



Boosting Your Bias Immunity

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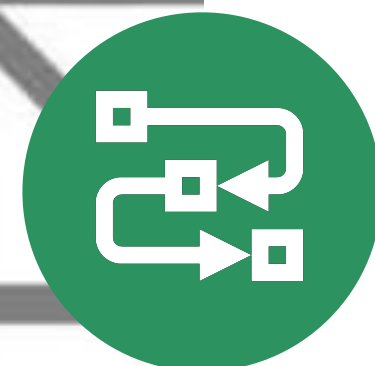
PERFECTLY IMPERFECT BRAINS



TYPES OF BIAS



HEURISTIC CARD EXERCISE



AVOIDING BIASED DECISIONS



Our Perfectly Imperfect Brains

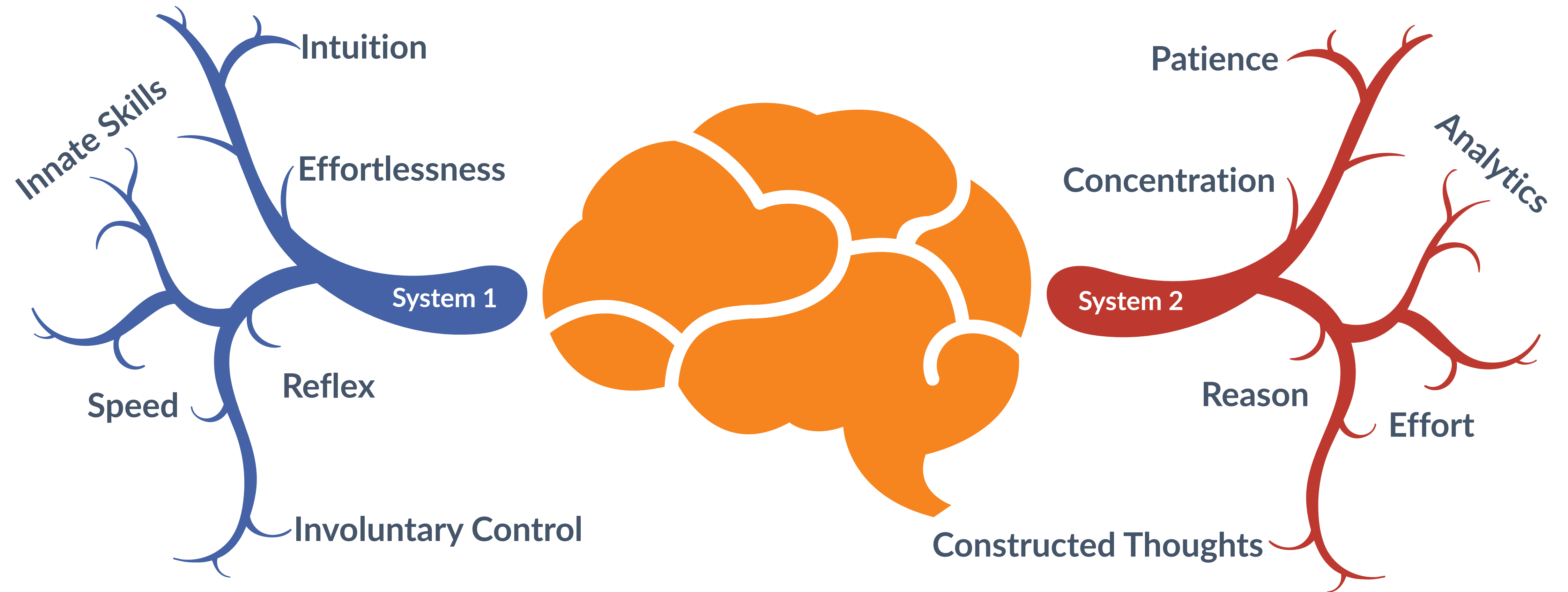
Seeing is not necessarily believing

“A cognitive bias refers to the systematic pattern of deviation from the norm or rationality in judgement, whereby inferences about other people and situations may be drawn in an illogical fashion. Individuals create their own ‘subjective social reality’ from their perception of input.”

