

# The Surprising Science of Community Input: What's Helpful? What's Useless? What's Dangerous?



*Wednesday, August 19 @ 11am CT*

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# What Do You Want to Know?

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- “Don’t tell me what you know, tell me what I want to know”
- Let’s test the chat!

# Where Are We Going?

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- Intro: What data is helpful? (5 min)
- Part 1: COVID data lessons (10 min)
- Part 2: Science of public input data (20 min)
- Part 3: Getting the right data (15 min)
- Conclusion: Q&A (10 min)

# INTRODUCTION: WHAT DATA IS HELPFUL?

# Two Ways to Move Rocks



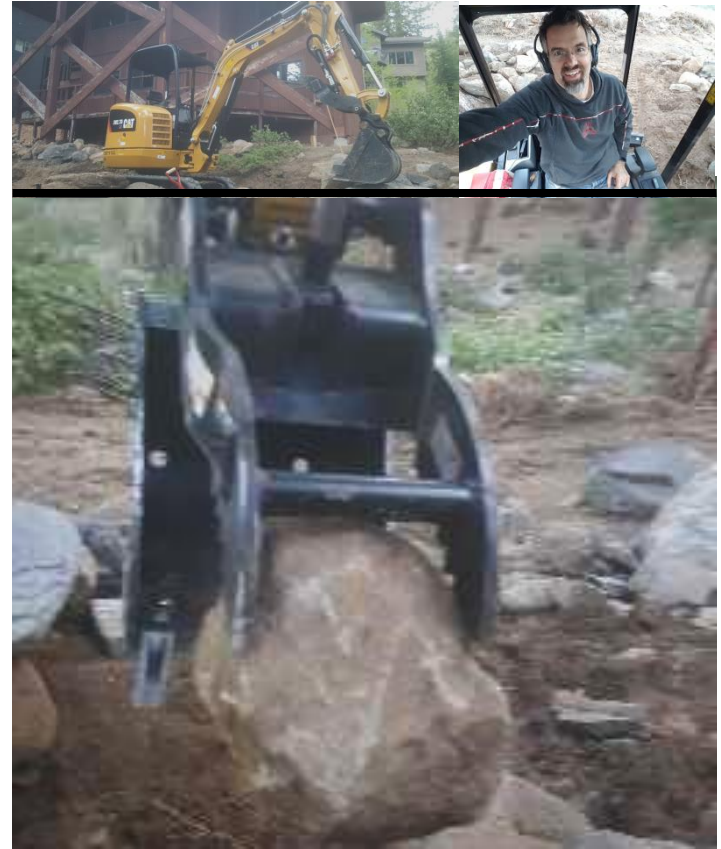
A

B

# Two Ways to Move Rocks



A



B

# Working Harder vs Smarter

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**Harder** = *“More time and effort”*

1 extra hour = ?

# Working Harder vs Smarter

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1 extra hour = 1 extra hour



# Working Harder vs Smarter

**Harder** = *“More time and effort”*

1 extra hour = 1 extra hour

**Smarter** = *“Better processes/tools”*

1 extra hour = ?

# Working Harder vs Smarter

**Harder** = *“More time and effort”*

1 extra hour = 1 extra hour

**Smarter** = *“Better processes/tools”*

1 extra hour = **Many hours/\$ saved**

# Smarter Wins! (Duh)

 **Harder** = *“More time and effort”*

1 extra hour = 1 extra hour

 **Smarter** = *“Better processes/tools”*

1 extra hour = **Many hours/\$ saved**

Ex: **\$4.8 million** saves **\$15 million**  
over 4 years (*Denver Peak Academy*)

# But... What About “Working Wiser”?

**Harder** = *“More time and effort”*

**How much** you do

**Smarter** = *“Better processes/tools”*



**How** you do it



# But... What About “Working Wiser”?

**Harder** = “*More time and effort*”

**How much** you do

**Smarter** = “*Better processes/tools*”



**How** you do it



**Wiser** = “*Better **knowledge**/judgment*”

**What** you do

# Work Smarter vs Wiser

**Smarter** = “*Better processes/tools*”

Ex: **\$4.8 million** saves **\$15 million (3x)**  
over **4 years** (*Denver Peak Academy*)

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Ex: **\$5 thousand** saves **\$7 million (1000x)**  
by changing **one decision** (*Survey Data*)

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Ex: **\$5 thousand** saves **\$7 million (1000x)**  
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# But How Do You Get Wiser?



# Better Data for Better Decisions



# “What To Do” Matters Most





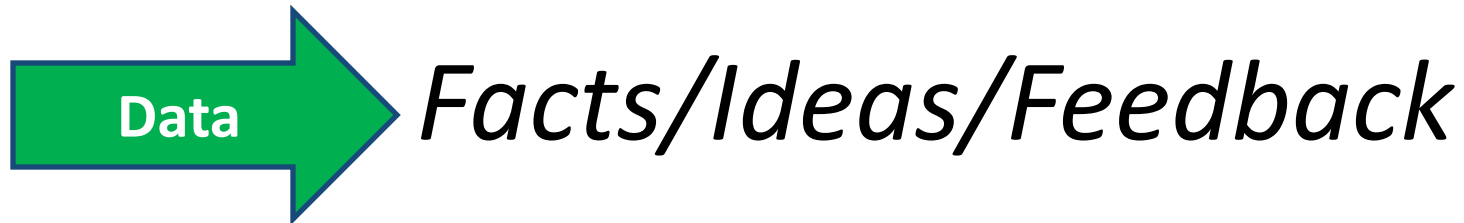
# “What To Do” Requires Input



# How Input Data is Helpful For You

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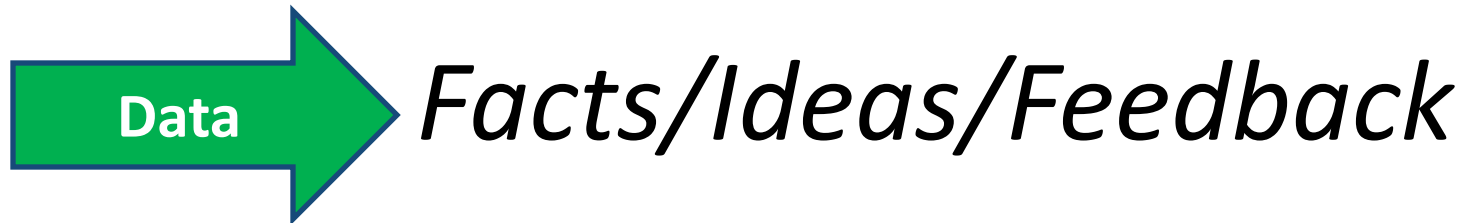
“Smarter” = **How** to do



# How Input Data is Helpful For You

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“Smarter” = **How** to do




“Wiser” = **What** to do



# How Input Data is Helpful For You

“Smarter” = **2x to 10x+ Returns**

 *Facts/Ideas/Feedback*

“Wiser” = **100x to 1000x+ Returns**

 *Community Preferences*

# **TWO DATA CHALLENGES TO KEEP IN MIND**



# #1: We're Not Natural Statisticians

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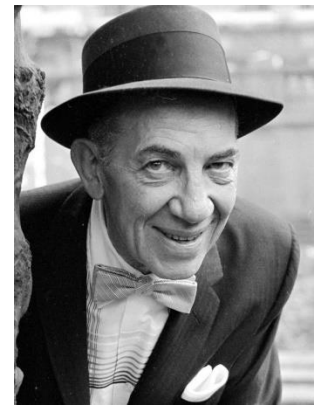
5 out of 4 Americans Do Not Understand Statistics

**Science-Based  
Medicine**

## #2: We're Misled by What We See

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***“Well, who ya gonna believe,  
me or your own eyes?”***



-Chico Marx

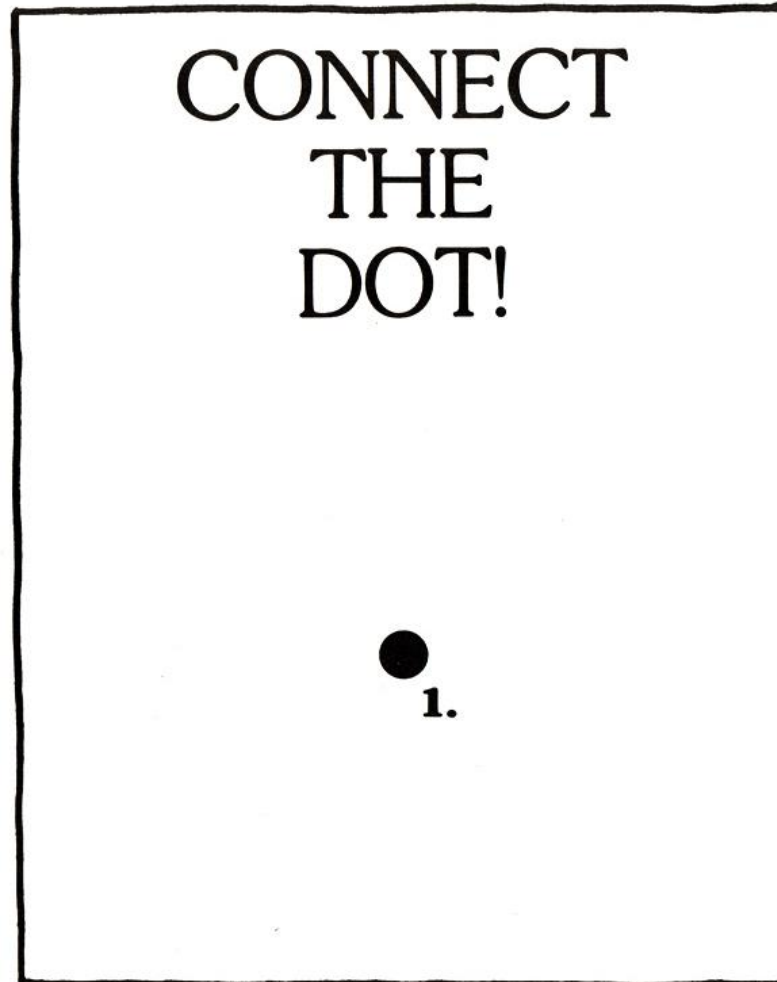
# PART 1: COVID-19 DATA

# Lets Get Started

$$\tilde{G}_n = \frac{\sum_{j=1}^N R_j W_j G_j}{\sum_{j=1}^N R_j W_j} = \frac{E_J[\tilde{R}_J G_J]}{E_J[\tilde{R}_J]}.$$

$$\begin{aligned}\tilde{G}_n - \bar{G}_N &= \frac{\text{Cov}_J(\tilde{R}_J, G_J)}{E_J(\tilde{R}_J)} = \rho_{\tilde{R}, G} \sqrt{\frac{V_J(\tilde{R}_J)}{E_J^2(\tilde{R}_J)}} \sigma_G \\ &= \rho_{\tilde{R}, G} \times \sqrt{\frac{1 - f + CV_W^2}{f}} \times \sigma_G,\end{aligned}$$

# More Like This?



# COVID-19: DATA **SAMPLES**

# QUICK POLL #1

For people that catch COVID-19, what do you think is the chance of dying? In other words, for every 1,000 random people that catch it, how many die from the disease?

- ( ) 0.1% or less (1 or less die)
- ( ) 0.2% to 0.5% (2 to 5 die)
- ( ) 0.6% to 1% (6 to 10 die)
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- ( ) More than 20% (201+ die)

# COVID-19 Fatality Risk (8/14/20)

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- What is the risk of dying from COVID-19?



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- Hint:



United States

Deaths:

**170,415**

Coronavirus Cases:

**5,415,666**

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- What is the risk of dying from COVID-19?

• Hint:



United States

Deaths:

**170,415**

Coronavirus Cases:

**5,415,666**

**= 3%**

# Hold On... Who Has Been Tested?

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✓ Sick people?



# Hold On... Who Has Been Tested?

✓ Sick people?



✓ Exposed people?



# Hold On... Who Has Been Tested?

✓ Sick people?



✓ Volunteers?



✓ Exposed people?



# Two Questions You Always Ask

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- Are the people in my sample *the same* as the people not in my sample?
- How might they be *different*?

# Are These Representative?

**X** Sick people?



**X** Volunteers?



**X** Exposed people?





# OK... So What Data Do We Need??

**X** Sick people?



**X** Volunteers?



**X** Exposed people?



**✓** Random sample?



# Infection Fatality Rate (IFR) Testing

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- For “**Infection** Fatality Rate” (IFR) need to know **all infections** not just tested/confirmed cases

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# Infection Fatality Rate (IFR) Testing

- For “**Infection** Fatality Rate” (IFR) need to know **all infections** not just tested/confirmed cases
- Need a **random** sample that is not **related** to positive test results (an **uncorrelated** sample)
- Specific Test: Have you **ever had** COVID-19?
  - “Blood Test” for antibodies

# April 17, 2020: First US Antibody Study

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# April 17, 2020: First US Antibody Study

**The Mercury News**

[News](#) > [Health](#)

## **Coronavirus: Santa Clara County has had 50 to 85 times more cases than we knew about, Stanford estimates**

Stanford research concludes that the infection rate is far higher, and the death rate far lower, than previous estimates

# April 17, 2020: First US Antibody Study

- 0.15% of county confirmed, but ~3% of sample positive

Confirmed Cases	Estimated from Sample
<b>1,094 cases</b>	<b>54,000 cases</b>
50 deaths	50 deaths (same)
Case Fatality Rate = 5%	Infection Fatality Rate = 0.1%

# Bad News and Good News

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- Bad news: Only 3% infected, much left to go
- Good news: IFR = 0.1% ... **same as seasonal flu!**



# Hold On Again...

- 3,300 volunteers for the test were **“recruited from Facebook ads”**



# Hold On Again...

- 3,300 volunteers for the test were **“recruited from Facebook ads”**



- They sampled like **a facebook poll?!?!**

# April 20, 2020: Whoops!

## The Mercury News

News > Health

### Feud over Stanford coronavirus study: 'The authors owe us all an apology'

Angry statisticians dispute Santa Clara County research that found high infection rates

# Both Samples Biased By “Self-Selection”

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**✗ 0.1% IFR (too low)**

**Blood tested** sample contains too many positives compared to overall population

**✗ 3% IFR (too high)**

**Confirmed case** sample contains sicker people compared to overall population

# BTW... Current IFR Best Guess?

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CDC guess: 0.2% to 1.0%

My guess: 0.3% to 0.5%

# My Guess: Many Antibody Tests

- April 6: Heinsberg Germany: antibodies to the virus in 14% of the 500 people tested. By comparing that number with the recorded deaths in the town, the study suggested the virus kills 0.4%
  - <https://medicalxpress.com/news/2020-05-team-covid-infection-fatality.html>
- April 16 Netherlands blood donors: 500k of 17M vs 28,158 confirmed, **18 times higher**, 3315 deaths IFR = 0.7%
  - <https://www.reuters.com/article/us-health-coronavirus-netherlands-study/dutch-study-suggests-3-of-population-may-have-coronavirus-antibodies-idUSKCN21Y102>
- April 17: First US survey Santa Clara County: 2.8% 54,000 vs 1,094 known at time, 50 deaths “Volunteers for the test were recruited from Facebook 3,300” **55 times more** prevalent and IFR = 0.1%
  - <https://www.mercurynews.com/2020/05/11/coronavirus-revised-stanford-estimate-says-santa-clara-county-had-54-times-more-cases-than-we-knew-about/>
- April 20: 4% of 800 have antibodies (~400k of 10M)- **40 times** higher than the 7,994 reported cases of COVID-19 in LA county at the time of the study in early April, 600 deaths (7.5% CFR) – IFR = 0.2%
  - <https://news.usc.edu/168987/antibody-testing-results-covid-19-infections-los-angeles-county/>
- ---May 20 (better sample): 2% of 1000 have antibodies (~200k) – **5 times** higher than 40,000 confirmed cases, with 1,976 deaths (5.0% CFR) – IFR = 1%
  - <https://www.nbclosangeles.com/news/coronavirus/new-antibody-testing-results-offer-some-hope-in-la-countys-coronavirus-fight/2366032/>
- April 23 (New York 19.5M, NYC 8.4M): Sample infection rate of 14%, **10 times** higher than 263,460 cases, New York is reporting 15,500 COVID-19 deaths, (6% CFR), and if 2.7 million people were infected, that would mean the IFR would be 0.5%
  - <https://www.livescience.com/covid-antibody-test-results-new-york-test.html>
- April 24: Miami-Dade County: 6% antibodies, **85% of residents who were randomly selected did participate**, (165k of 2.75M), **15 times higher** than Miami-Dade testing site data with 10,567 cases, 287 deaths IFR = 0.2%
  - <https://www.miamidade.gov/releases/2020-04-24-sample-testing-results.asp>,  
<https://miami.cbslocal.com/2020/04/24/coronavirus-at-a-glance-4-24-20/>
- May 14: Spain 5% antibodies 2.35M vs 228,691 positive cases, **10 times higher** and 27,100 deaths for IFR = 1.1%
  - <https://english.elpais.com/society/2020-05-14/antibody-study-shows-just-5-of-spaniards-have-contracted-the-coronavirus.html>
- May 18: Boston: 10% antibodies (70k of 700k), 2.5% COVID (no symptoms) cases (**6 times higher** than 11,000 cases and 500 deaths (0.7% IFR) (0. <https://www.boston.gov/news/results-released-antibody-and-covid-19-testing-boston-residents>
- May 19: Meta Study (biased low): <https://www.medrxiv.org/content/10.1101/2020.05.13.20101253v1>

# QUICK POLL #1: ANSWER

For people that catch COVID-19, what do you think is the chance of dying? In other words, for every 1,000 random people that catch it, how many die from the disease?

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# Guess Who Else Was Off?

Menu icon |  **MARKETS** **BUSINESS** **INVESTING** **TECH** **POLITICS** **CNBC TV**

**HEALTH AND SCIENCE**

## **WHO** says coronavirus death rate is **3.4%** globally, higher than previously thought

PUBLISHED TUE, MAR 3 2020 4:28 PM EST | UPDATED WED, MAR 4 2020 8:54 AM EST

 **Berkeley Lovelace Jr.**  
@BERKELEYJR

 **Noah Higgins-Dunn**  
@HIGGINSDDUNN

SHARE    



# Takeaway #1

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Self-selection makes COVID  
testing data useless

(and public input data too...)

# COVID-19: **AGGREGATING DATA**

# (Your) Mortality Risk from COVID-19?

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What does 0.4% risk mean  
for **you personally**?

# (Your) Mortality Risk from COVID-19?

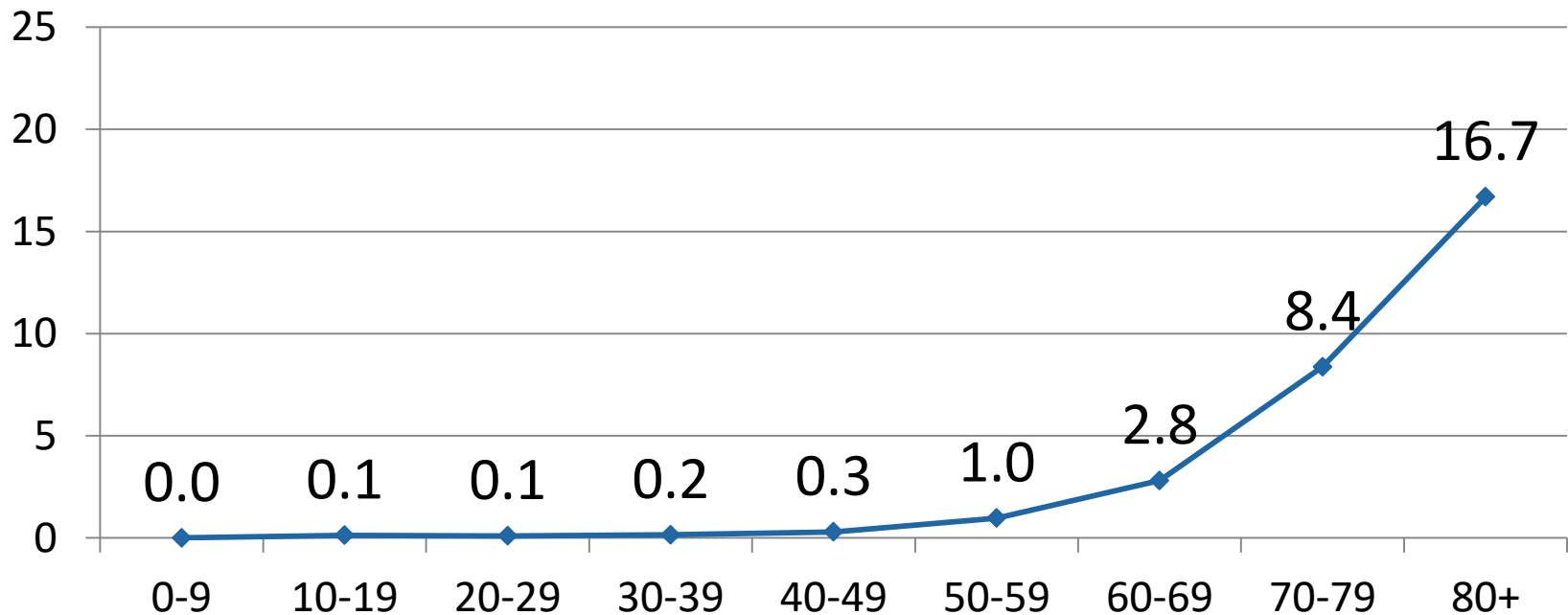
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What does 0.4% risk mean  
for **you personally**?

Almost nothing...

