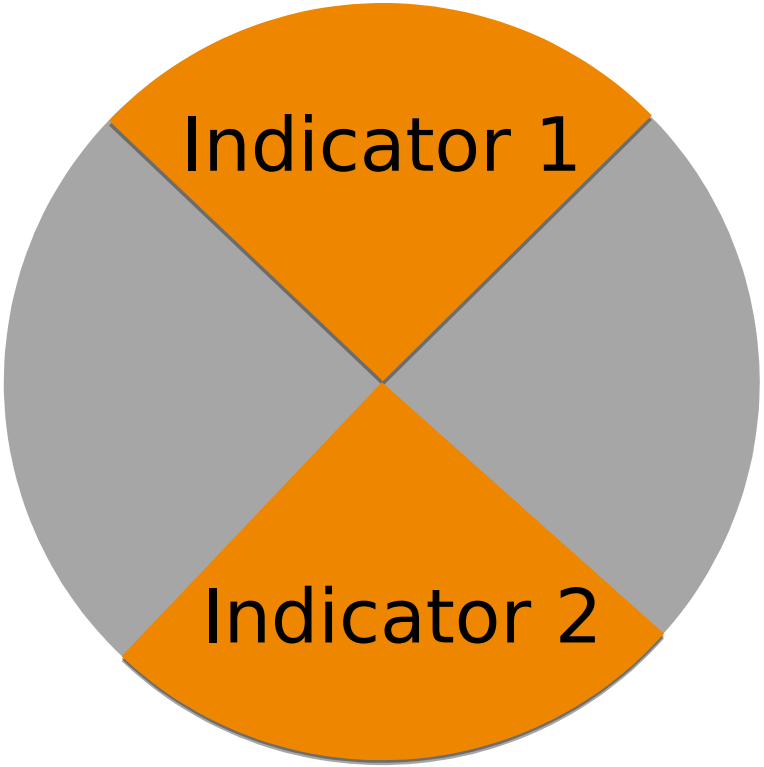
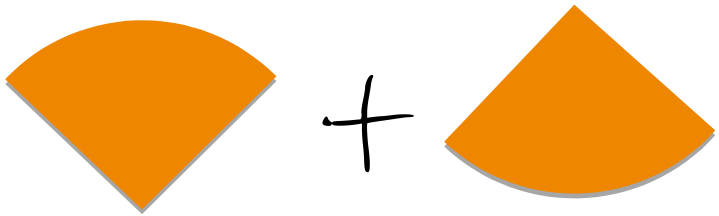
Index



State



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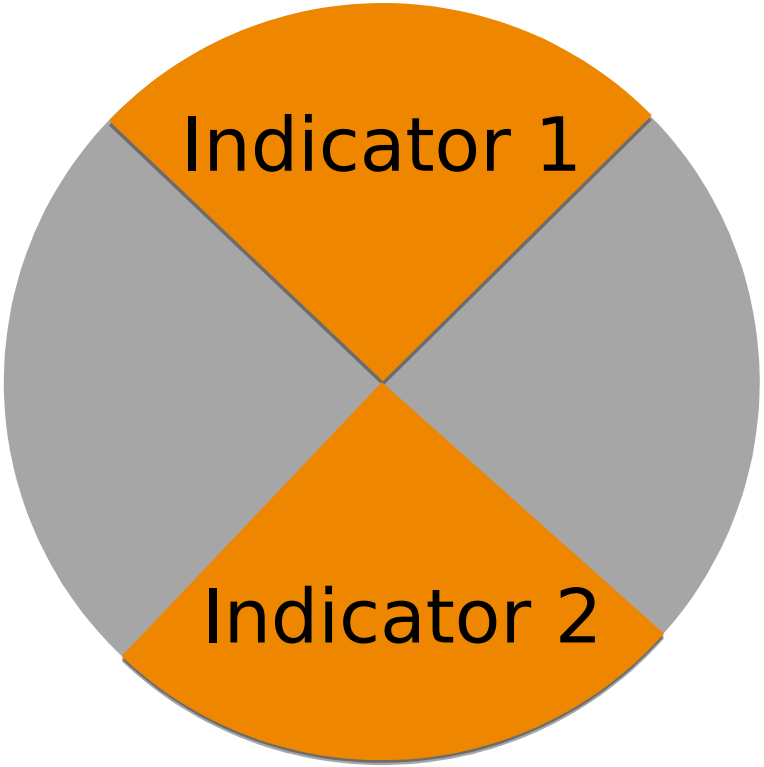
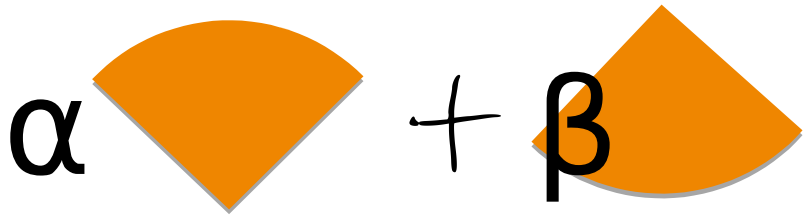
Aggregate Indicator