—Wikipedia

Thinking Fast and Slow

The foundation of behavioural economics



Primary Sources of Bias

Efficiency and Defence

**Self
Protection**
Avoid bodily and
ego harm



**Efficient
Decision
Making**
System 1

Biased Algorithms

Do robots get hungry?

Objective Robot Judges

Use prior sentencing data to train computers to make objective judgements in criminal cases.



COMPAS



Objective Consistency

Judgements don't fluctuate with the time of day or whether the judge just ate. Machines don't bring emotion into decisions.

Uneven Fairness Baseline

The system is defined as fair, but the definition of what is fair differs. We see the system the algorithm is based off as fair, but what if it's not?

Biased Data Sets

Who is the target audience anyway?

Repurpose Existing Game Data

Reuse data from a game popular with tech centric runners.



Quick Turn Around

Launched across the US with accurate geolocation data which otherwise would have taken a long to gather and deploy.



Lack of Inclusion

People who played Ingress were not the same as PG players, leaving many fans with nowhere nearby to play,

Biased Cultures

Blind to potential outcomes by intention

Focus on Shareholder Value

Boeing swapped a culture of safety and engineering excellence for a culture of maximum shareholder value.

IDEA

Boeing Sold More 737s than AirBus

Boeing was first to market, met shareholder expectations, and were able to market the plane as an upgrade rather than a new product.

NEGATIVE

Two Avoidable Plane Crashes

The patches and shortcuts required to make the plane work with the new engines made it impossible to fly.

POSITIVE





Bias is like polluted air

- Impossible to avoid, but filterable.
- Filtering requires identification of potential influencing biases.



Types of Bias

Name Thy Enemies

The World of Biases

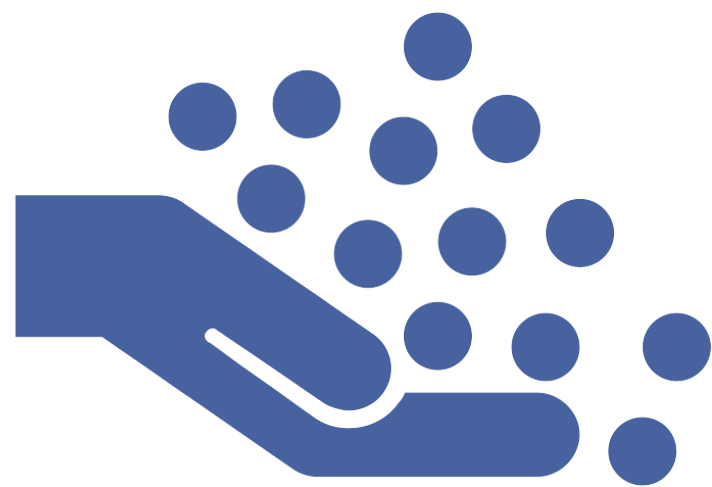
Using bias to understand bias

There are over 170 types of cognitive biases

The World of Biases

Using bias to understand bias

There are over 170 types of cognitive biases



ABUNDANT INFORMATION

Selective filtering
We can't take it all in



LIMITED CONTEXT

We can't know everything, so we fill in the gaps



LIMITED TIME

We need to act fast



LIMITED MEMORY

We can't remember everything, so what sticks?