# COVID-19 Risk by Age – 5 Countries

**Average Case Fatality Rate (%)**



# Under 30 in Texas

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- Percent of Texans under 30

42.9%

- Percent of Texas COVID deaths under 30

# Under 30 in Texas

---

- Percent of Texans under 30

42.9%

- Percent of Texas COVID deaths under 30

0.9% (87 total)

# 75 or Older in Texas

---

- Percent of Texans 75 or older

4.4%

- Percent of Texas COVID deaths 75 or older



# 75 or Older in Texas

---

- Percent of Texans 75 or older

4.4%

- Percent of Texas COVID deaths 75 or older

46.1% (4,626 total)

# BTW... See Any Data Problems?

**Age of Confirmed Cases** as of  
8/17 at 9:30 AM CST

Age Groupings	Number	%
<1 year	145	.3%
1-9 years	666	1.5%
10-19 years	1,748	3.9%
20-29 years	8,559	18.9%
30-39 years	9,524	21.0%
40-49 years	8,695	19.2%
50-59 years	7,675	17.0%
60-64 years	2,930	6.5%
65-69 years	2,028	4.5%
70-74 years	1,198	2.6%
75-79 years	784	1.7%
80+ years	1,290	2.8%
Unknown	32	.1%
Total	45,274	100%

**Age of Confirmed Fatalities** as of  
8/17 at 9:30 AM CST

Age Groupings	Number	%
<1 year	2	.0%
1-9 years	5	.0%
10-19 years	10	.1%
20-29 years	70	.7%
30-39 years	200	2.0%
40-49 years	540	5.4%
50-59 years	1,173	11.7%
60-64 years	946	9.4%
65-69 years	1,154	11.5%
70-74 years	1,308	13.0%
75-79 years	1,237	12.3%
80+ years	3,389	33.8%
Unknown	0	.0%
Total	10,034	100%

# Aggregated Data Hides Information

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- Age 65 and up has **30x risk** of Under 50
- Age 80 and up has **150x risk** of Under 30

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- Age 65 and up has **30x risk** of Under 50
- Age 80 and up has **150x risk** of Under 30
- So 0.4% tells you **almost nothing – need age!**
- Need to **disaggregate** data to get information

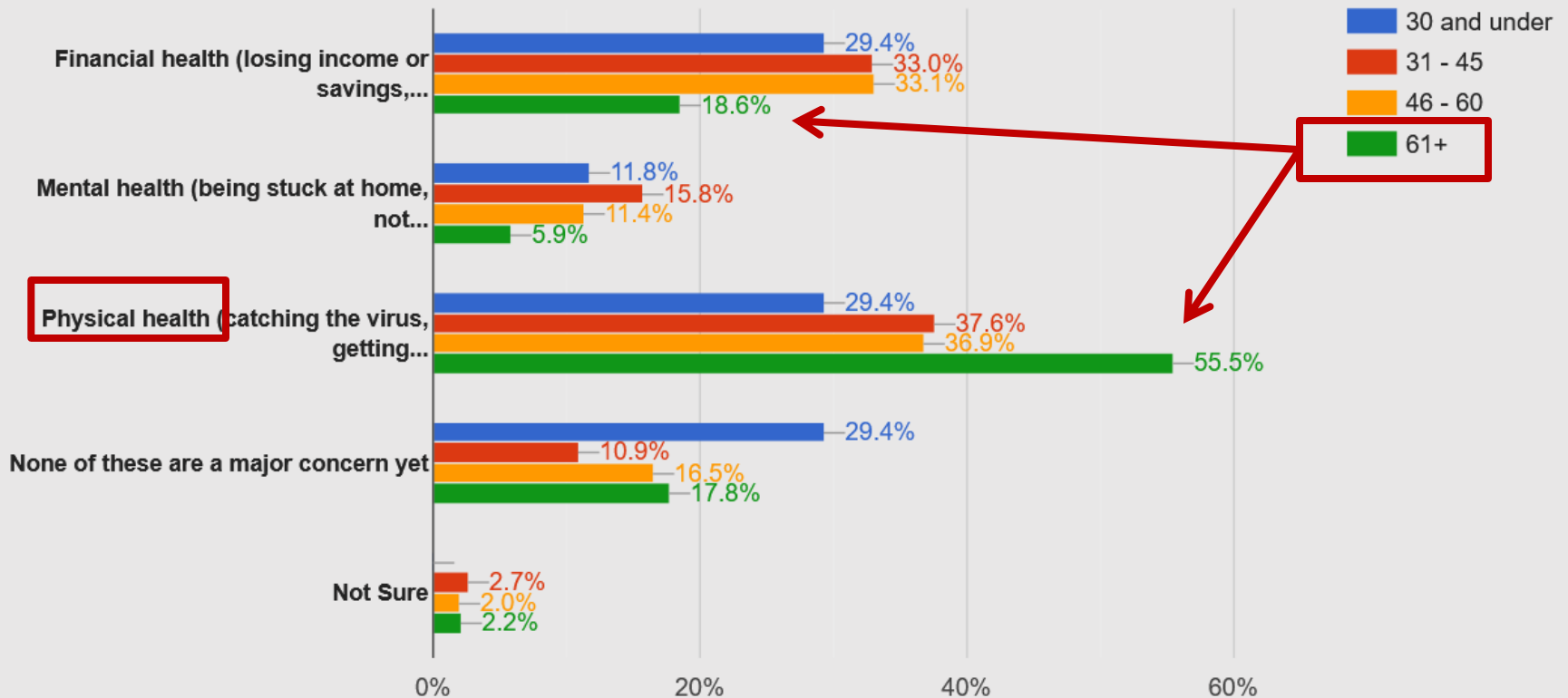
# People Seem to Know Age Risks

Q2 Right now, which of the following is your biggest concern?

(1275 responses by age)

[Touch chart bars for details]

Show table view



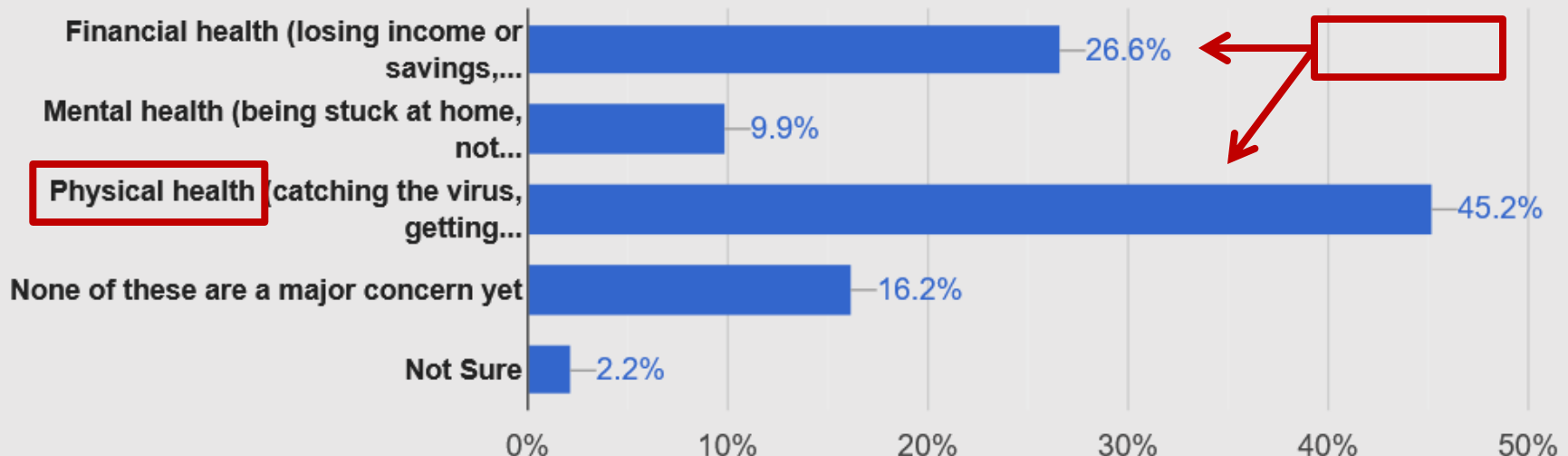
# But Aggregation Obscures

Q2 Right now, which of the following is your biggest concern?

(1255 responses by locals)

[Touch chart bars for details]

[Show table view](#)



## Takeaway #2

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Over aggregation creates  
confusion about COVID risks

(and community needs...)



# COVID-19 DATA: **CONTEXT**

# QUICK POLL #2

Which condition disproportionally affects older people and has a 120 day mortality rate of 1%?

- ☐ Cancer
- ☐ Heart Attack
- ☐ Dementia
- ☐ Flu
- ☐ Other

# QUICK POLL #2: ANSWER

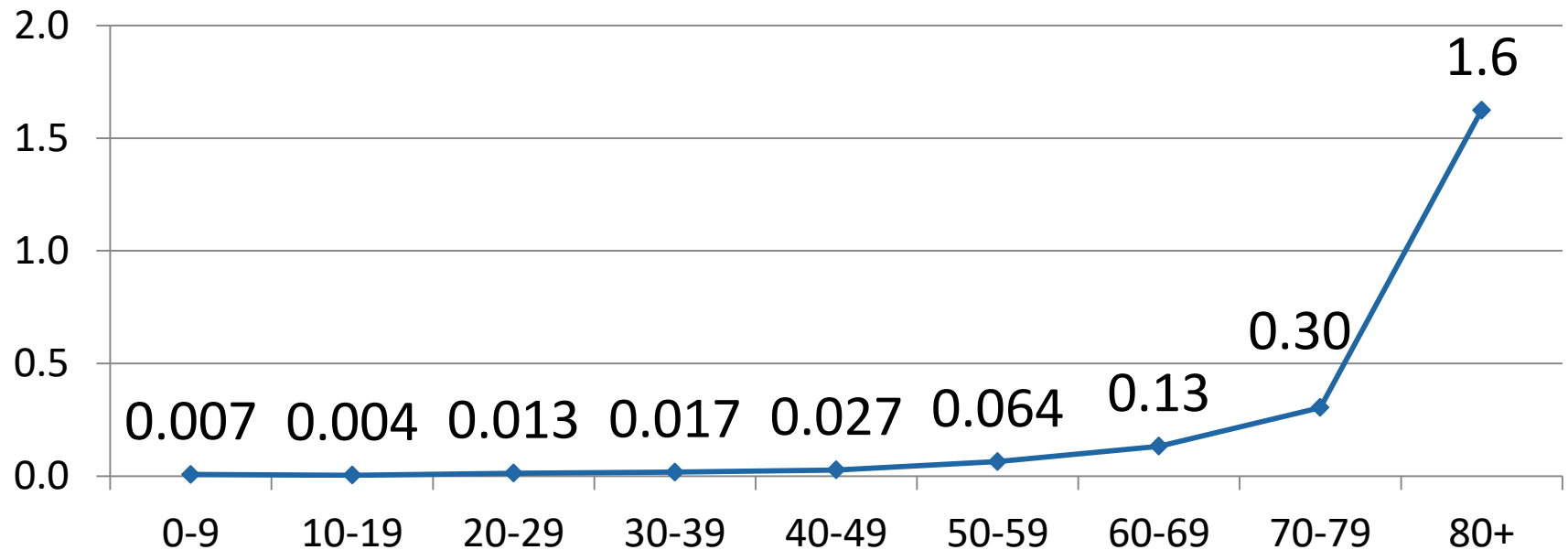
Which condition disproportionately affects older people and has a 120 day mortality rate of 1%?

- ☐ Cancer
- ☐ Heart Attack
- ☐ Dementia
- ☐ Flu
- ☒ Other  
**“Turning 75”**



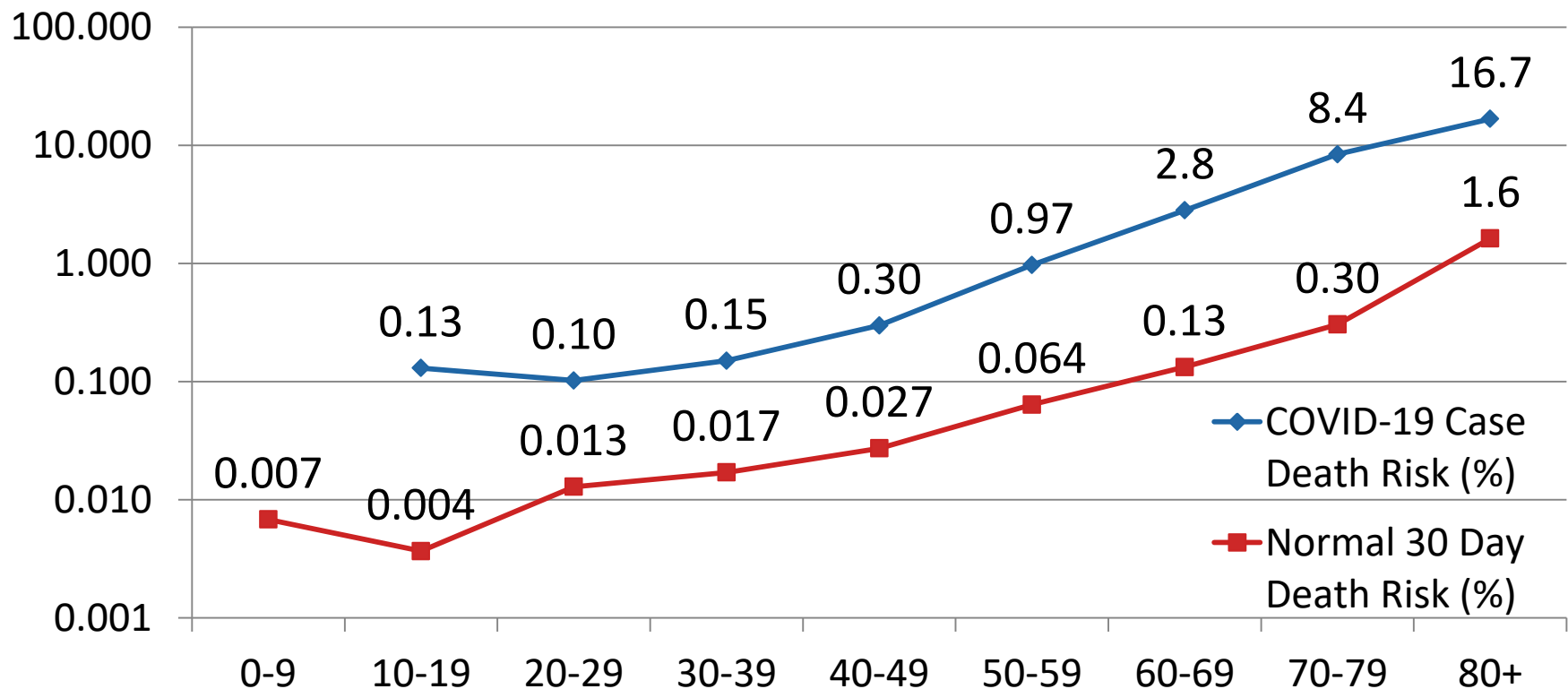
# Mortality Risk from “Being Alive”

## Male 30 Day Death Risk by Age (%)



# Normal Risk vs COVID-19 Case Risk

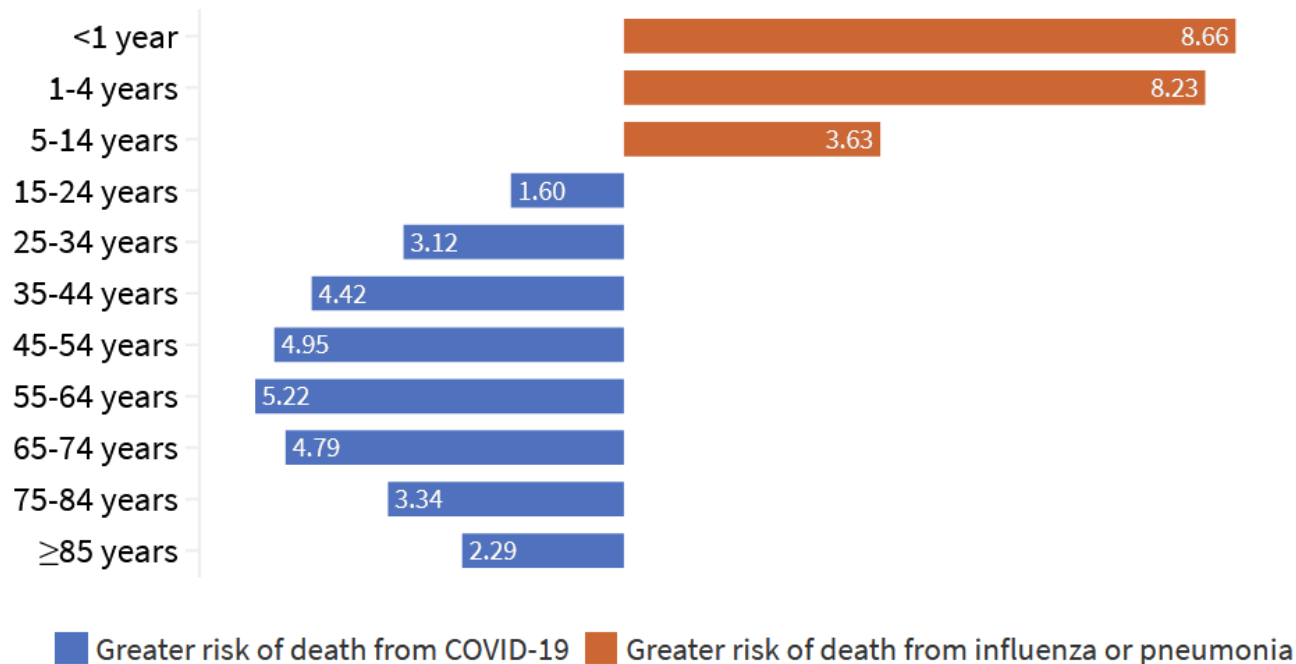
## COVID-19 Case Risk and Normal Risk (%)



# Context: COVID Risk vs Flu Risk By Age

## Estimated Relative Risk of Death from COVID-19 vs. Influenza or Pneumonia

(Assuming 200,000 Total COVID-19 Fatalities)



Source: [Avik Roy, National Center for Health Statistics, CDC](#)  
Based on CDC data as of August 12, 2020

FREOPP.org

**BUT NOT “JUST THE FLU”**

# Deaths in New York City

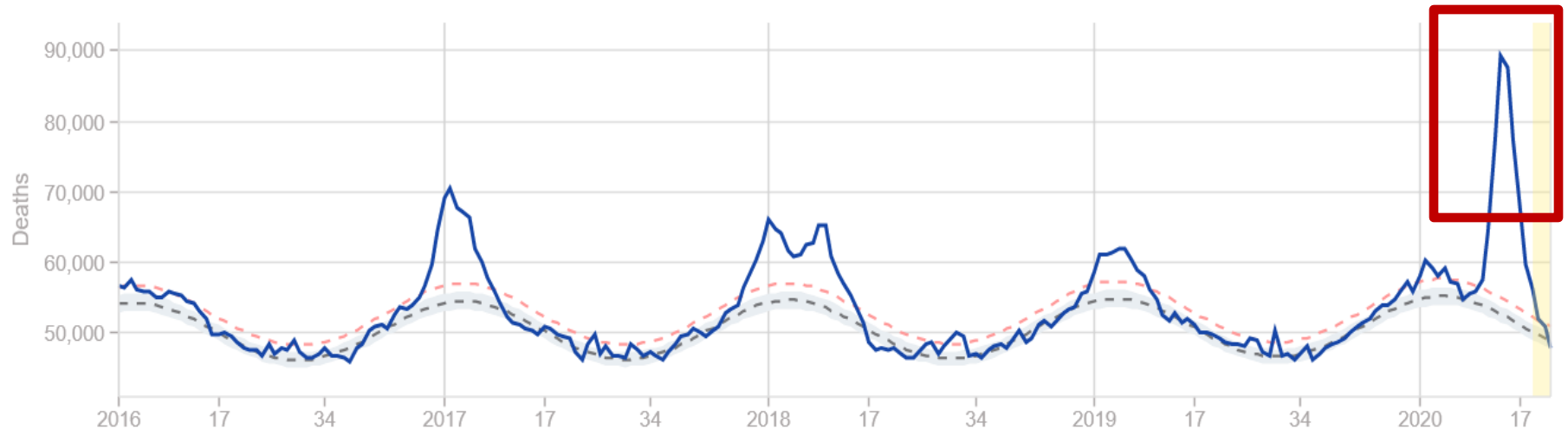
- Seasonal Flu = **0.1% IFR**
- 8/14/20: confirmed deaths in NYC is 23,610 out of 8.4M = **0.28% Population Fatality Rate**
- NYC by antibody test estimate = **0.5% IFR**



# “Excess Deaths” in Europe

— Pooled deaths    ■ Normal range    ..... Baseline    ..... Substantial increase    ■ Corrected for delay in registration

All ages



Source: <https://www.euromomo.eu/graphs-and-maps>

# So... 6 to 10 times Worse Than Flu

- COVID-19
  - **3 to 5 times as deadly** as the flu (0.3% to 0.5%)
  - **2 times as many targets** (300M vs 150M)
- And deadliest for older age groups...

# How We Failed: Nursing Homes

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- **Good data** told us to overprotect elderly/sick
- US: 0.6% of population... 42% of deaths
- Canada: 1.2% of population... 81% of deaths
- Jurisdictions **missed this data and context** and cost lives

## Takeaway #3

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The wrong data or context  
leads to COVID missteps

(and bad agency decisions...)

# PART 2: SCIENCE OF PUBLIC INPUT

# QUICK POLL #3

- Which best describes how you feel about online polls/surveys?
  - ( ) Good data, glad we can get it
  - ( ) Probably not great, but better than nothing
  - ( ) Bad data, would never use it
  - ( ) Not Sure

# Etymology of The Word “Input”

“input” (n.)

- 1753 "a **sum of cash** put in, a sharing contribution"
- 1902 "**energy** supplied to a device or machine"
- 1948 "**data** fed into a machine"