State



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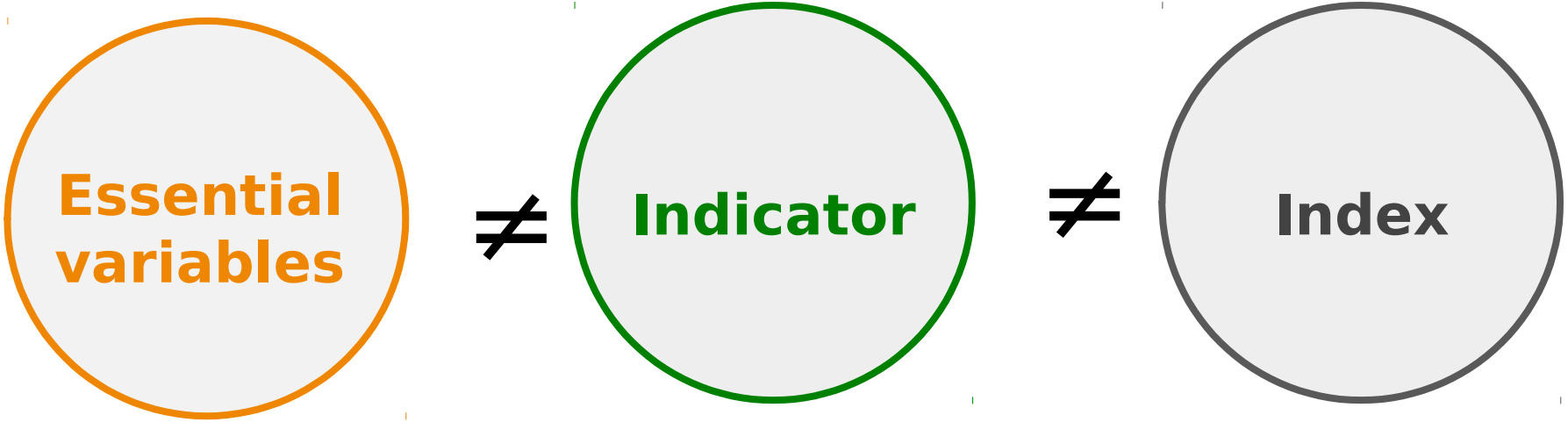
Index

No Weights

≠

No Value Judgment


Essential variables
≠
Indicator
≠
Index

Measuring wellbeing...