Abundant Information

Selective filtering, we can't take it all in



Limited Context

We can't know everything, so we fill in the gaps



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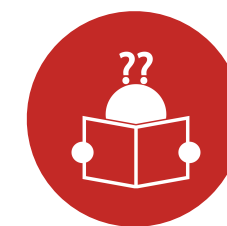
OPTIMISM BIAS

We overestimate the probability of a positive outcome



BARNUM EFFECT

We connect things through leaps of imagination because we don't have all the facts



DUNNING-KRUGER

When you're not an expert, there is a tendency to think layperson's knowledge is all there is

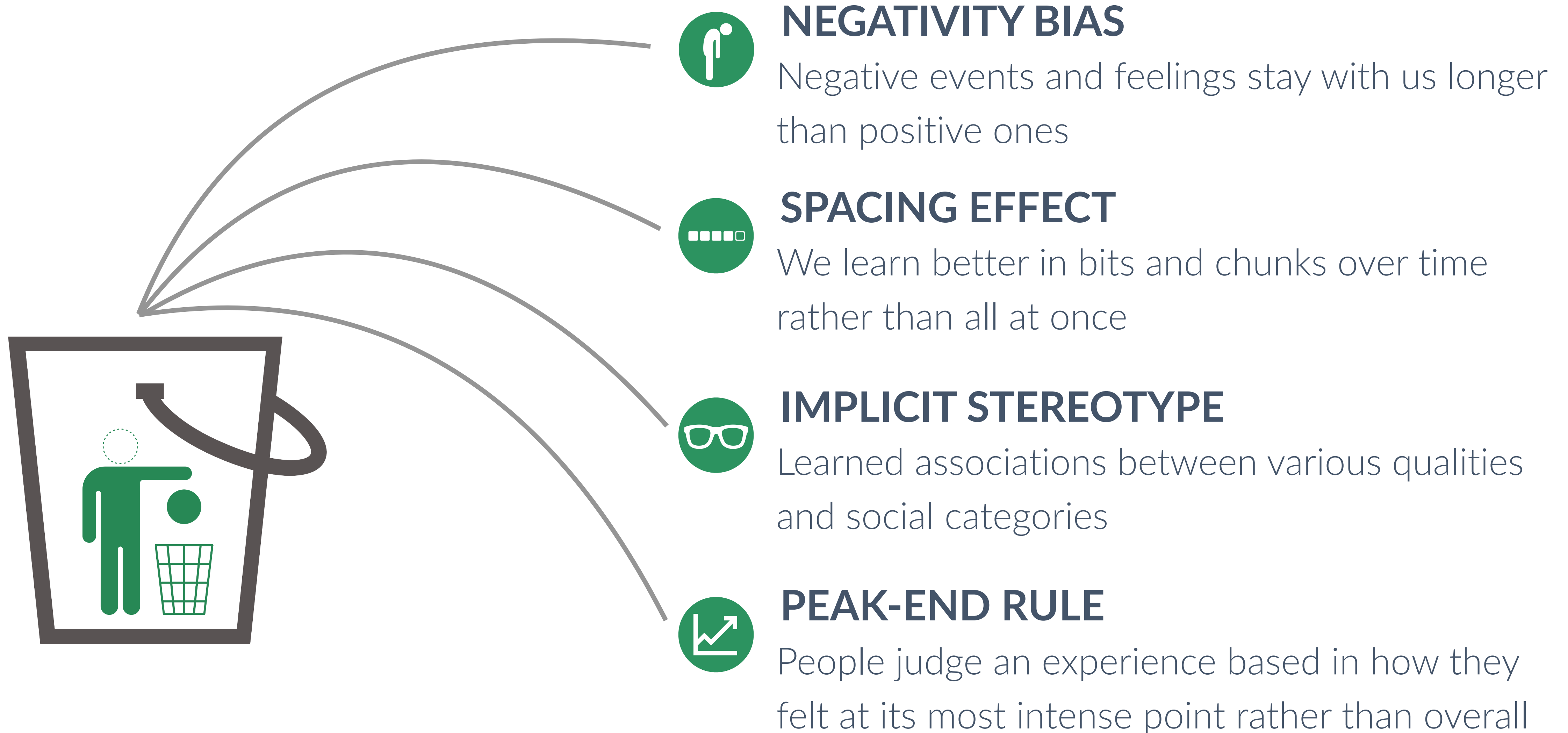


GROUPTHINK/BANDWAGON EFFECT

Opinions are based on fitting in with the group rather than evidence.