# Etymology of The Word “Input”

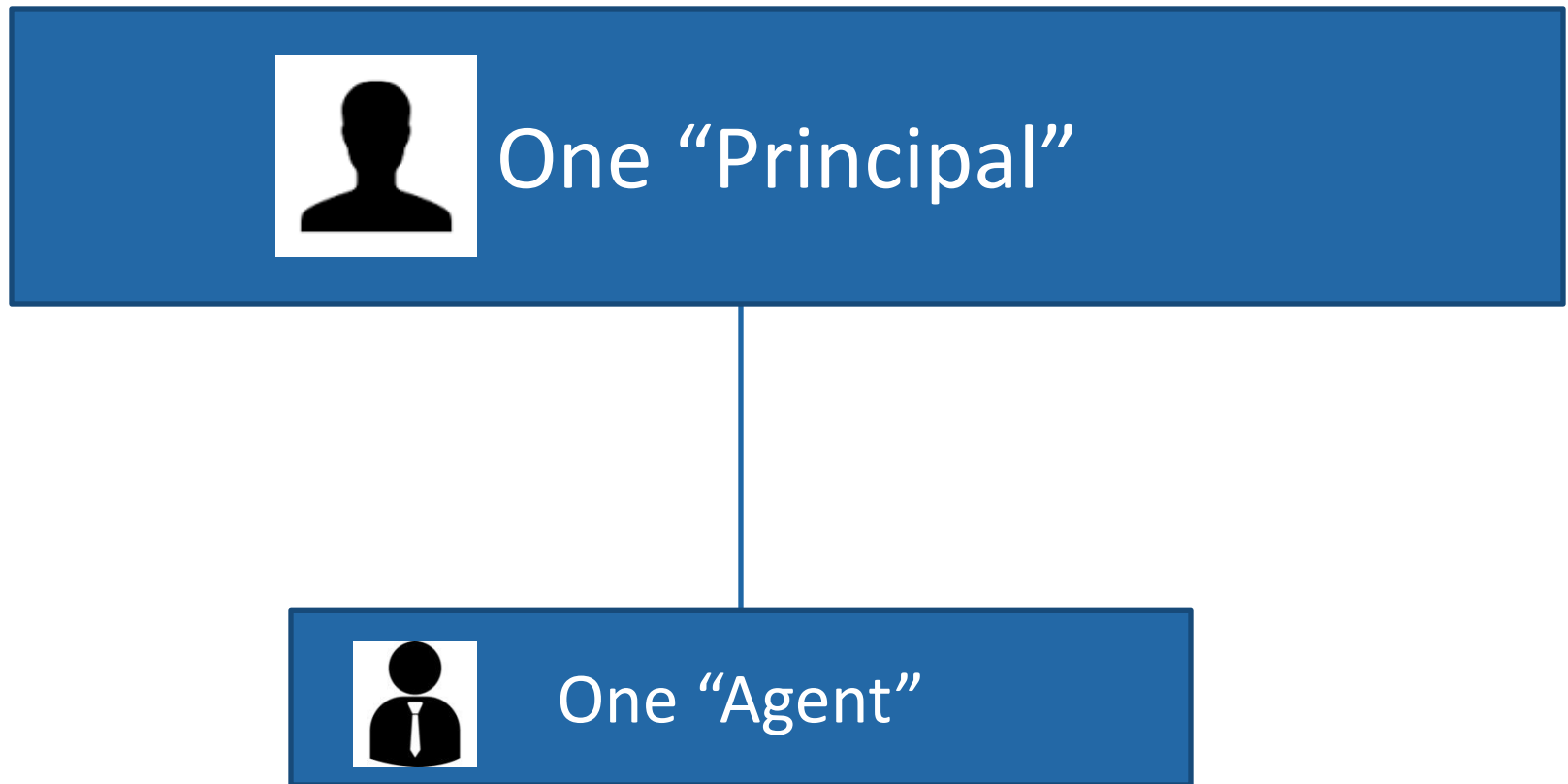
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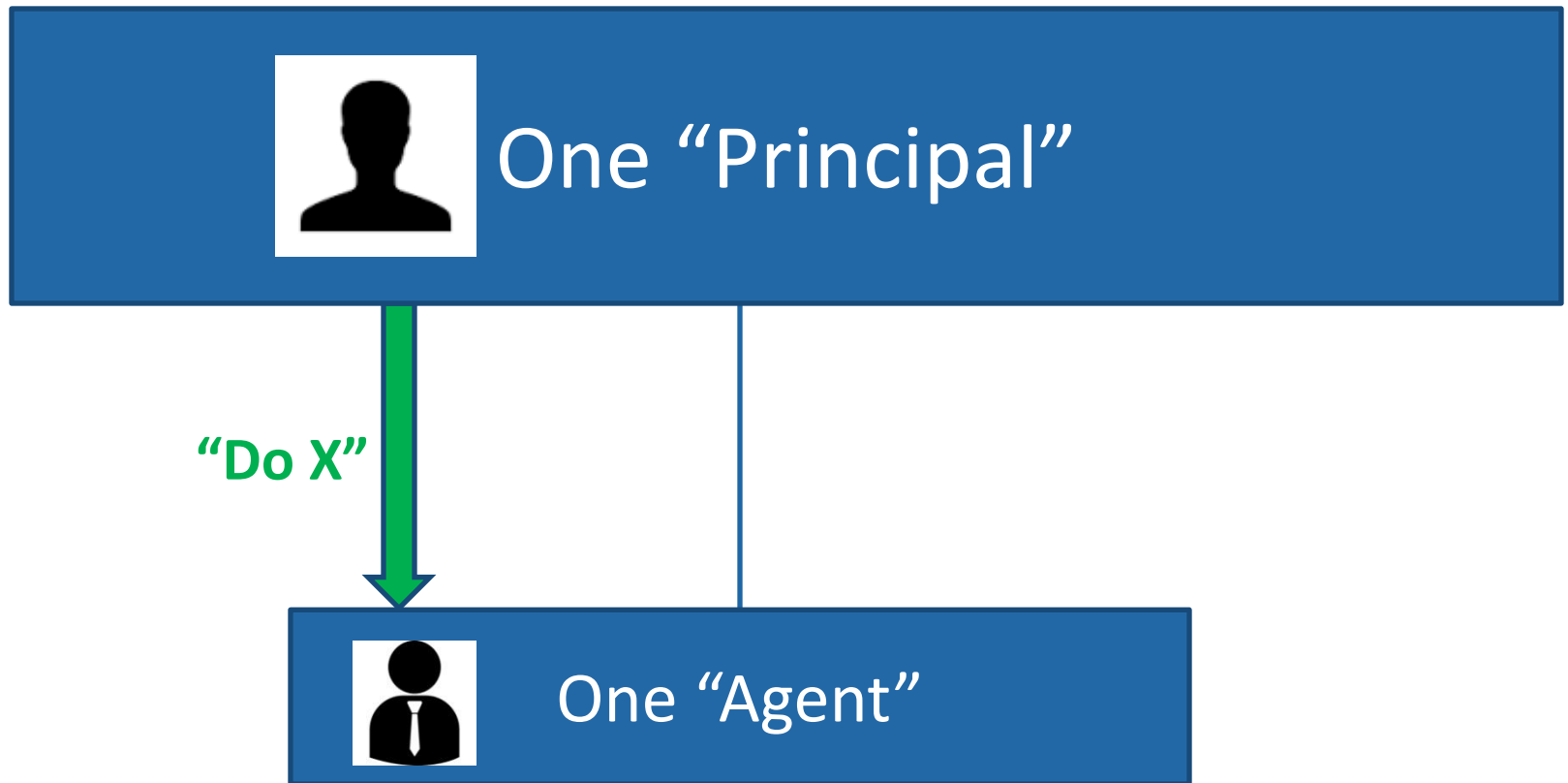