Direct Measure

Latent Measure *Progress*

Aspirational Measure *Wellbeing*

Aspirational Measure *Wellbeing*

National Wellbeing

Happiness Index	Social Progress Index	U.S. News Best Countries
Brazil (17)	**Portugal** (18)	France (8)
France (32)		
Somalia (76)	Brazil (41)	**Portugal** (23)
Bhutan (84)		
Portugal (94)		
	Somalia (unranked)	Somalia (unranked)

National Wellbeing

Happiness Index	Social Progress Index	U.S. News Best Countries
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France (32)	France (21)	Brazil (20)
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	Bhutan (unranked)	Bhutan (unranked)
	Somalia (unranked)	Somalia (unranked)

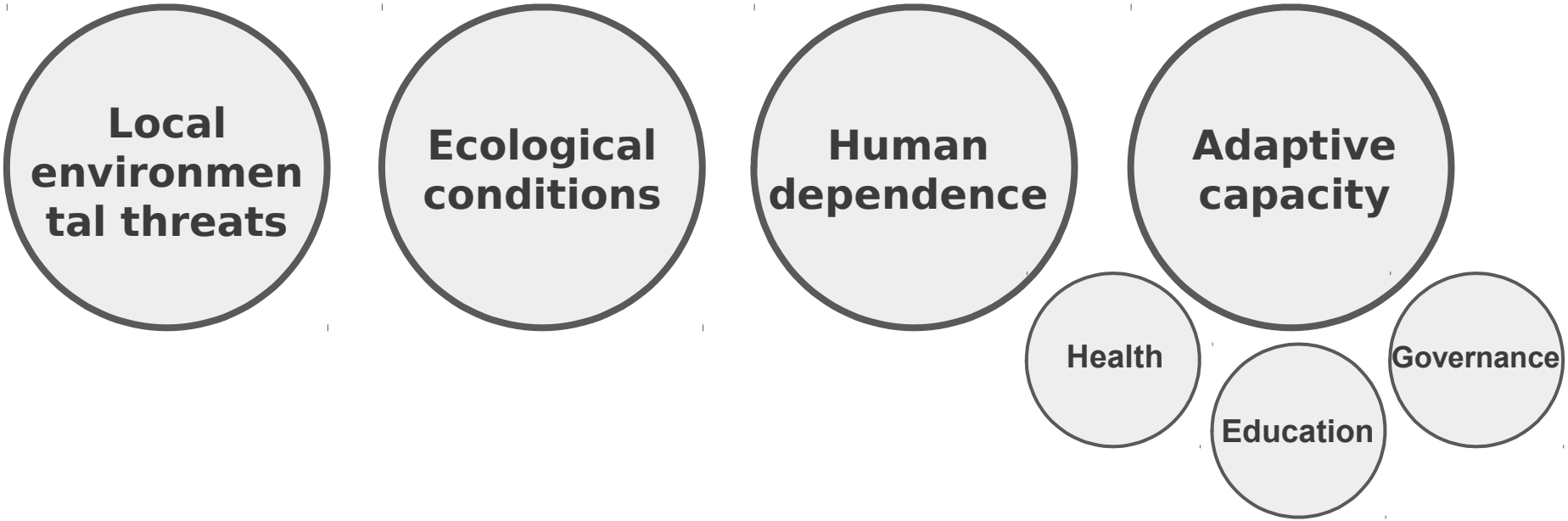
One index, many uses

OCEAN HEALTH INDEX™

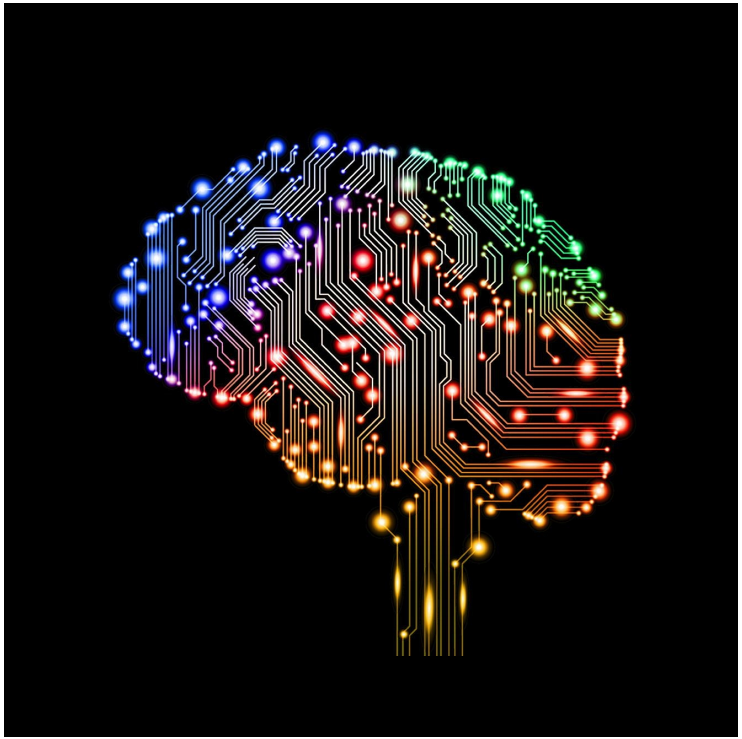
- Raise public awareness
- Direct resource management
- Improve policy
- Prioritize scientific research