Limited Memory

We can't remember everything, so what sticks



Let's Explore Biases with Cards!

This will probably be fun. Maybe. No promises.



Avoiding Biased Decisions

Move at a steady pace and make good choices



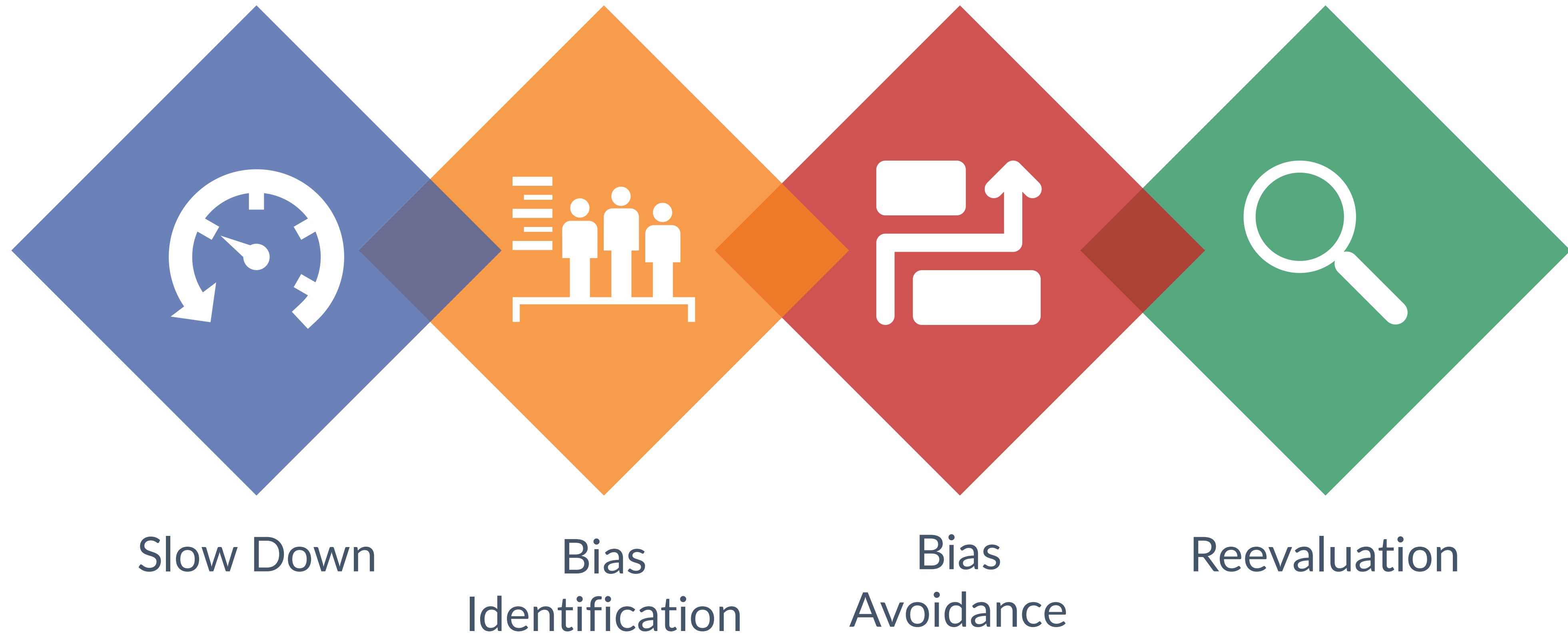
REMEMBER

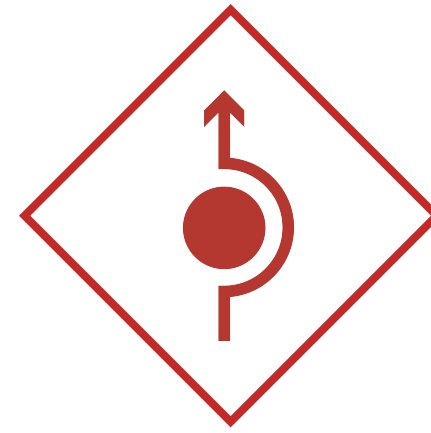
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Bias is unavoidable, but it is
manageable