# THE GOVERNMENT COMMUNICATIONS **MACHINE**

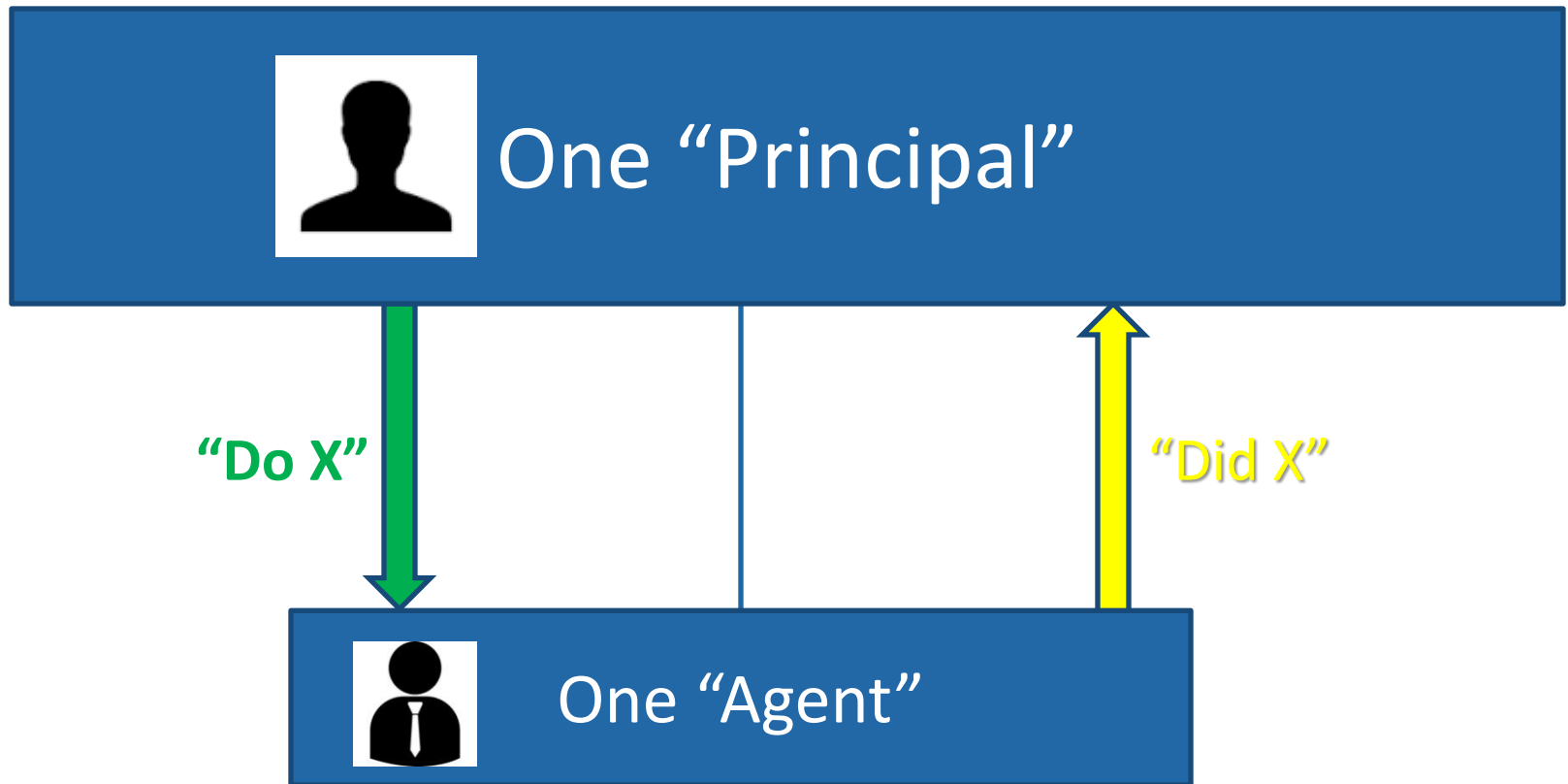
# Basic Fiduciary Org Chart



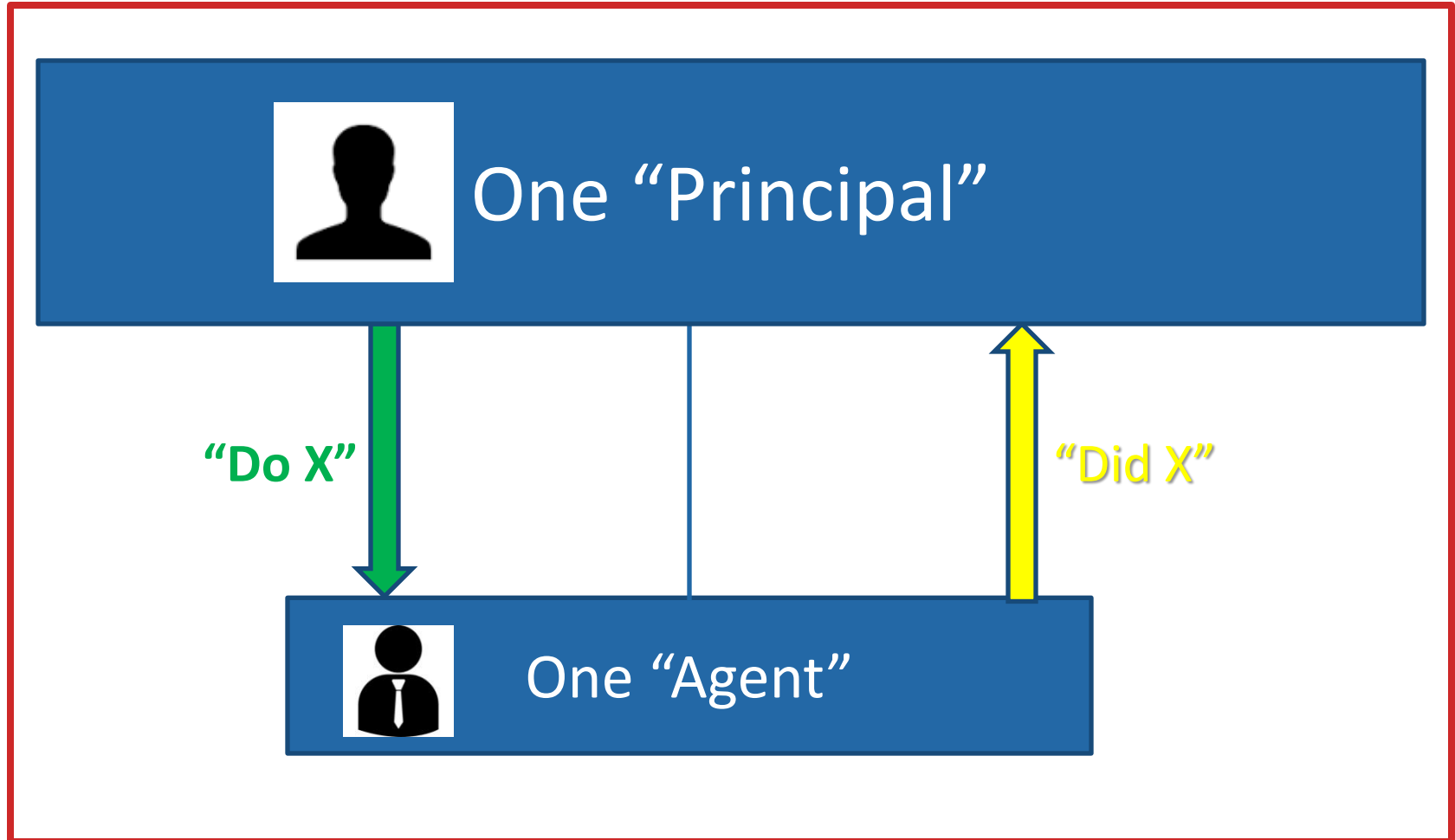
# Give Instructions



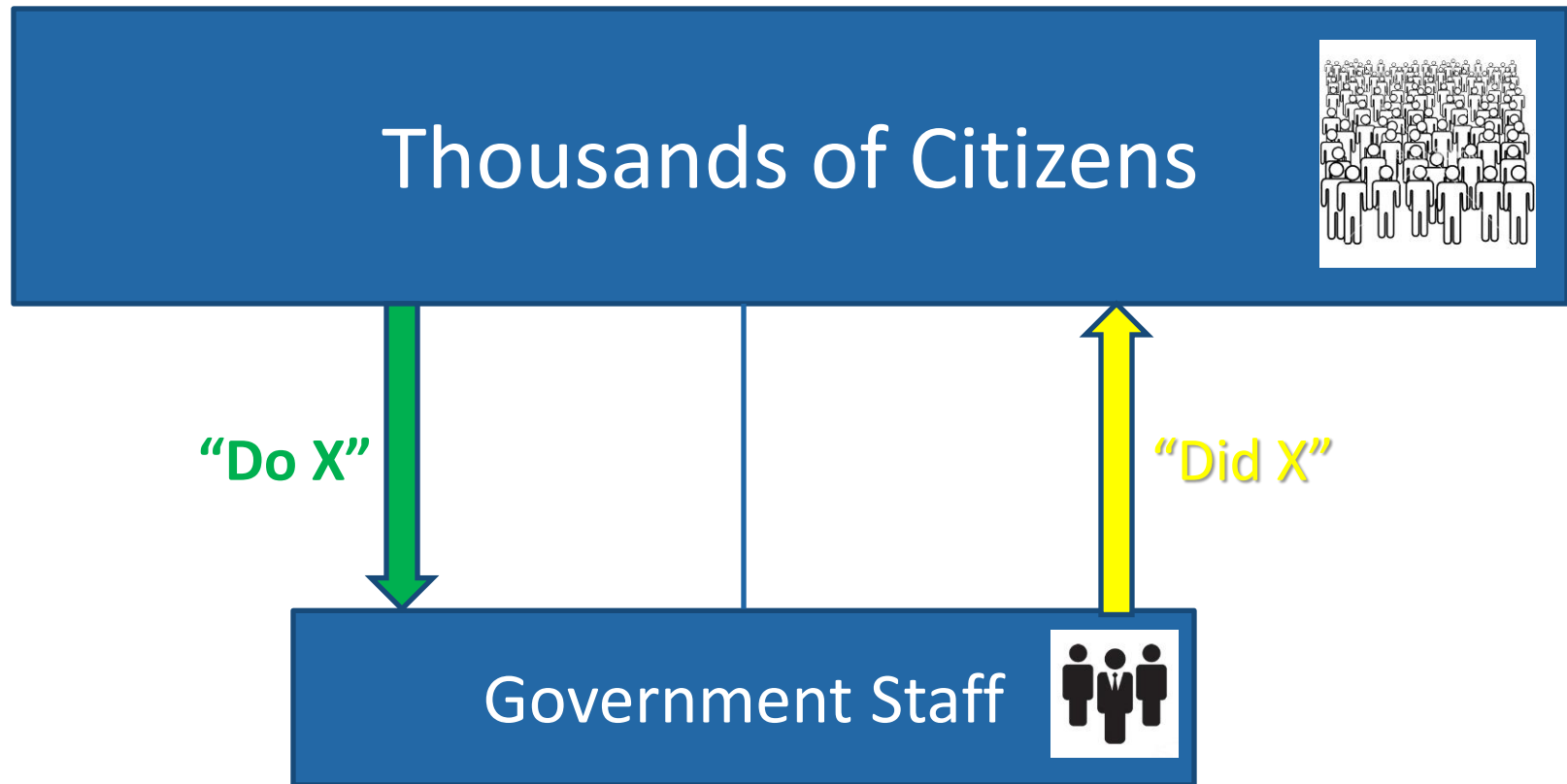
# Get Reports



# Complete Communication Loop



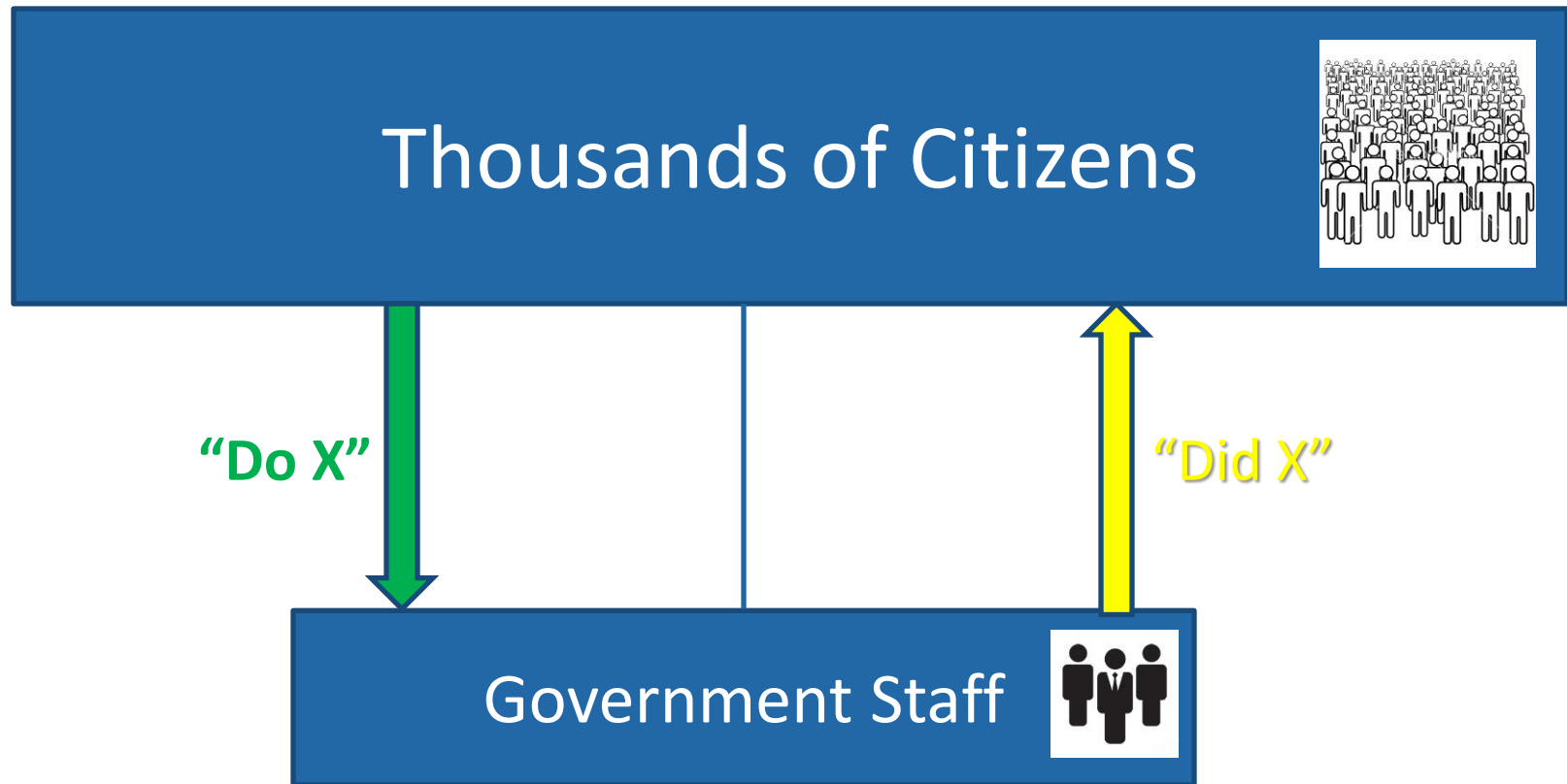
# Government Organizational Chart



# See Any Problems?

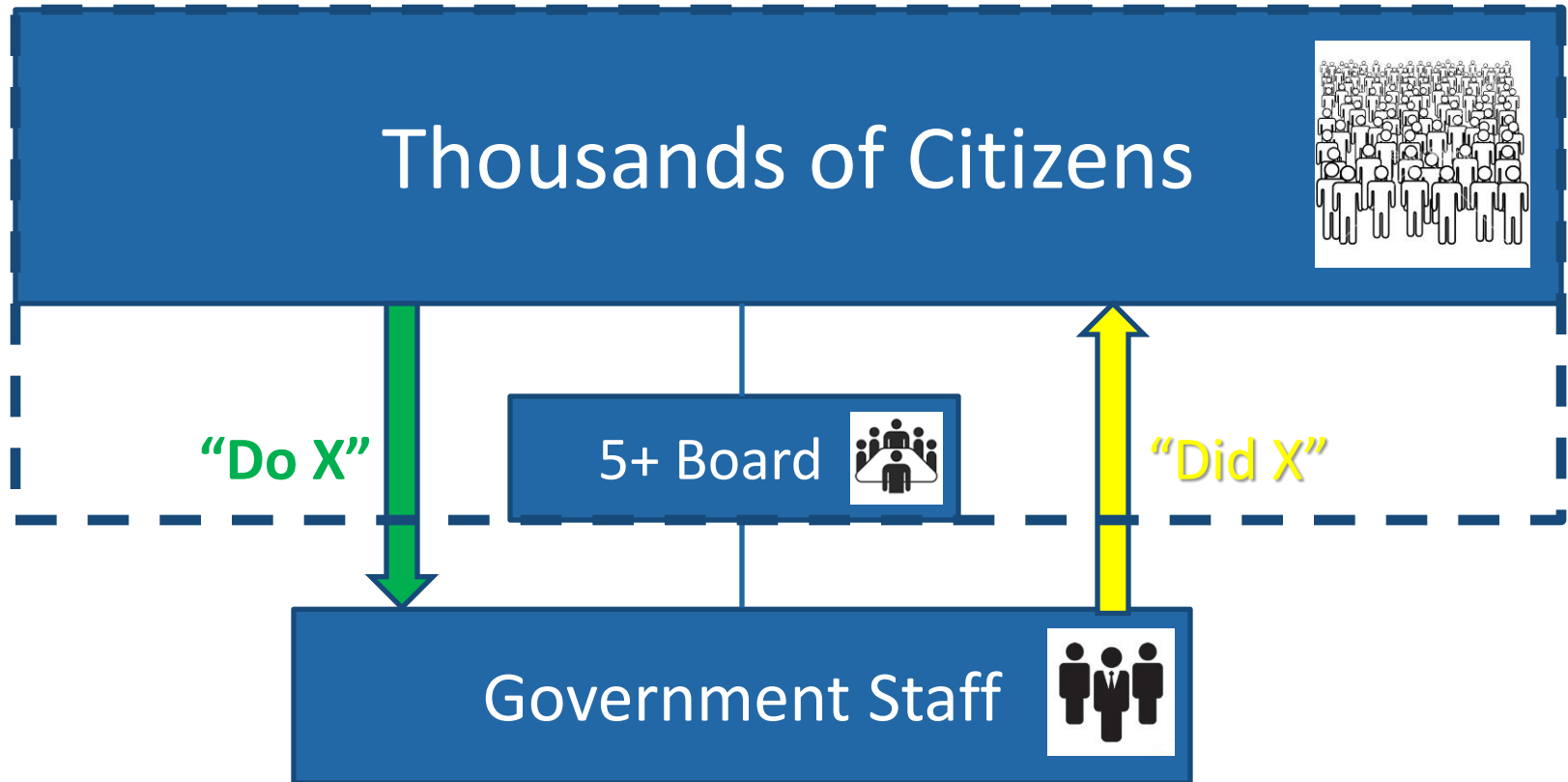


# Government Organizational Chart

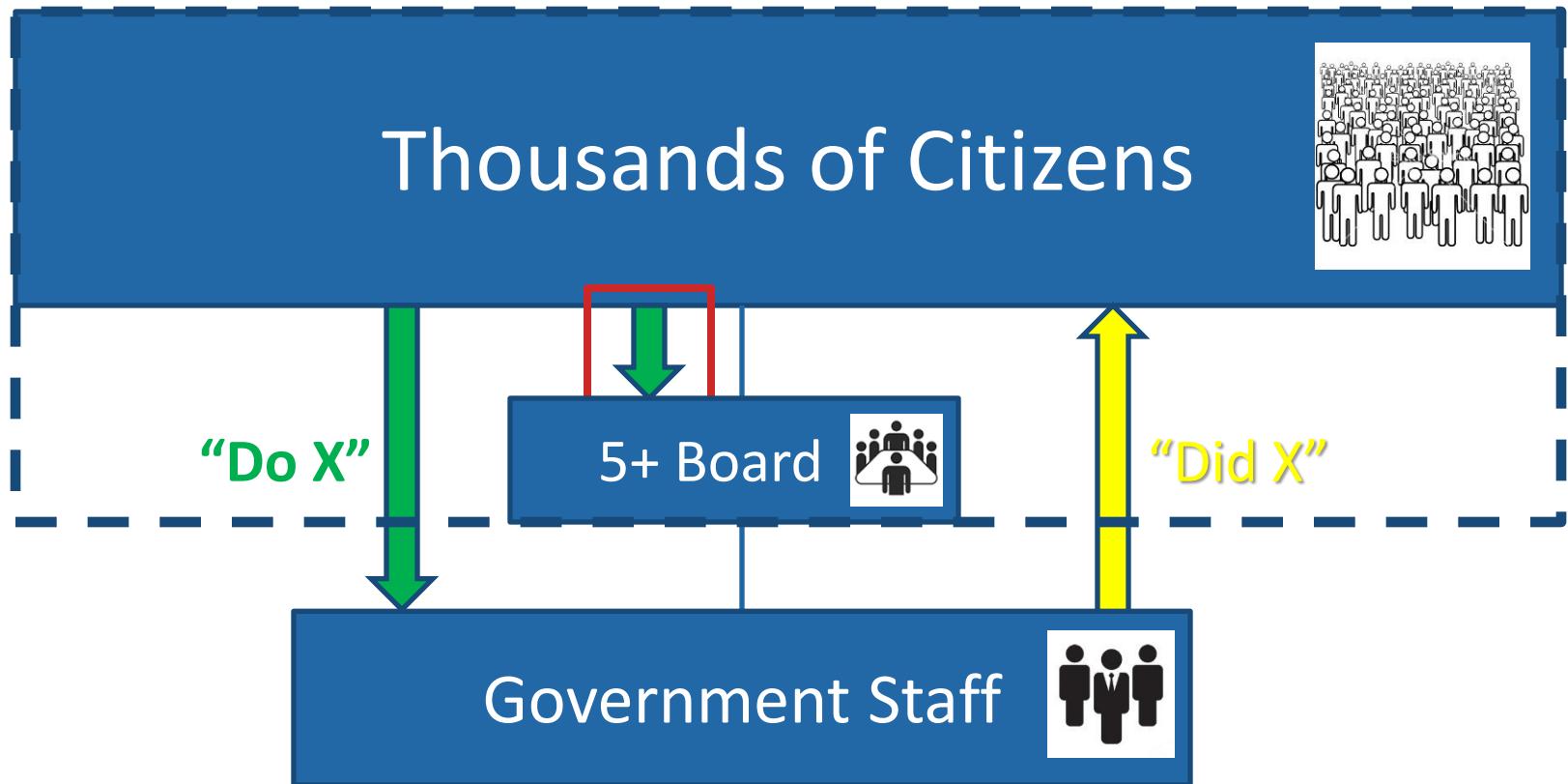




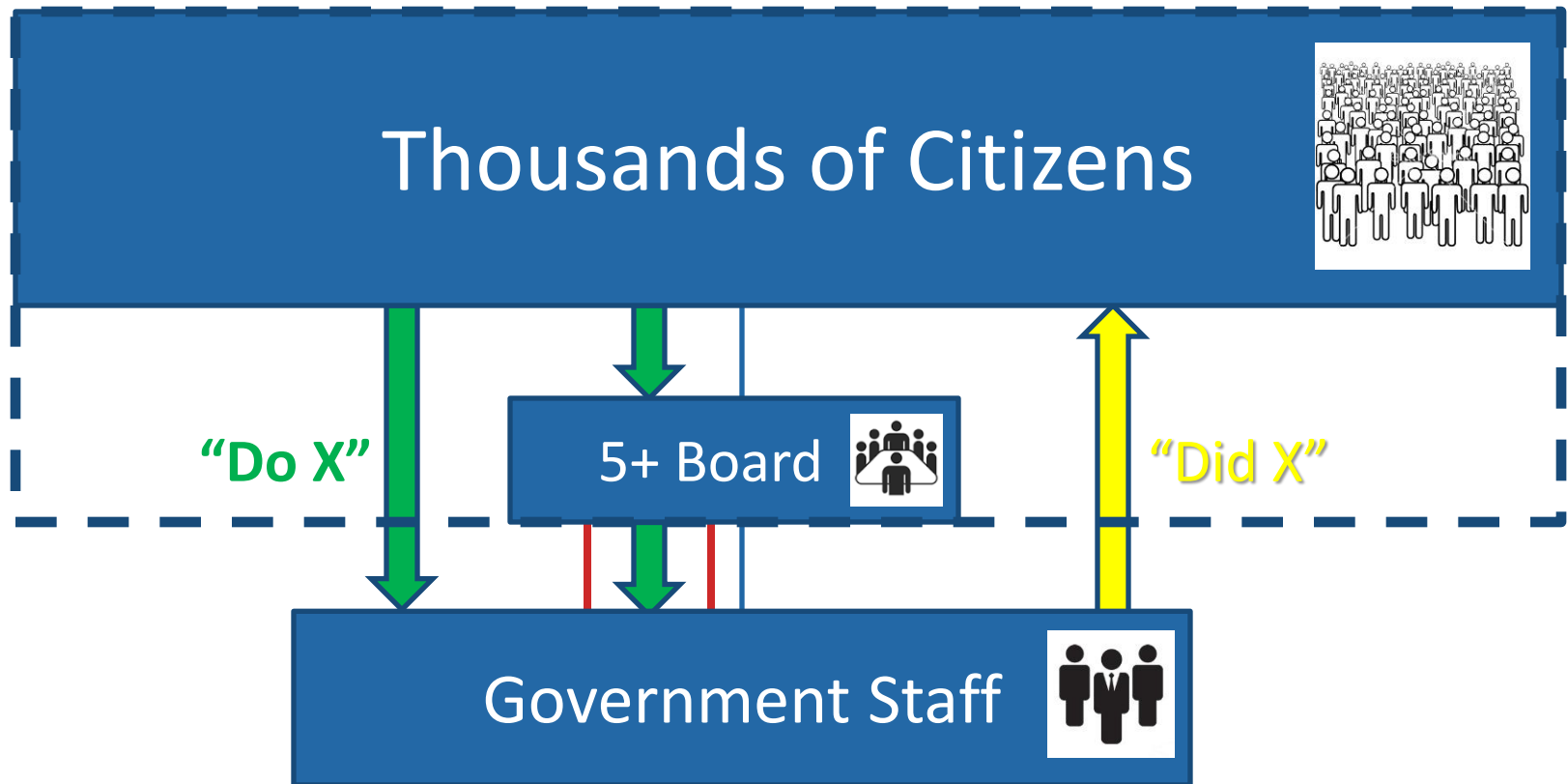
# Expanded Organizational Chart



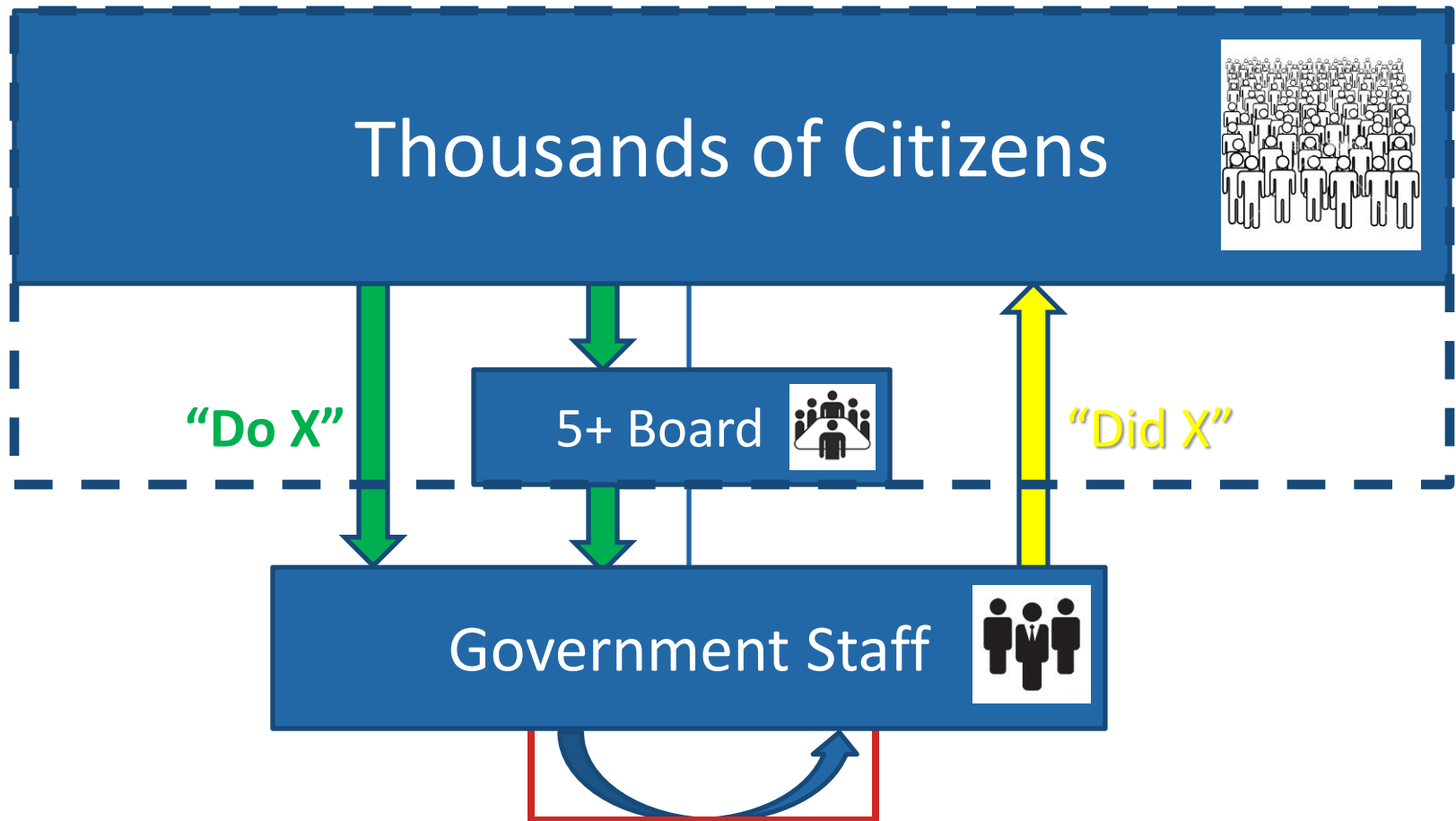
# Expanded Communications



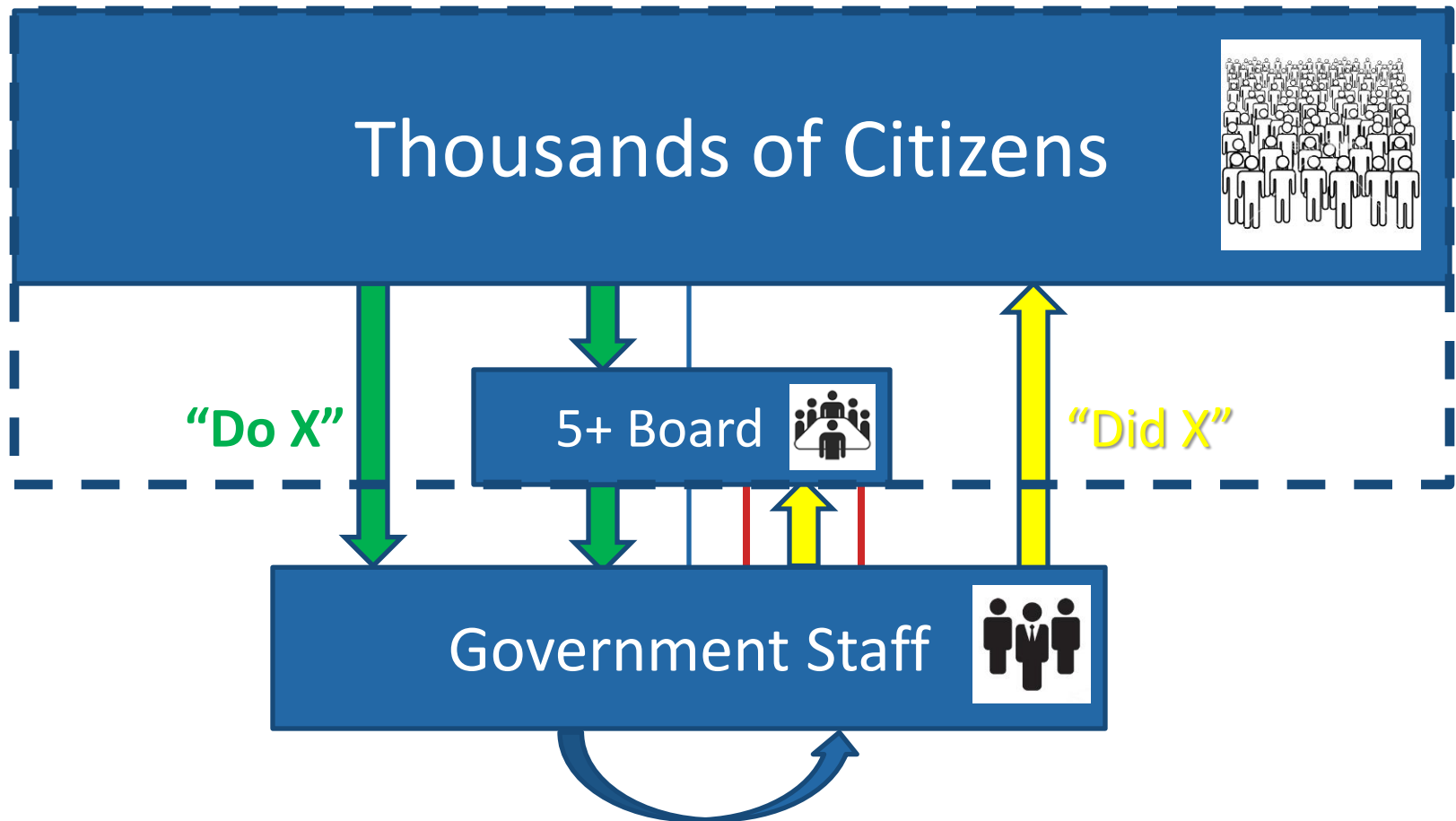
# Expanded Communications



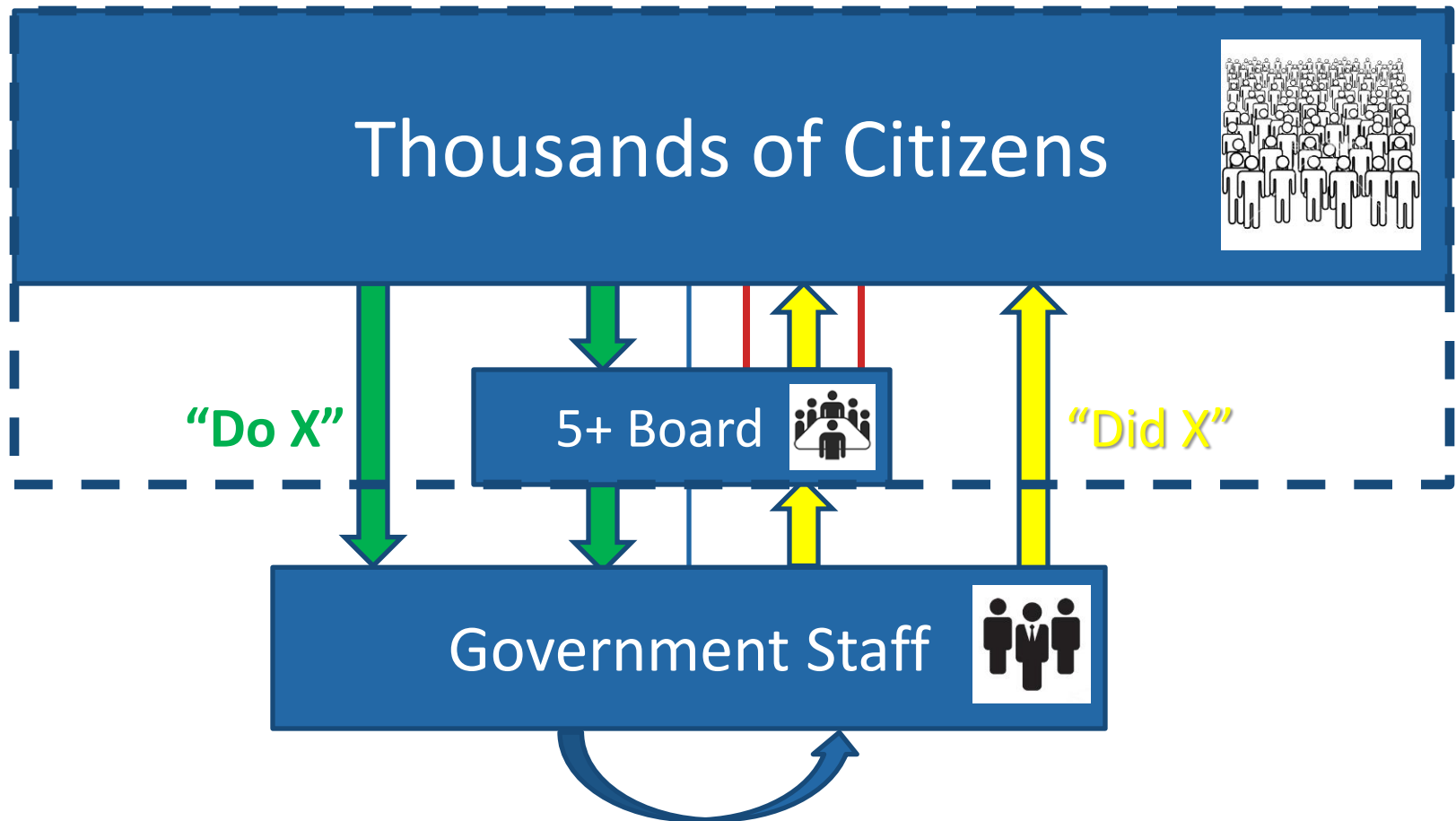
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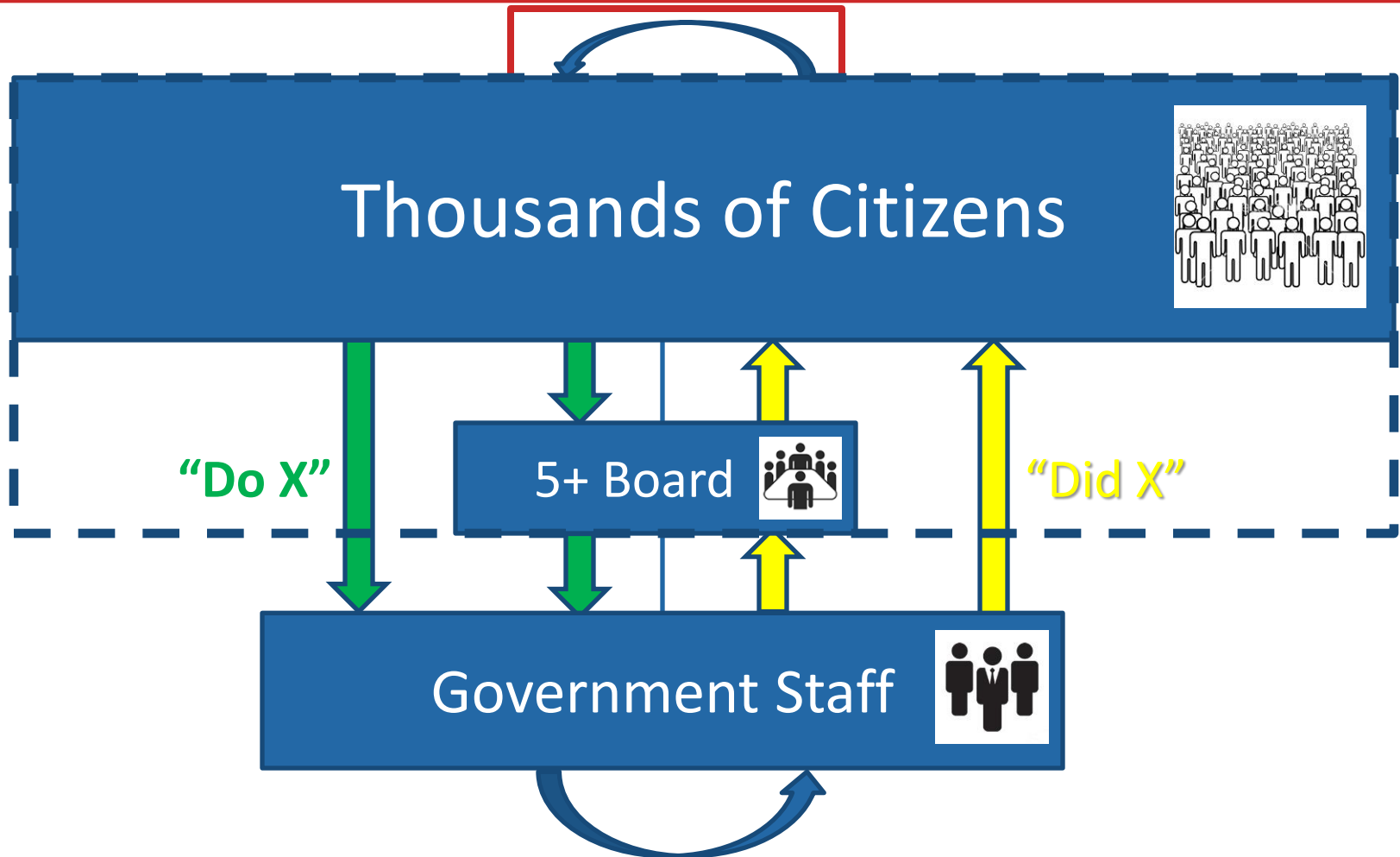
# Expanded Communications