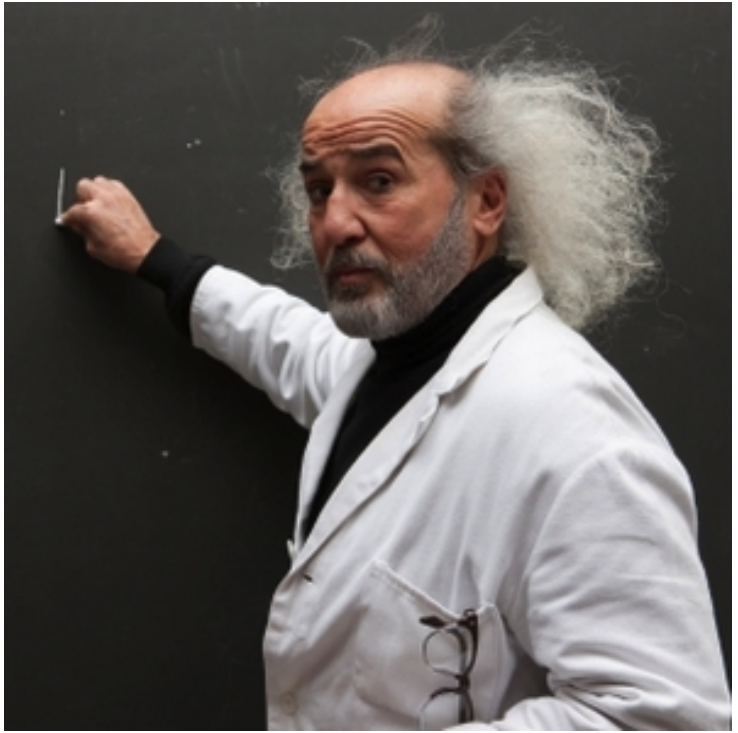
E PLURIBUS UNUM

SUB-GROUPS, GOALS, WHATEVER



How to Simplify?