Process Matters

I love it when a plan comes together





**Biases Are Avoided on Purpose,
Not By Accident**

Take Good Notes

It works for Comey, it will work for you



Write it down or it never happened



Get agreement on goals



What is the understanding of risk?



Revisit after the decision is in action

Don't Try to Control Everything

How do you reduce individual or group influence?



Secret Ballots



Individual Opinions



Reverse
Brainstorming



Outside Input



Uncomfortable
Questions



No HiPPOs



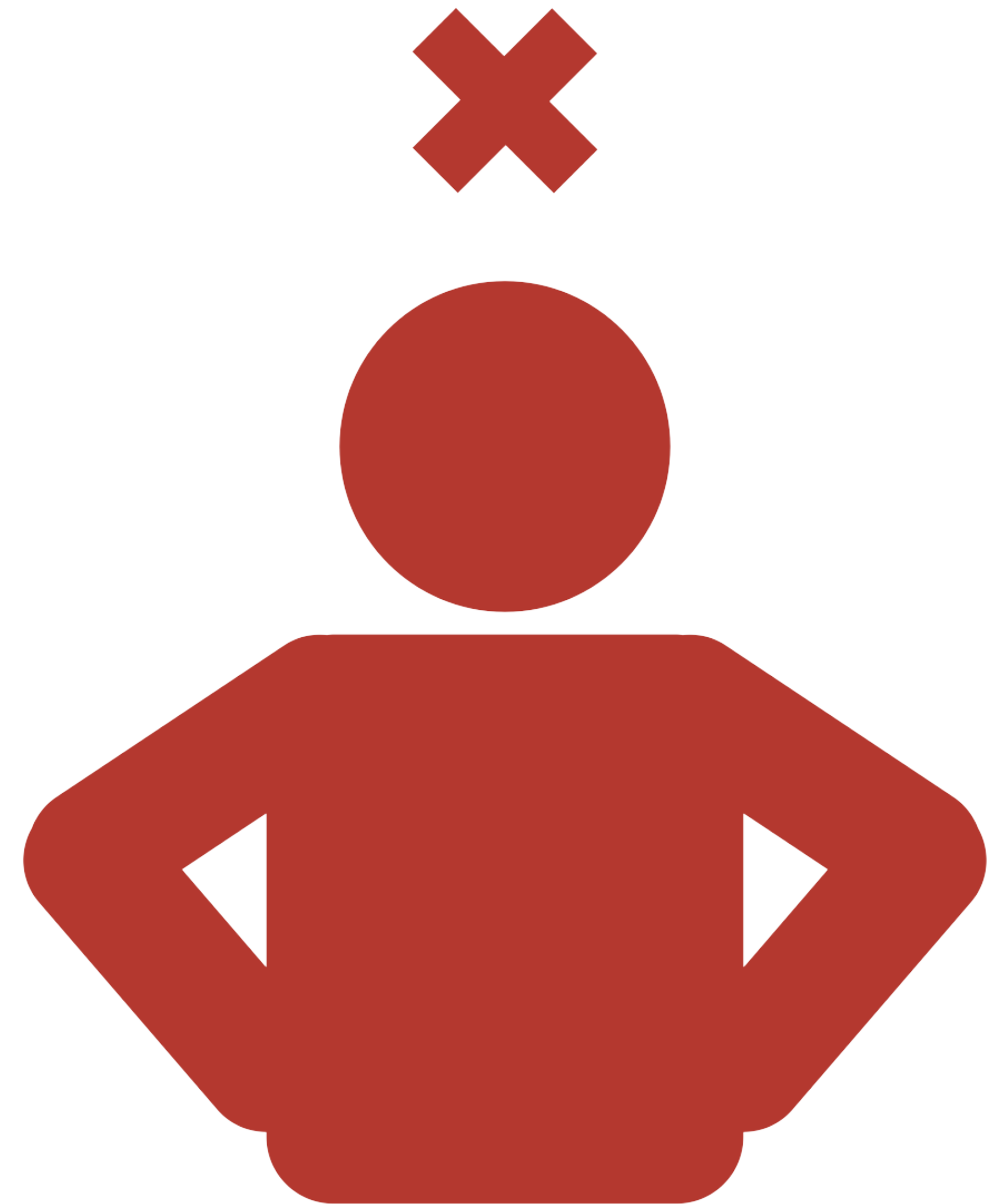
“ If we are all in agreement on the decision - then I propose we postpone further discussion of this matter until our next meeting to give ourselves time to develop disagreement and perhaps gain some understanding of what the decision is all about. ”