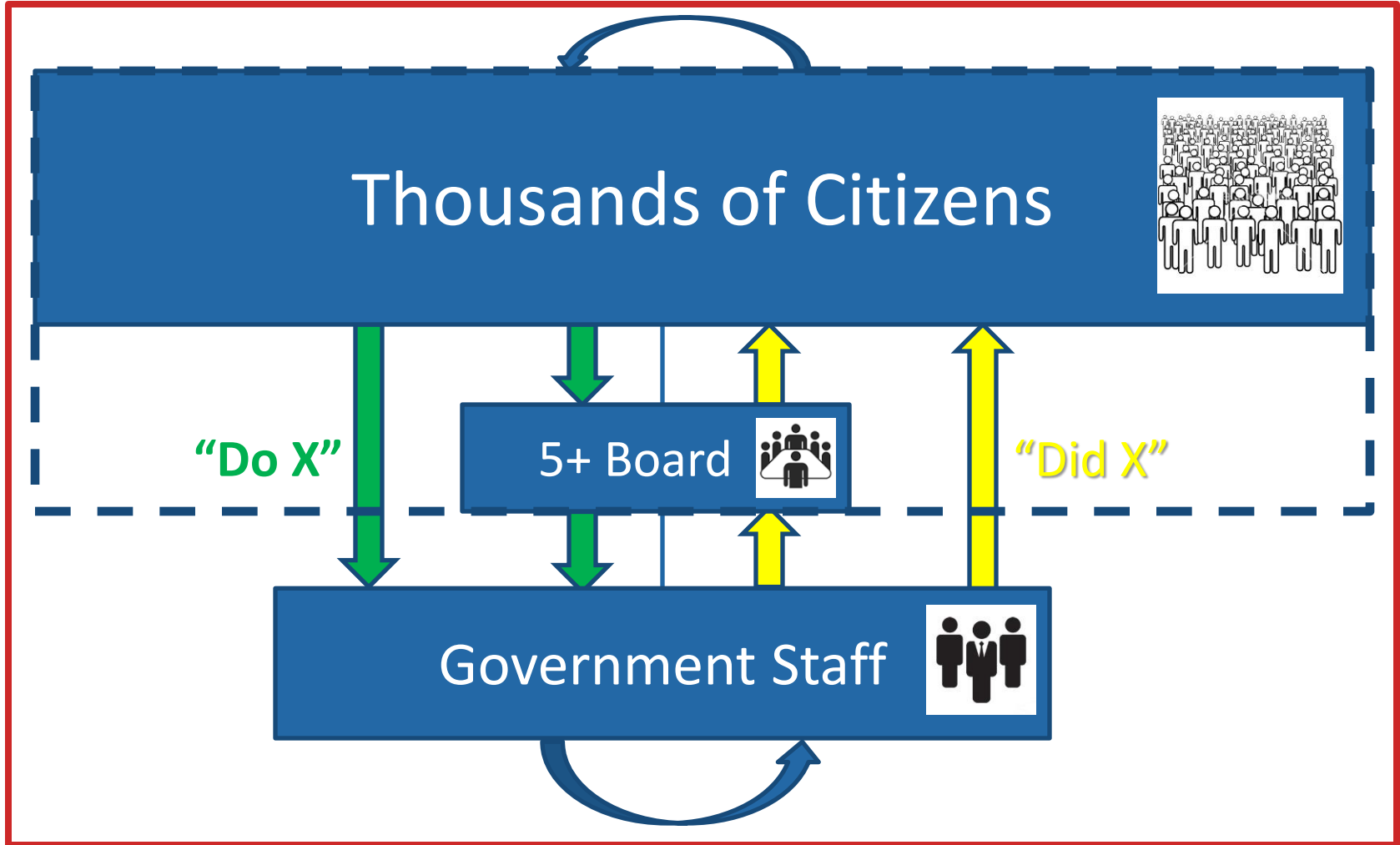
# Expanded Communications



# Expanded Communications



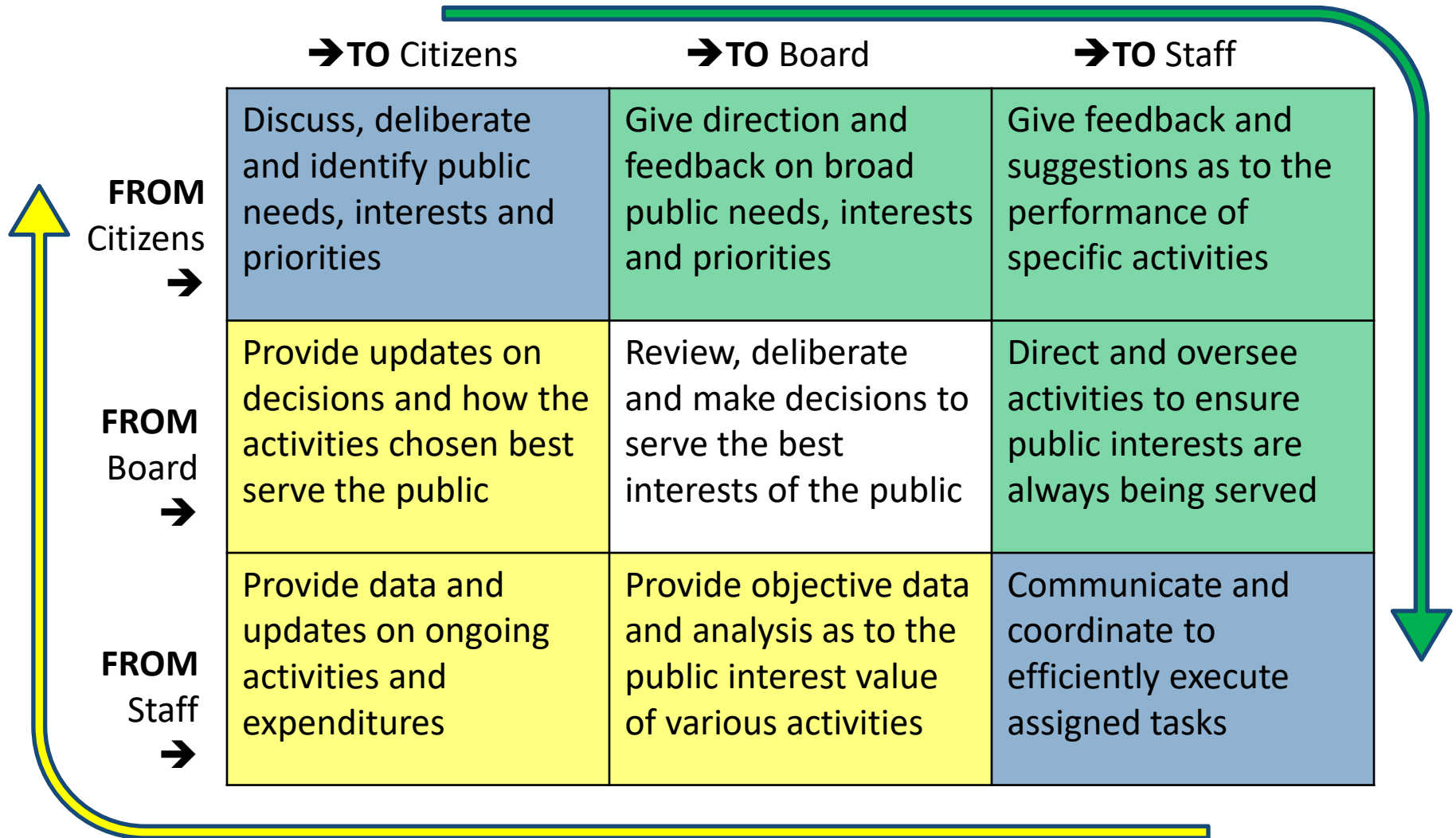
# Full Communications Loop



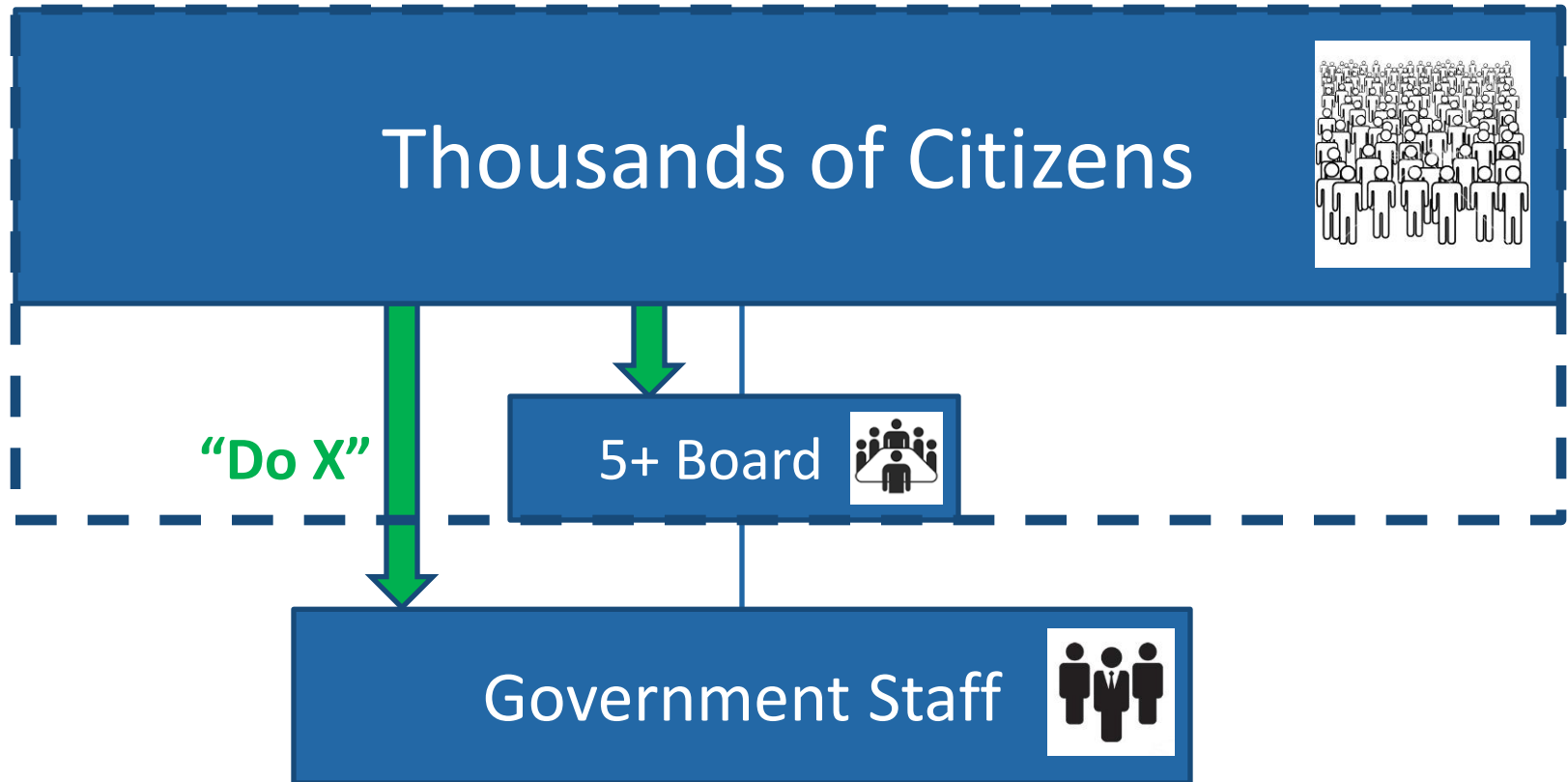


# **FUNCTIONAL FRAMEWORK FOR COMMUNICATIONS**

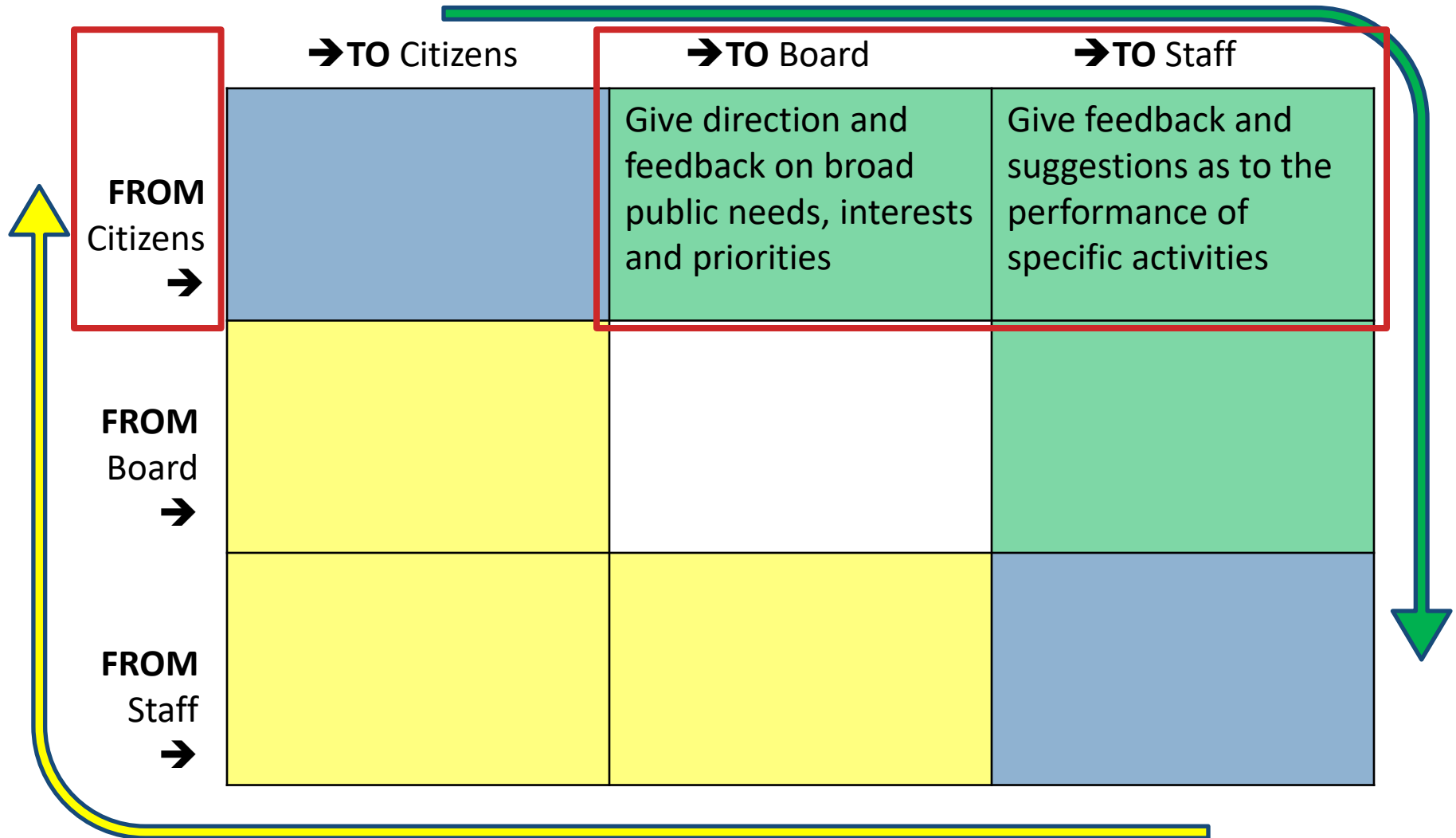
# Core Communications Purposes (All)