It is pointless to do with more what can be done with fewer - Occam

U.S. Navy, 1960

Local environmental threats

Ecological conditions

Human dependence

Adaptive capacity

Health

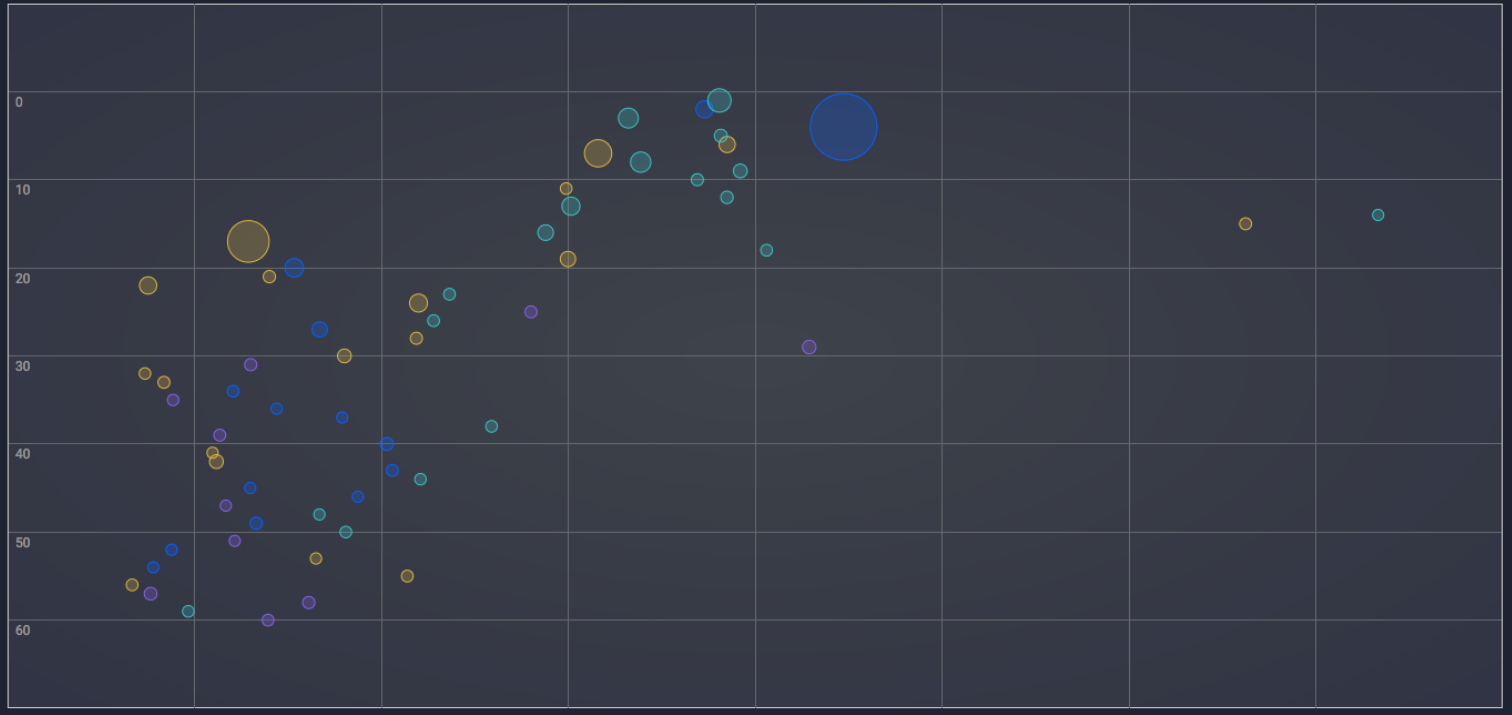
Education

Governance

BEST COUNTRIES

Bubble Size: **GDP** change

Switch View: Heat Map



Select a country

- Algeria
- Argentina
- Australia
- Austria
- Azerbaijan
- Bolivia
- Brazil
- Bulgaria
- Canada
- Chile
- China