ALFRED P. SLOAN

CEO of GM

Hypotheses were made to be disproved

- Researchers don't try to prove their theories. They try to disprove them.
- If an idea can withstand counter evidence, it's probably a good idea.



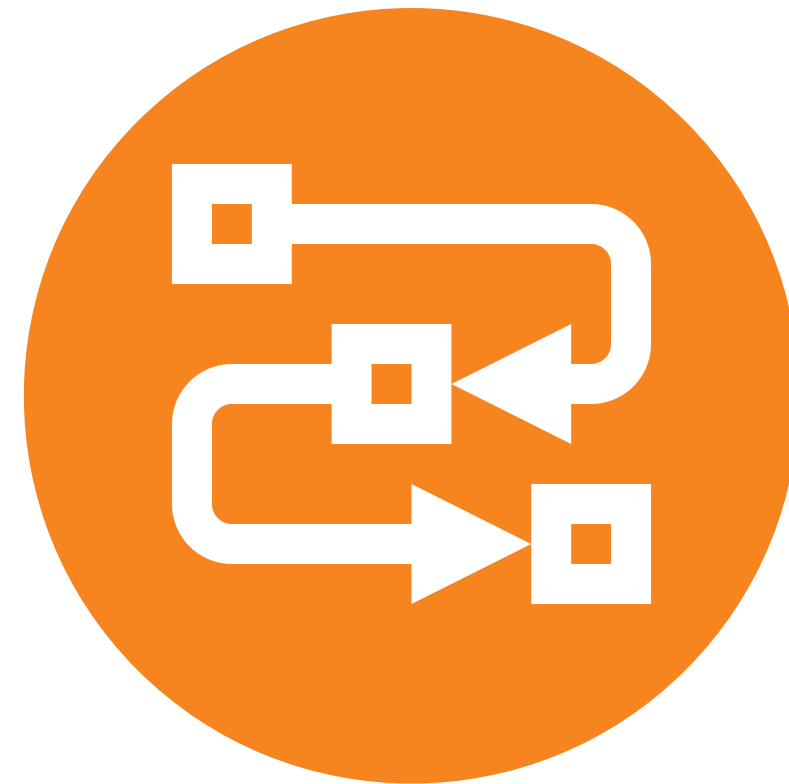
What's Your Process?

Yes, take a photo of this slide



What are the biases at play?

Abundant Information
Limited Context
Limited Time
Limited Memory



Have a process

Slow your roll
Identify potential
biases
Avoid biases
Reevaluate



Take good notes

Record consensuses
Revisit after
implementation



Be open to disagreement

Break echo chambers
Strong ideas
withstand contrary
arguments



THANK YOU

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