# Core Communications Purposes (“Input”)

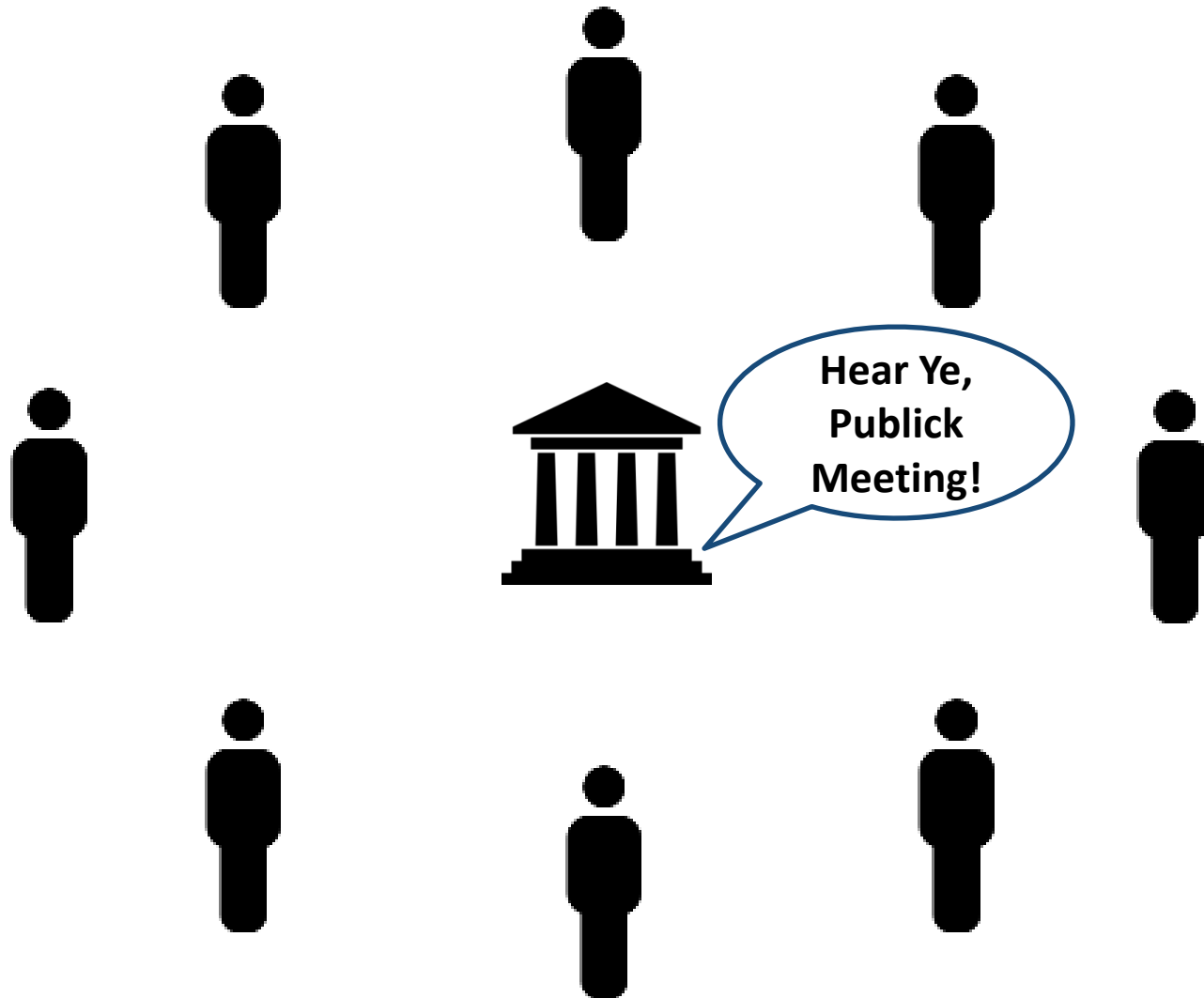


# Core Communications Purposes (“Input”)

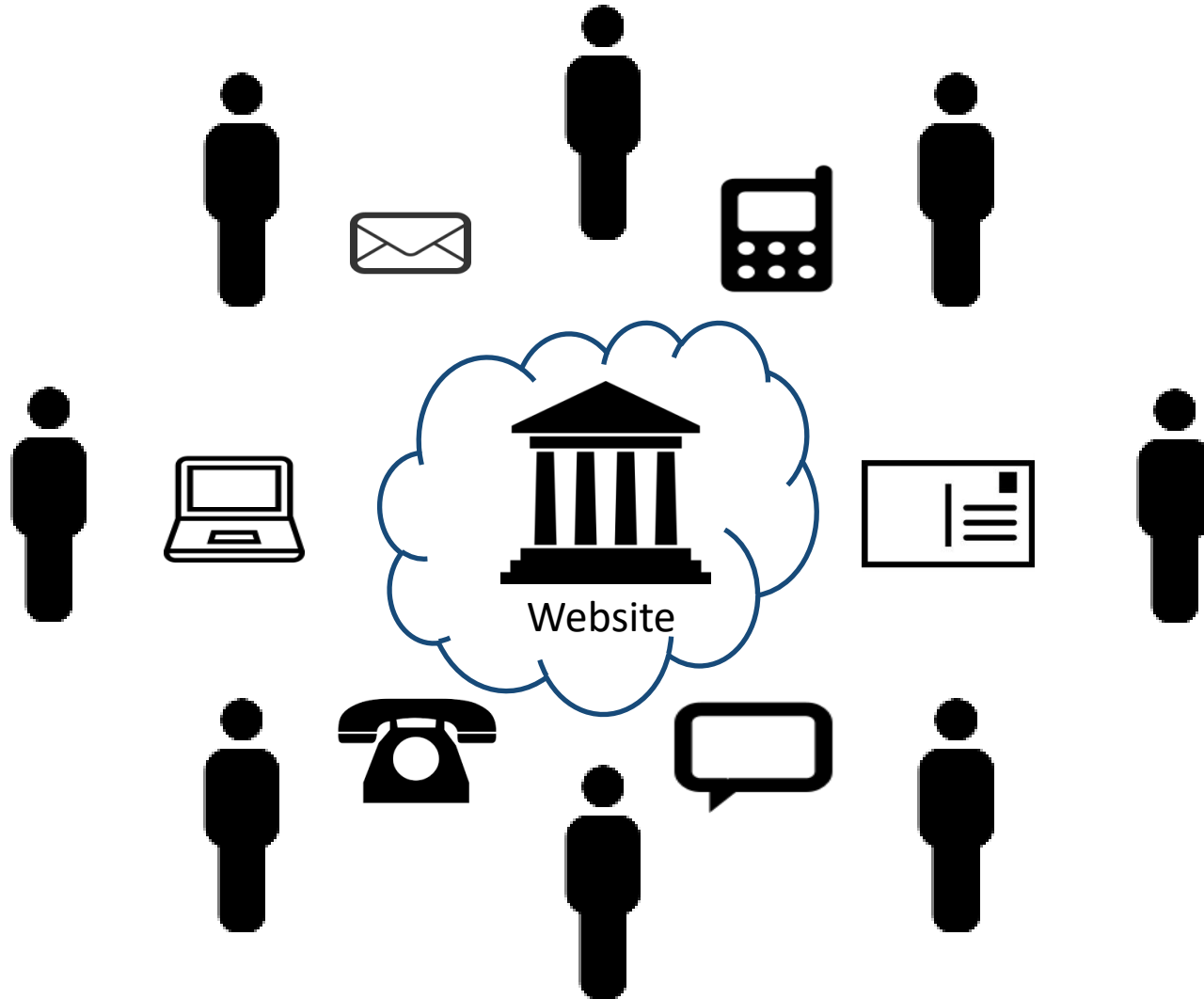


# **CHANNELS FRAMEWORK FOR COMMUNICATION**

# Old Government Communications



# New Government Communications

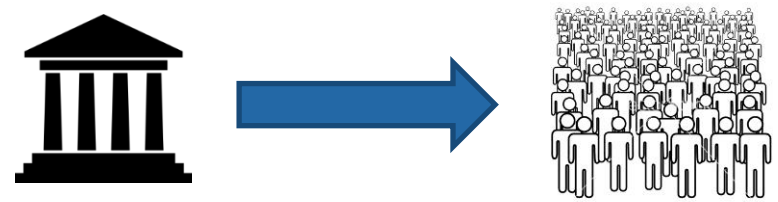


# Outbound and Inbound Channels

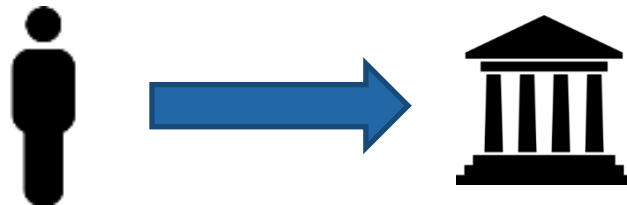
Gov to One



Gov to Many



One to Gov



Many to Gov

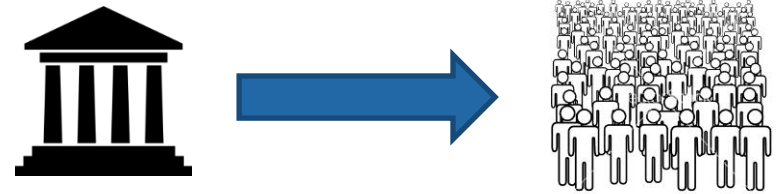




# Traditional Tools: Outbound



- Messenger
- Mailed letter
- Phone call

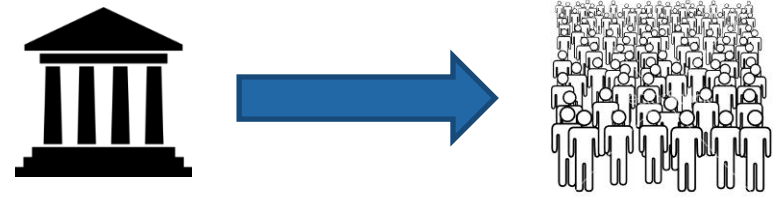


- Town crier
- Mass mailing
- Newspaper post

# New Tools: Outbound



- Messenger
- Mailed letter
- Phone call

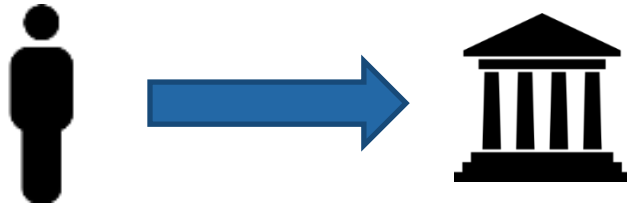


- Town crier
- Mass mailing
- Newspaper post

- Personal email
- Social/app message
- Text message

- Email blast/link
- Social media post
- Livestream

# Traditional Tools: Input



- Public meeting
- Letter
- Phone call

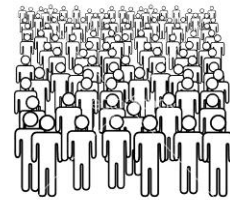


- Election
- Petition
- Scientific survey

# New Tools: Input



- Public meeting
- Letter
- Phone call











- Election
- Petition
- Scientific survey

- Personal email
- Mobile app
- Online forum

- Web survey
- Web petition
- Scientific panel

# New Tools by Channel

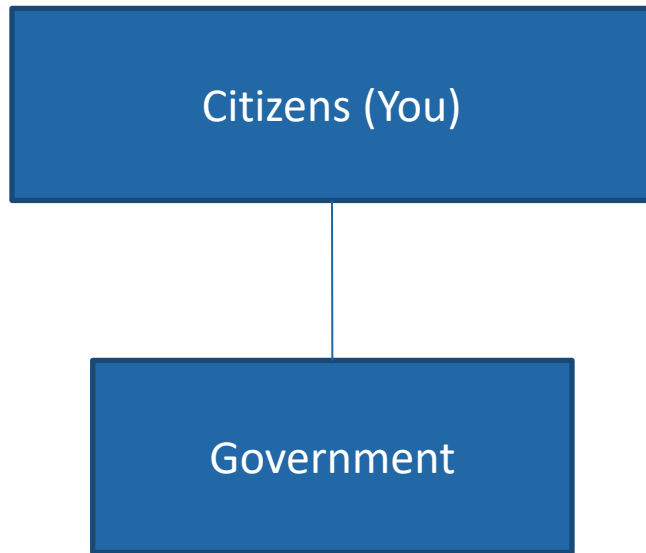
	 → 	 → 	 → 	 → 
Method	Gov to One	Gov to Many	One to Gov	Many to Gov
Website	Y	Y	Y	N
Email	Y	Y	Y	N
Online Forum	N	Y	Y	N
Surveys/Petitions	N	Y	N	Y
Texts/Mobile App	Y	Y	Y	N
Social Media	Y	Y	Y	N
Livestream	N	Y	N	N

**WHY DO WE NEED  
COMMUNITY INPUT (MANY TO GOV)?**

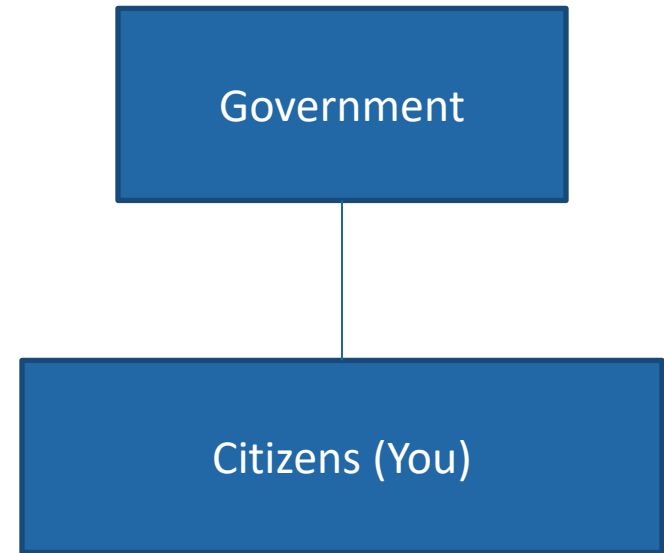
**CITIZEN PERSPECTIVES**

# Government Basics

Which org chart would you rather be in?



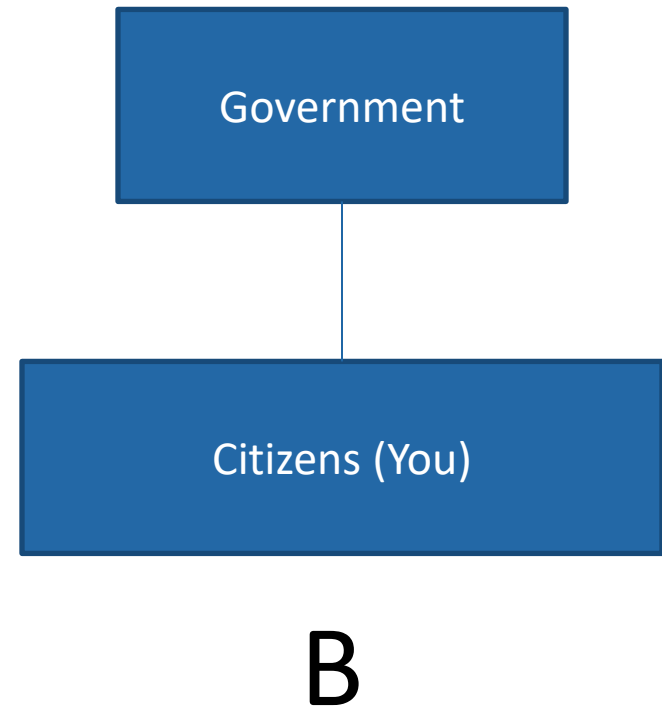
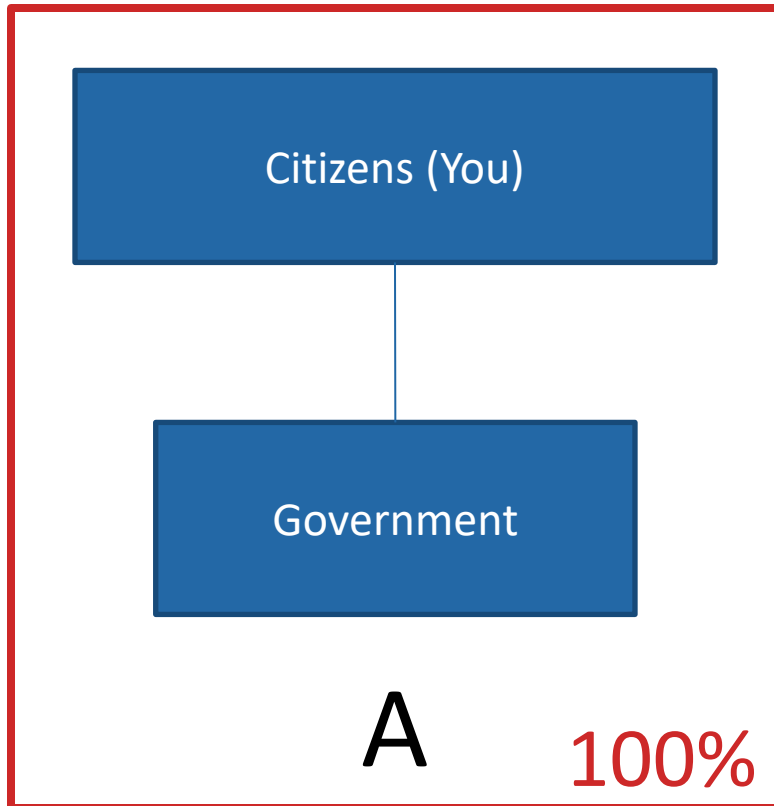
A



B

# Government Basics

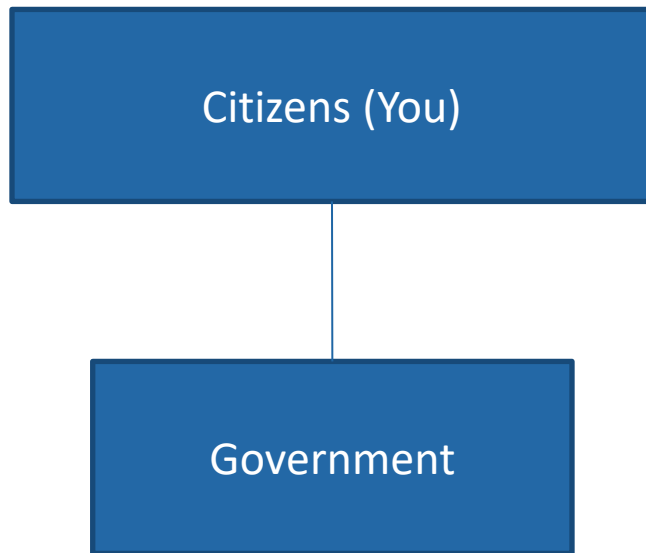
Which org chart would you rather be in?



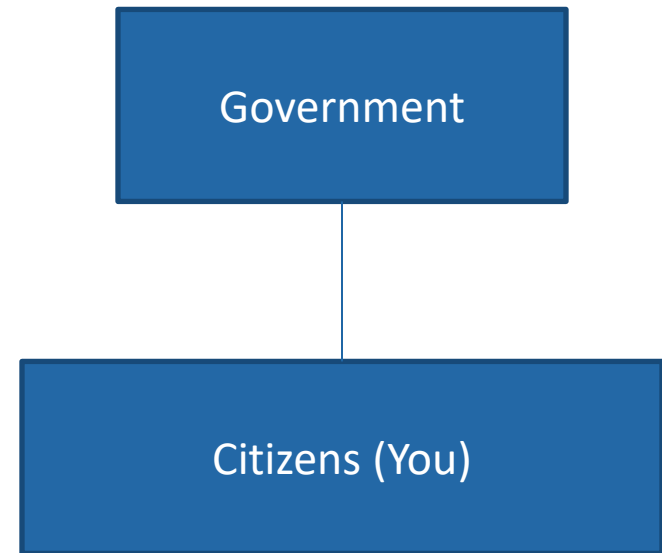


# Government Basics

Which org chart is “Democracy”?



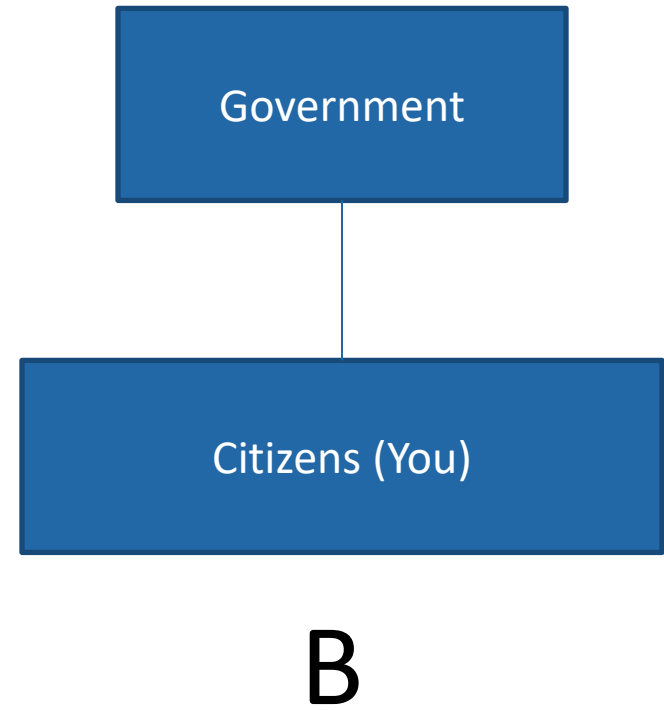
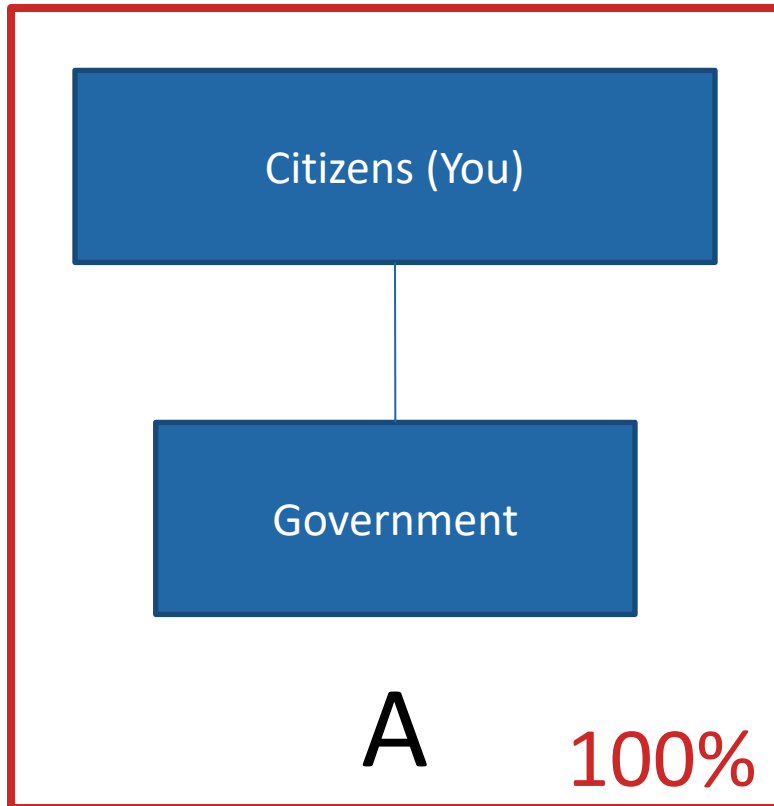
A



B

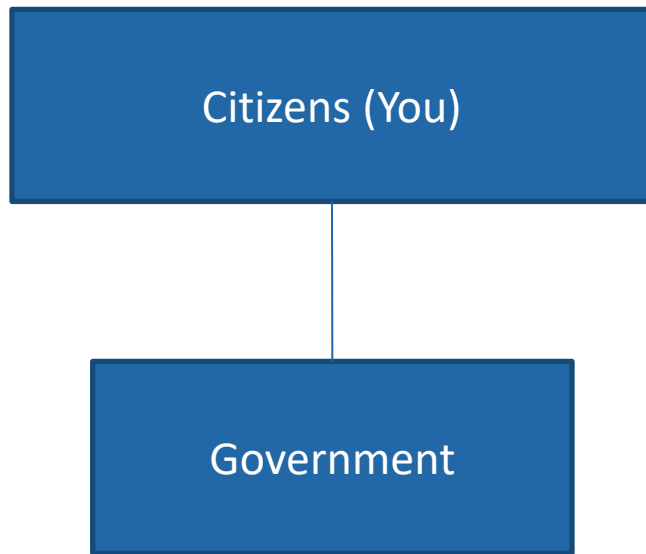
# Government Basics

Which org chart is “Democracy”?

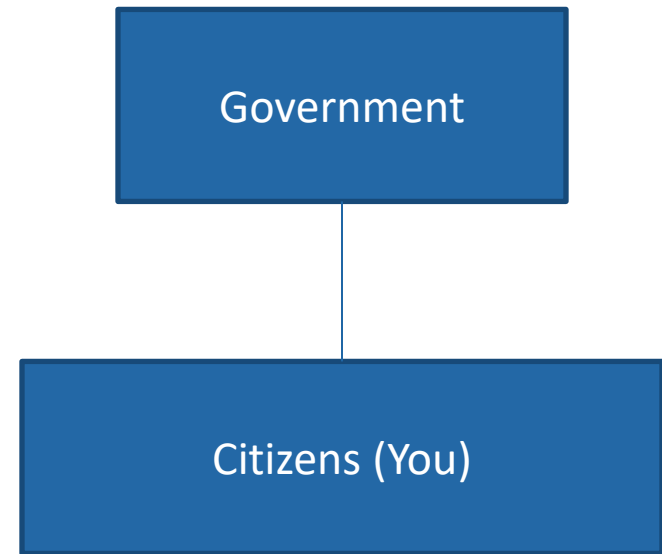


# Government Basics

Which org chart feels most like reality?



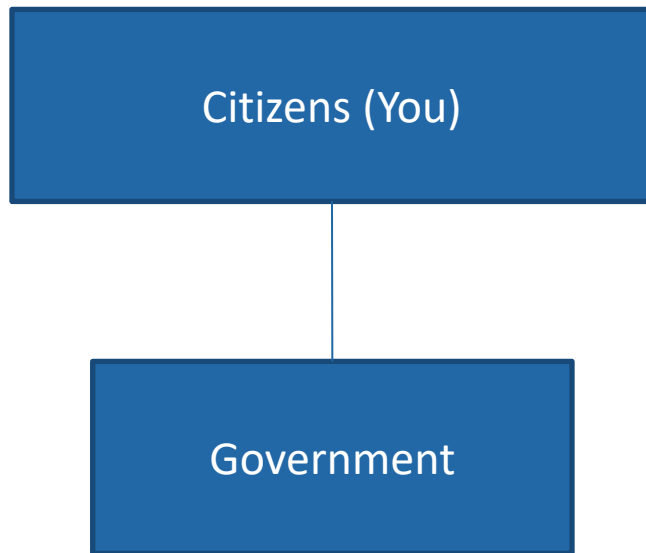
A



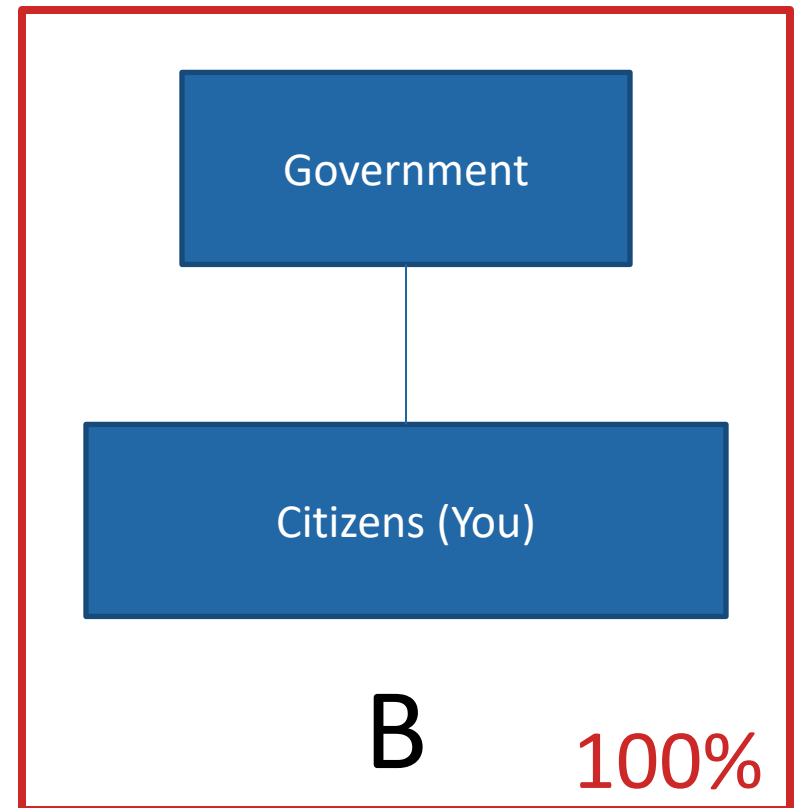
B

# Government Basics

Which org chart feels most like reality?



A

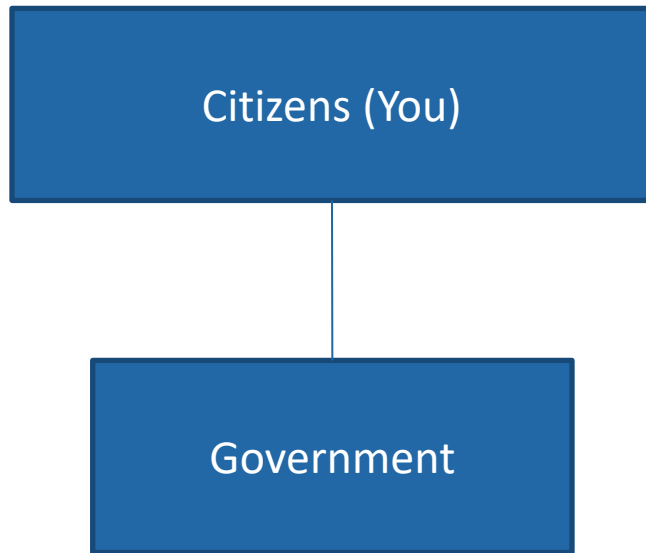


B

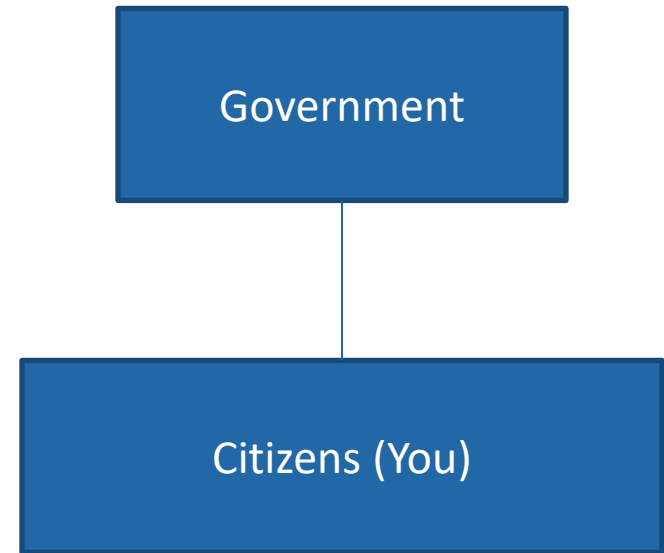
100%

# Government Basics

Which org chart is established by law?