ONE OF THESE
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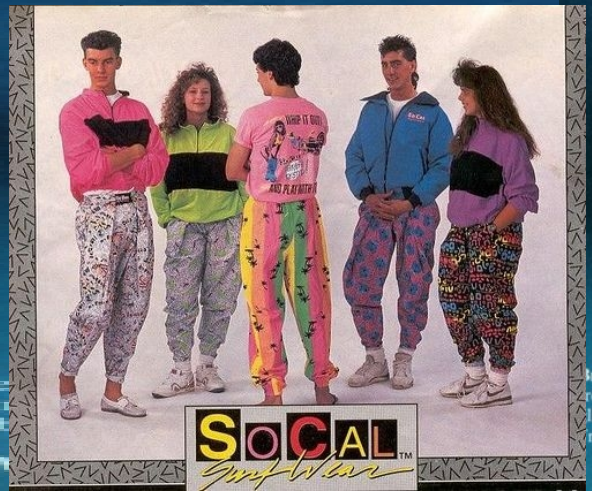
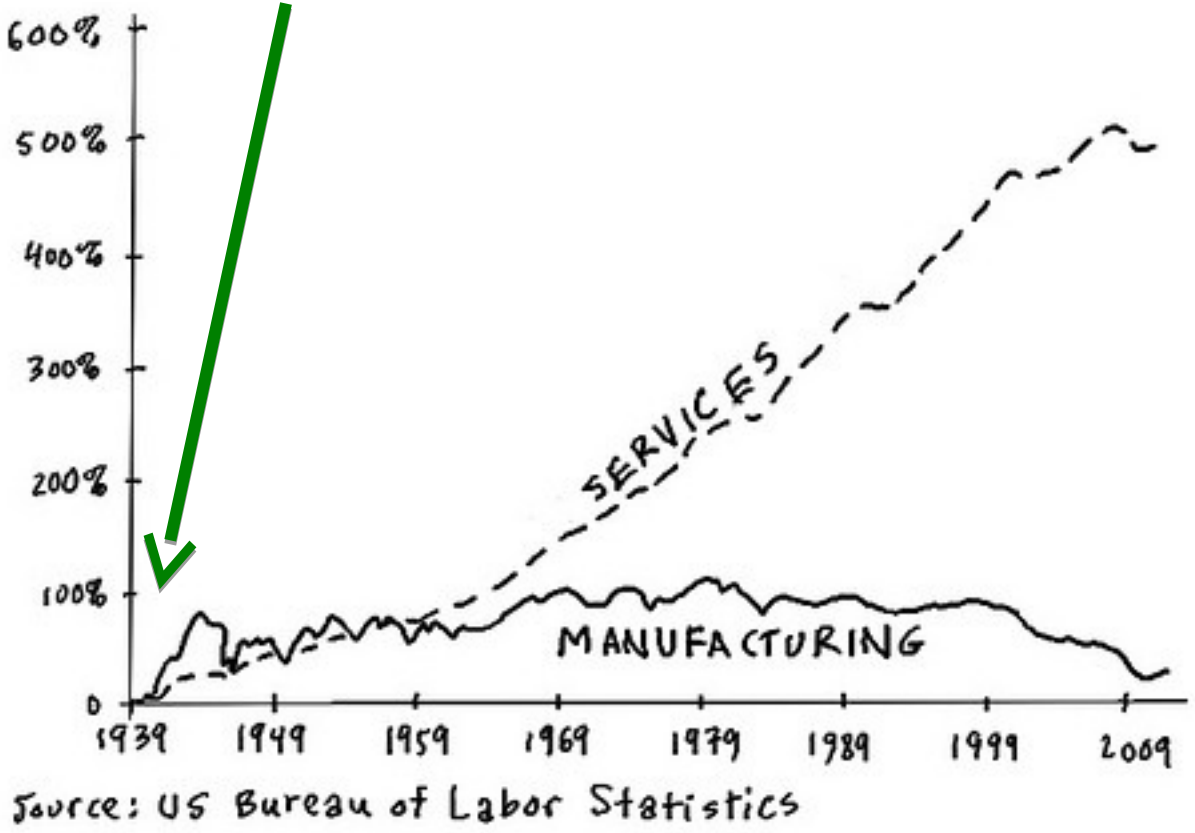
Sign and Mail one of these Post Cards to Your Congressman at Washington
and help make it a National Law to SET THE CLOCK ONE HOUR AHEAD
United Cigar Stores Company

Brawny—That's the word for these Lee doubleknit
jeans
from the West. In every detail. Right down to the stylish flare. An
glitter, snag-resistant doubleknit of 100% Dacron® polyester. The
from The Lee Company, 640 Fifth Avenue, New York, New York