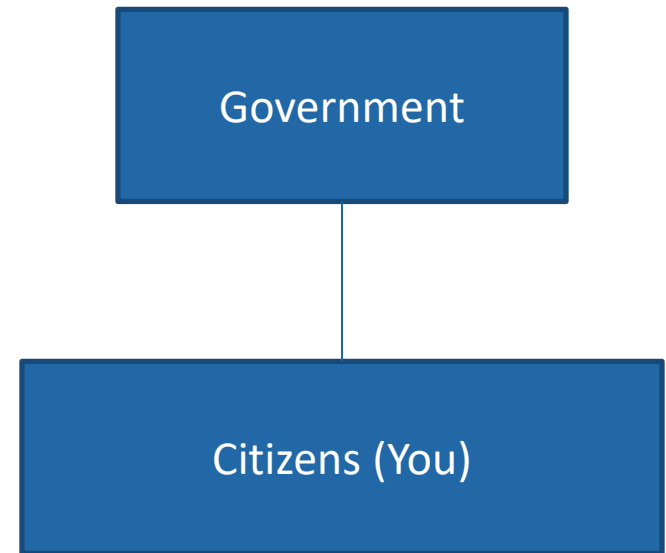
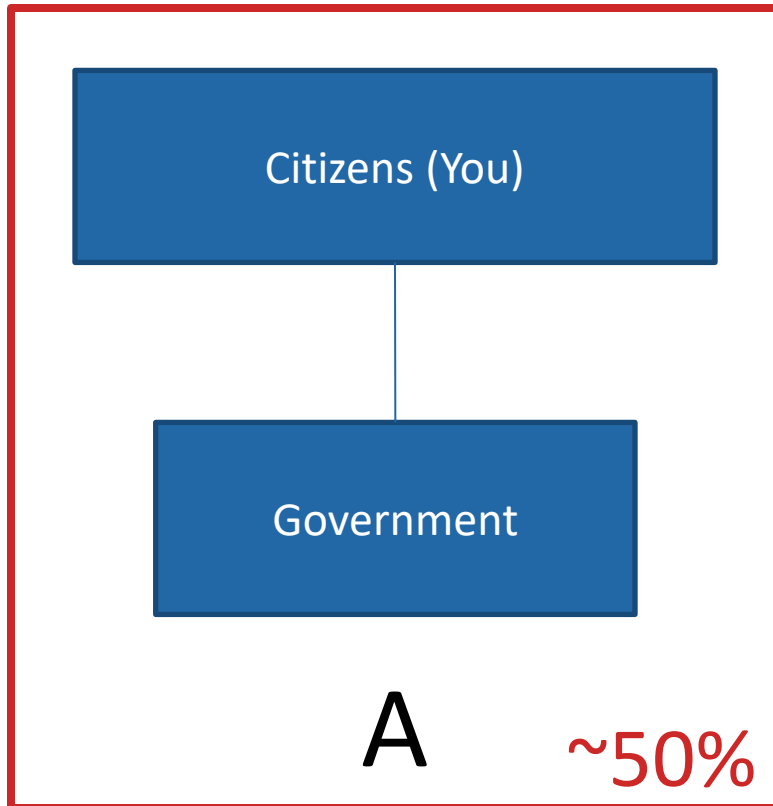
A



B

# Government Basics

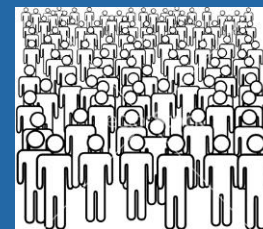
Which org chart is established by law?



# What Everyone Wants

We all want “A” to be reality...

Citizens (Public Masters)



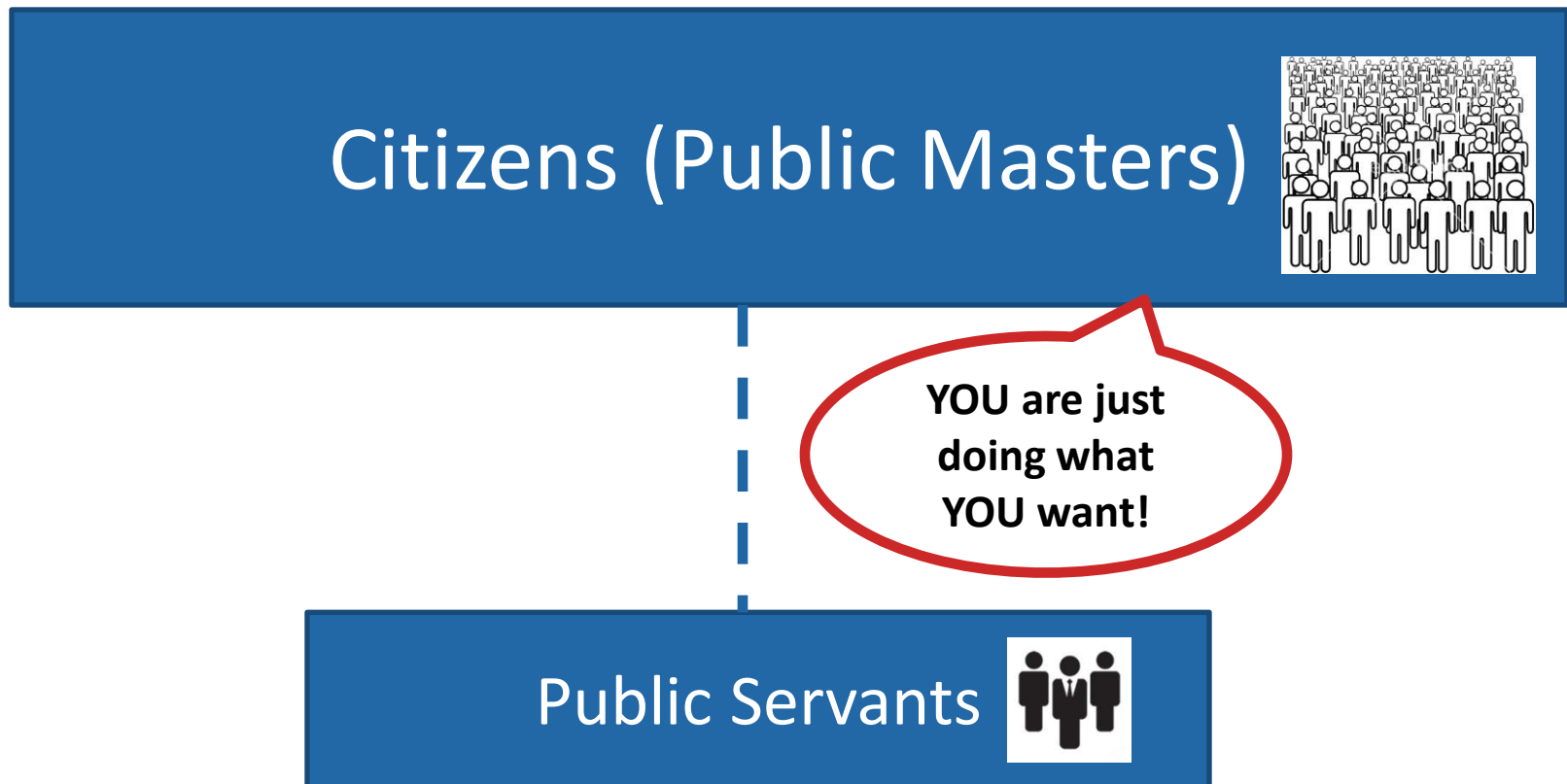
WE'LL do what  
Y'ALL want

Public Servants



# What Everyone Gets

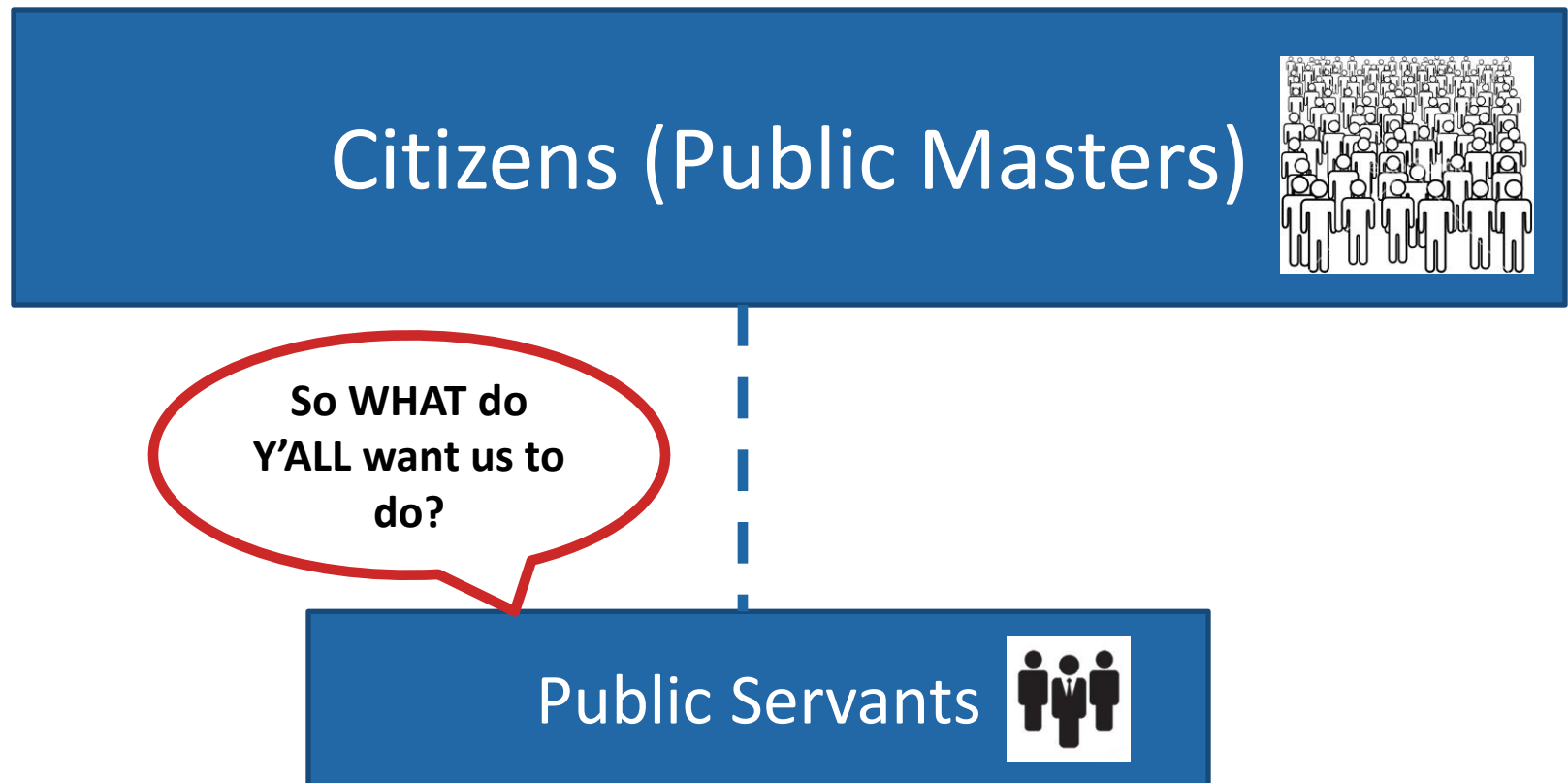
Unrepresentative input leads to “B” perception





# What Everyone Needs

Representative input can solve the problem



# Been Influenced By The Noisy Few?

---

- What percent of Texas governments have had decisions influenced by a few noisy people?

# Been Influenced By The Noisy Few?

---

- What percent of Texas governments have had decisions influenced by a few noisy people?

97%

# Been Influenced By The Noisy Few?

---

- What percent of Texas governments have had decisions influenced by a few noisy people?

97%

- What percent of Texas government decisions *should be* influenced by a few noisy people?

# Been Influenced By The Noisy Few?

---

- What percent of Texas governments have had decisions influenced by a few noisy people?

97%

- What percent of Texas government decisions *should be* influenced by a few noisy people?

0%

# One Interesting Citizen Perspective

## American People Hire High-Powered Lobbyist To Push Interests In Congress

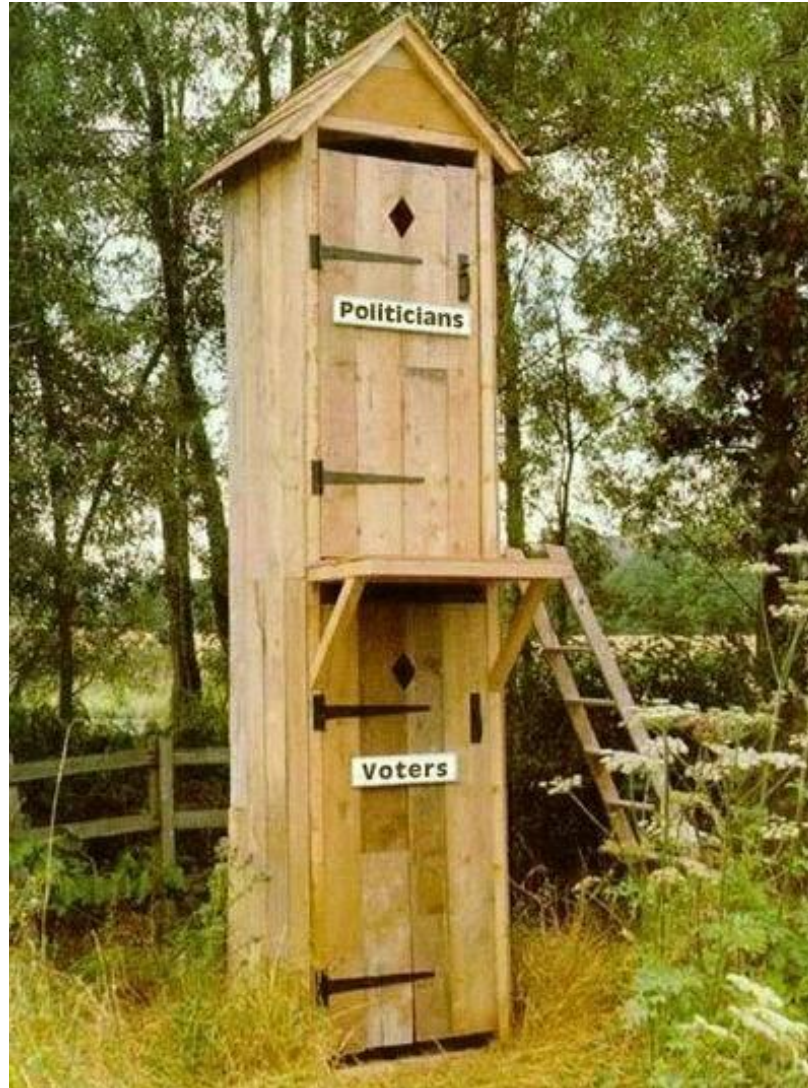


*Americans hope lobbyist Jack Weldon will finally give them a voice in Washington.*

WASHINGTON—Citing a desire to gain influence in Washington, the American people confirmed Friday that they have hired high-powered D.C. lobbyist Jack Weldon of the firm

the ONION®

# Another Interesting Perspective



**WHY DO WE NEED  
COMMUNITY INPUT (MANY TO GOV)?**

**YOUR PERSPECTIVE**

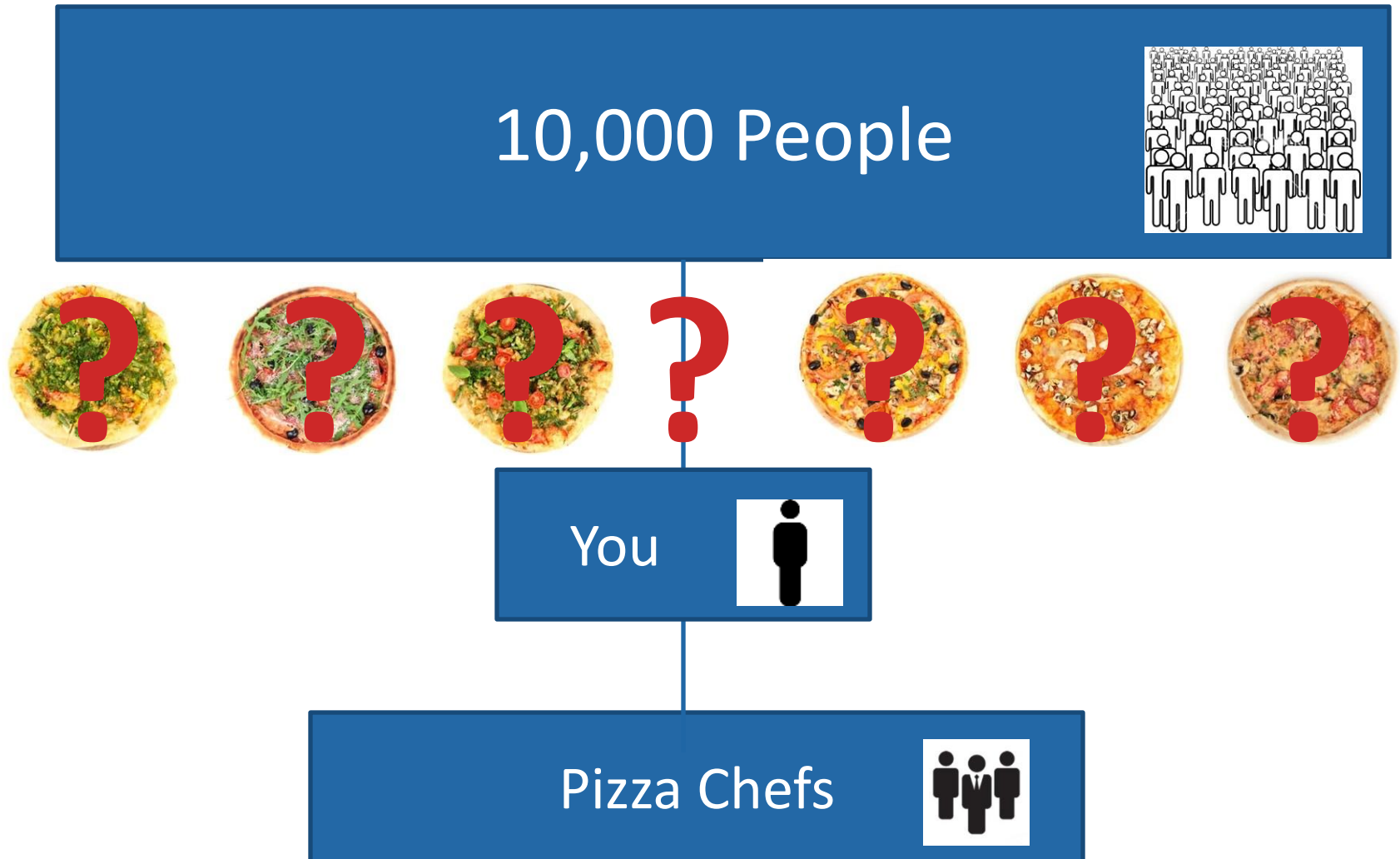


# 10,000 People Chip In For Pizza

- **YOU** have to figure out which toppings to get



# How Do You Figure This Out?



# Which of These Work?

---

- Order what you want?

# Which of These Work?

---

- Order what you want?
- Ask your friends what they want?

# Which of These Work?

---

- Order what you want?
- Ask your friends what they want?
- Call a meeting?

# Which of These Work?

---

- Order what you want?
- Ask your friends what they want?
- Call a meeting?
- Read social media posts?

# Which of These Work?

---

- Order what you want?
- Ask your friends what they want?
- Call a meeting?
- Read social media posts?
- Start an online engagement forum?

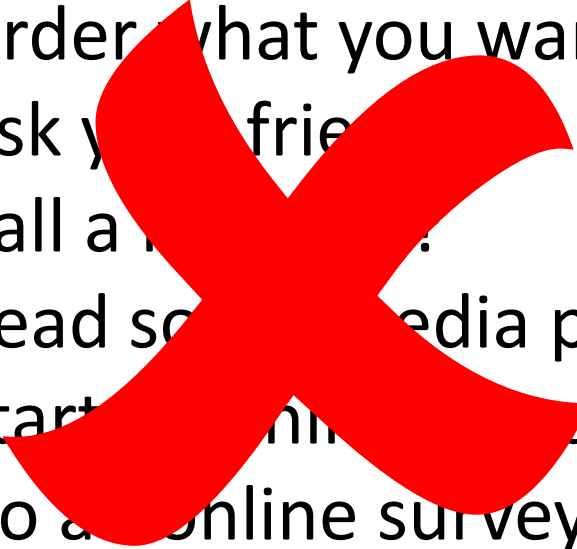
# Which of These Work?

---

- Order what you want?
- Ask your friends what they want?
- Call a meeting?
- Read social media posts?
- Start an online engagement forum?
- Do an online survey?



# None! They Are All Unrepresentative

- Order what you want?
  - Ask your friends?
  - Call a random number?
  - Read social media posts?
  - Start an online management forum?
  - Do an online survey?
- 

# So What Is the Right Answer?

- Order what you want?
- Ask your friends?
- Call a consultant?
- Read social media posts?
- Start an online management forum?
- Do an online survey?



- Take everyone's order

# Or... Also Good and Representative

- Order what you want?
- Ask your friends?
- Call a pollster?
- Read social media posts?
- Start an online management forum?
- Do an online survey?