SoCAL
Sportswear

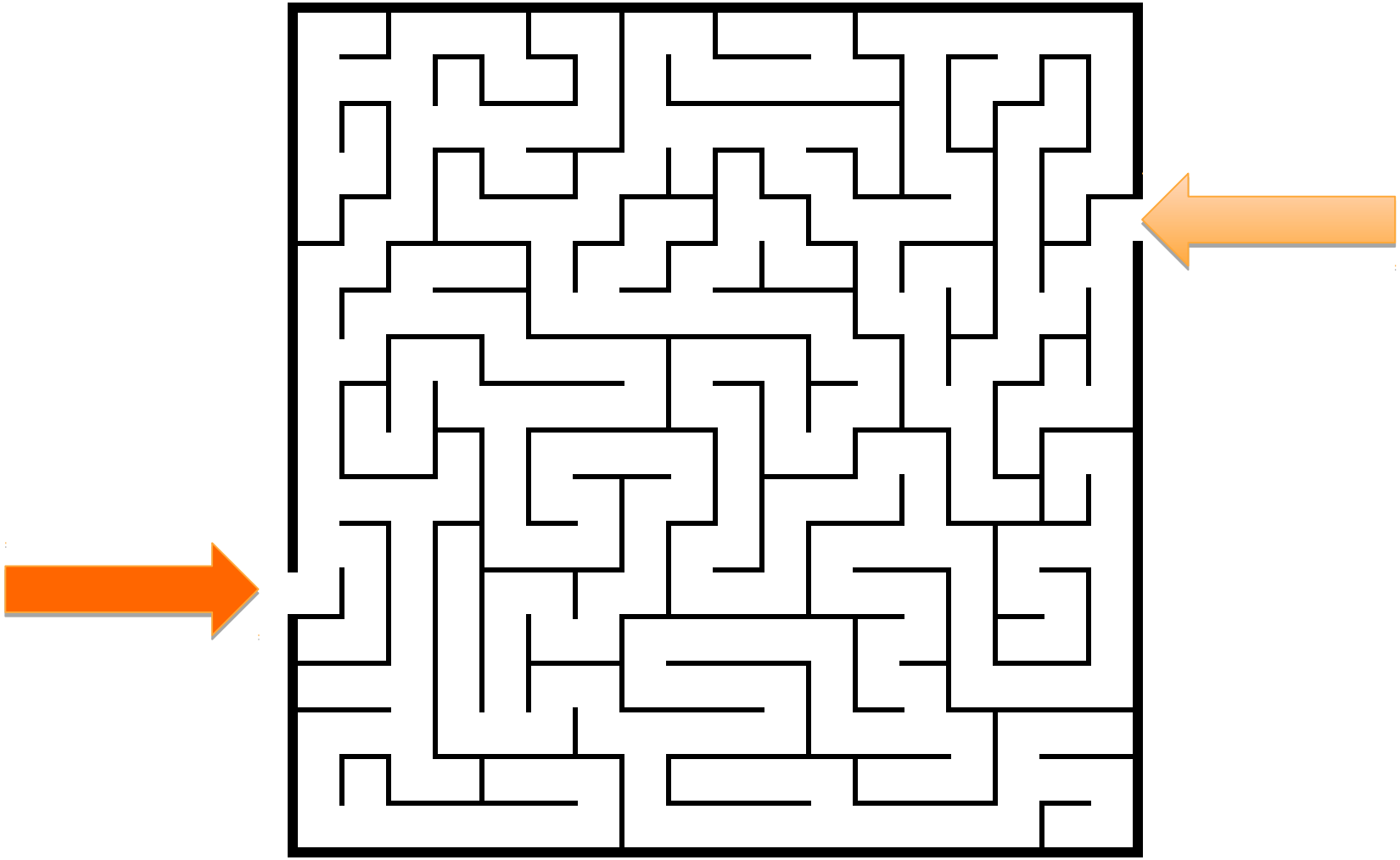
GDP still relevant?



GDP = OUTPUT

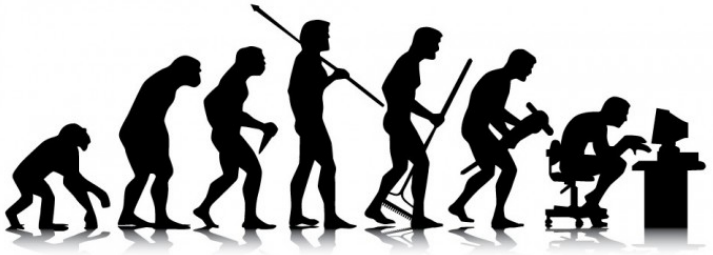
GDP = PERFORMANCE

GDP = WELLBEING



The original

Not the original



Thanks to E. Drakou, A. Himes-Cornell, A. Rivière, and A. Comte and you!

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No minds were hurt in the making of this presentation.