- Take everyone's order



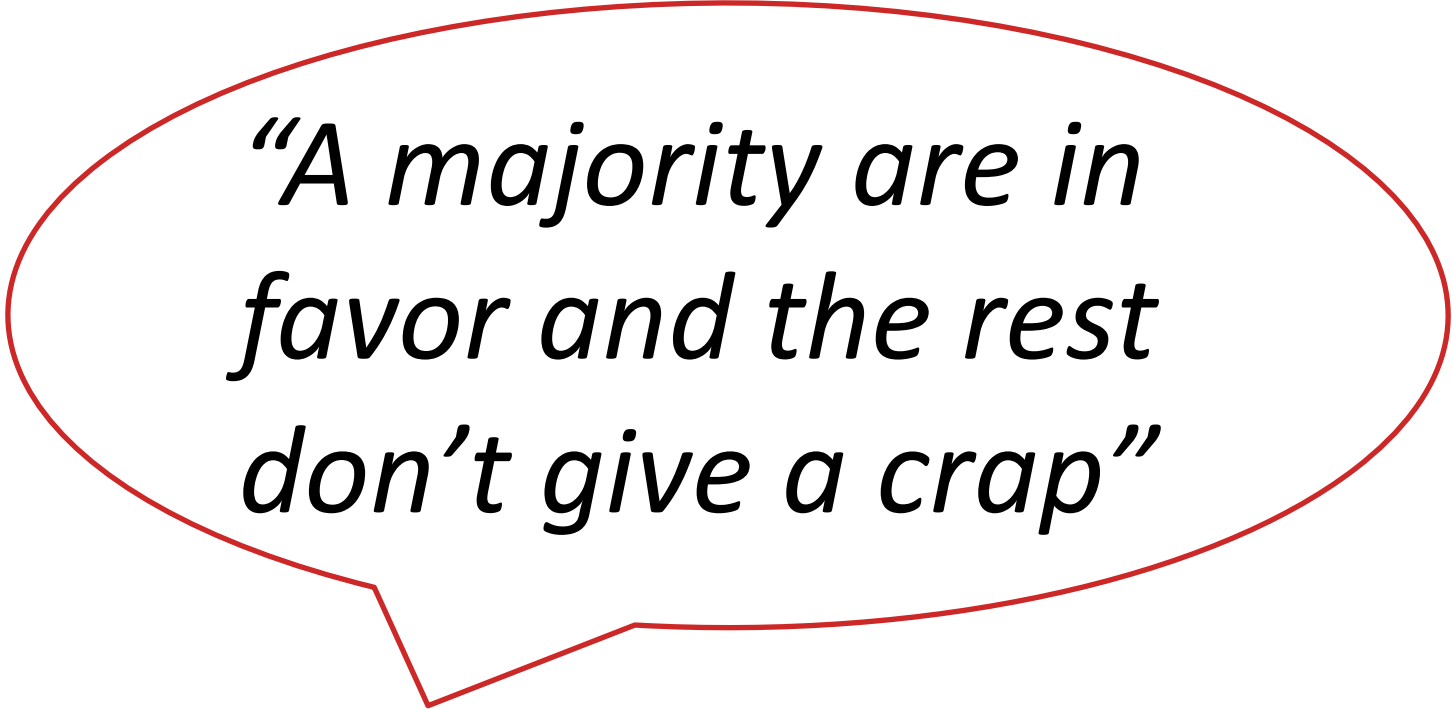
- Take a **scientific survey** of orders

# **WHY DO GOVERNMENTS NEED REPRESENTATIVE COMMUNITY INPUT?**

# Proposed Garbage Service Change

---

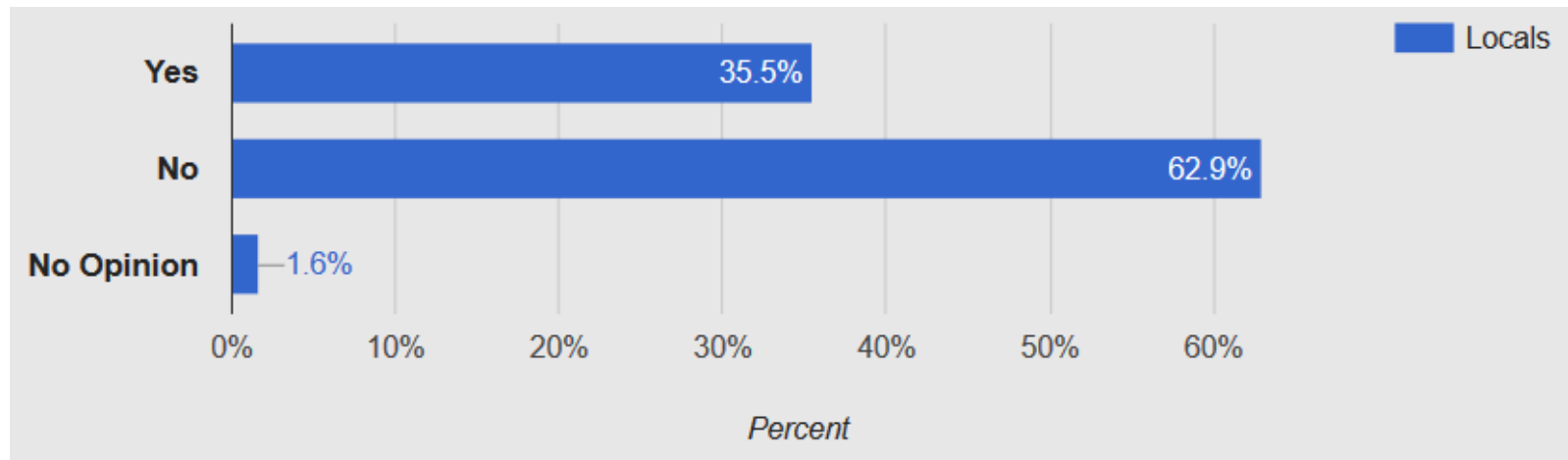
- Honest perception by well-intentioned official



*“A majority are in favor and the rest don’t give a crap”*

# A Majority Was Not In Favor

- Survey found almost 2 to 1 against



# Serious Problems Were Overlooked

- Citizens identified nonobvious flaws in the proposal and suggested better alternatives



# Data Changed the Decision

---

- Board **unanimously** voted against
- Avoided **10 years** of unwanted service
- Saved residents **\$7 million**



# **WHY DO CITIZENS NEED REPRESENTATIVE COMMUNITY INPUT?**

# QUICK POLL #4

In the year 1972, in the South, what percent of whites do you think favored segregation?

- ( ) 0% to 20%
- ( ) 21% to 40%
- ( ) 41% to 60%
- ( ) 61% to 80%
- ( ) 81% to 100%

# The Year is 1972 in the South

---

- What percent of whites favored segregation?

# The Year is 1972 in the South

---

- What percent of whites favored segregation?
- What percent of whites believed a majority of whites in their area favored segregation?

# The Year is 1972 in the South

---

- What percent of whites favored segregation?

15%

- What percent of whites believed a majority of whites in their area favored segregation?

# The Year is 1972 in the South

---

- What percent of whites favored segregation?

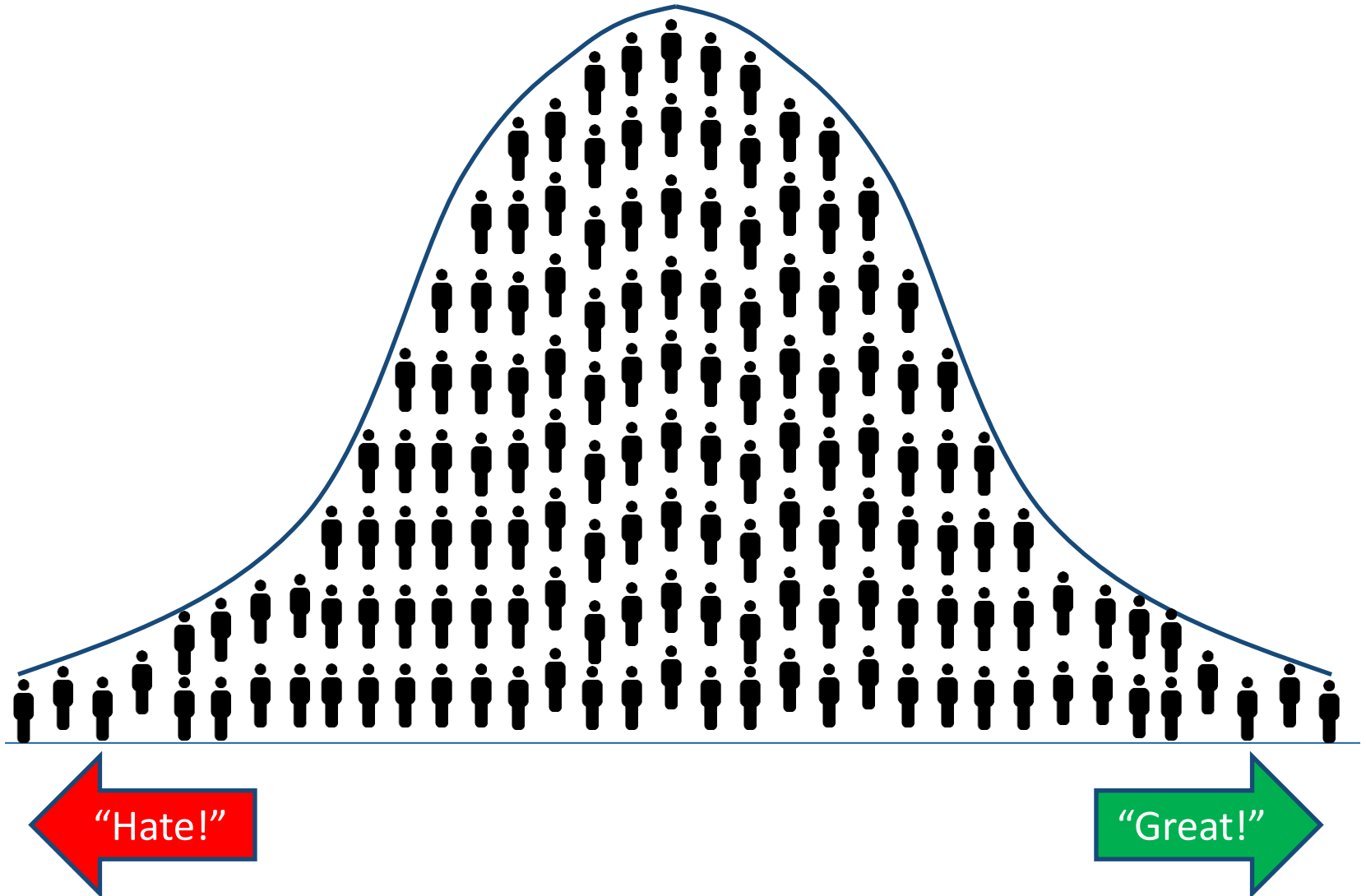
15%

- What percent of whites believed a majority of whites in their area favored segregation?

72%

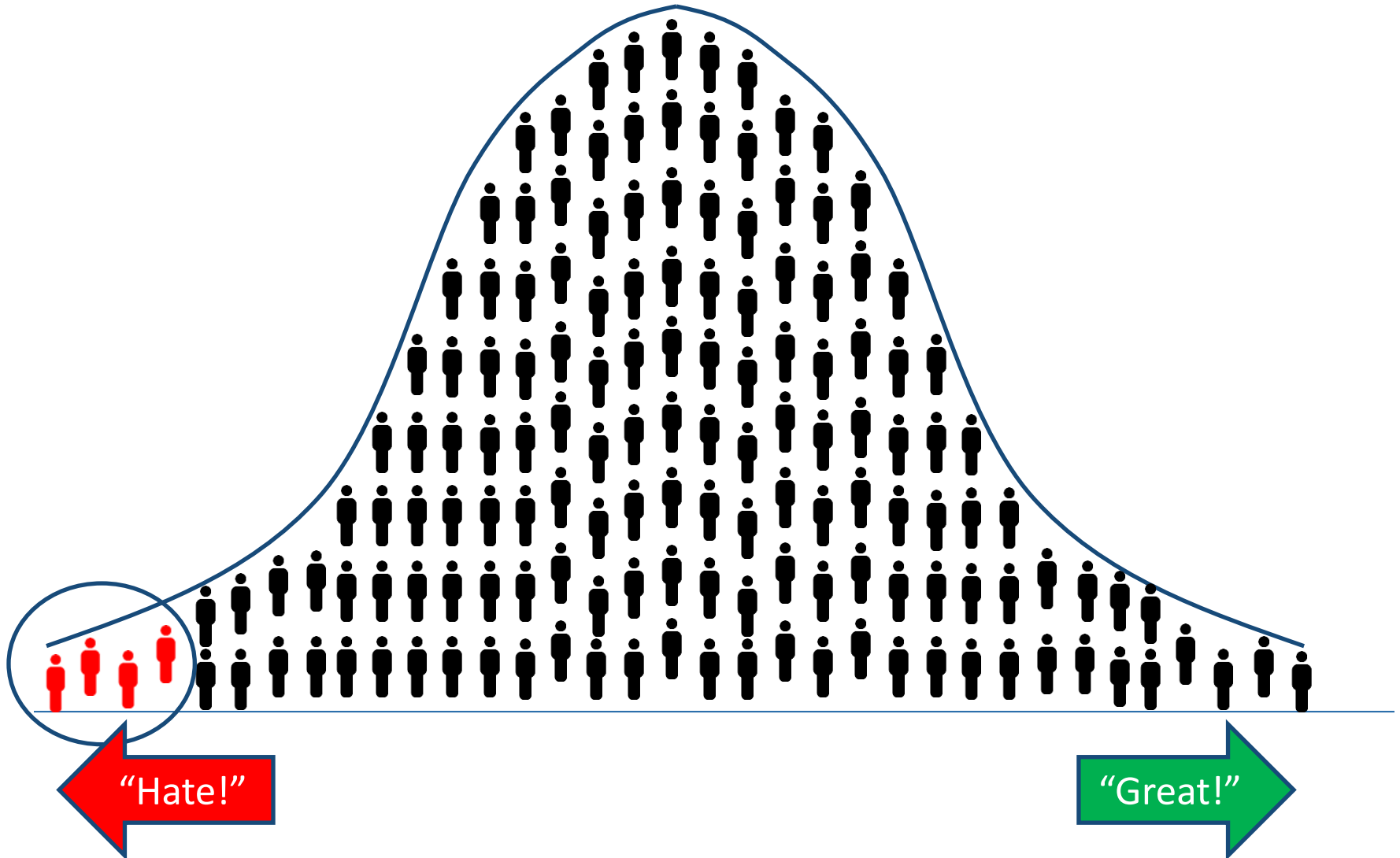
# WHAT IS THE **GENERAL CHALLENGE** WITH COMMUNITY INPUT?

# Your Community

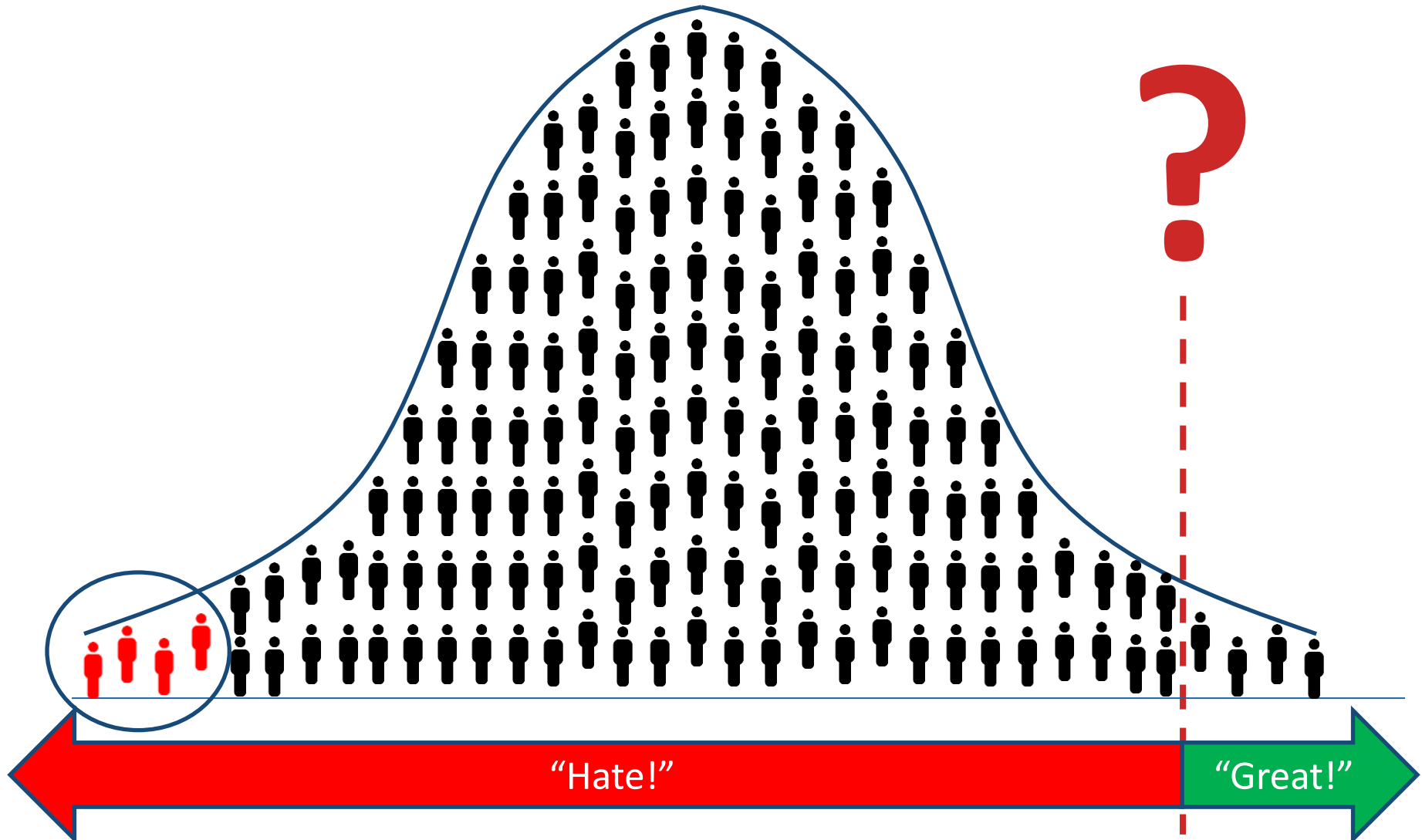




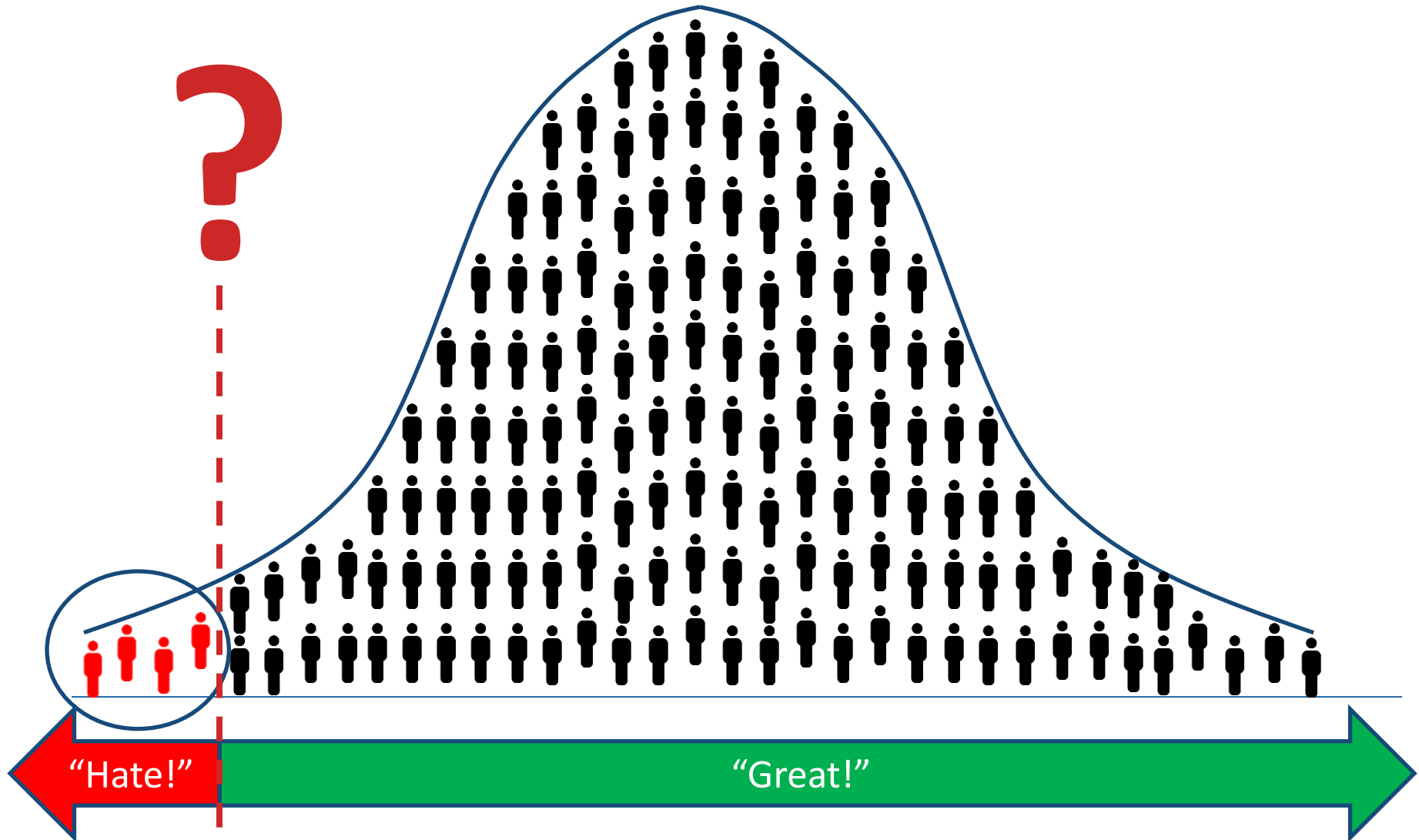
# Who You Usually Hear From



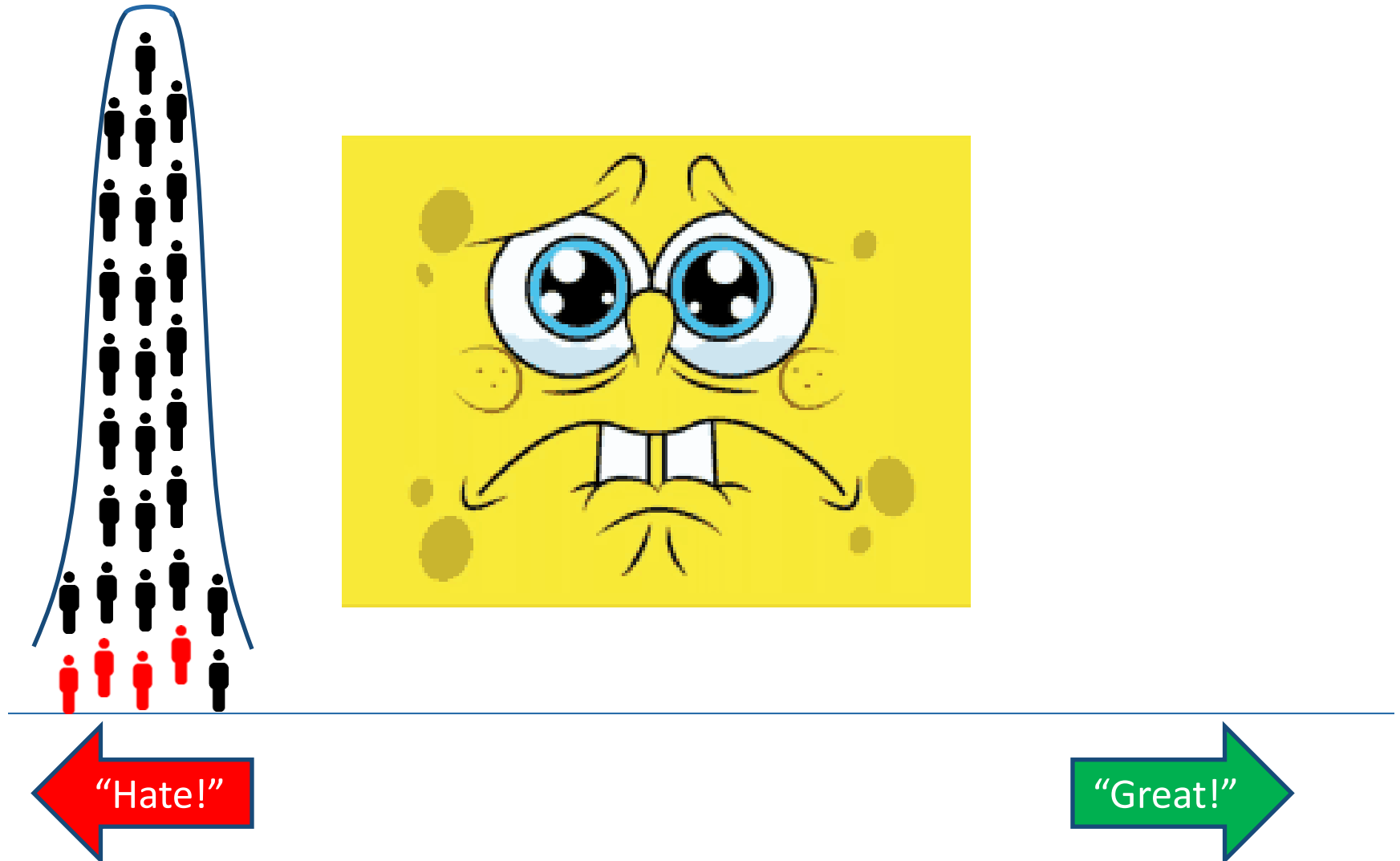
# Does The Community Think This?



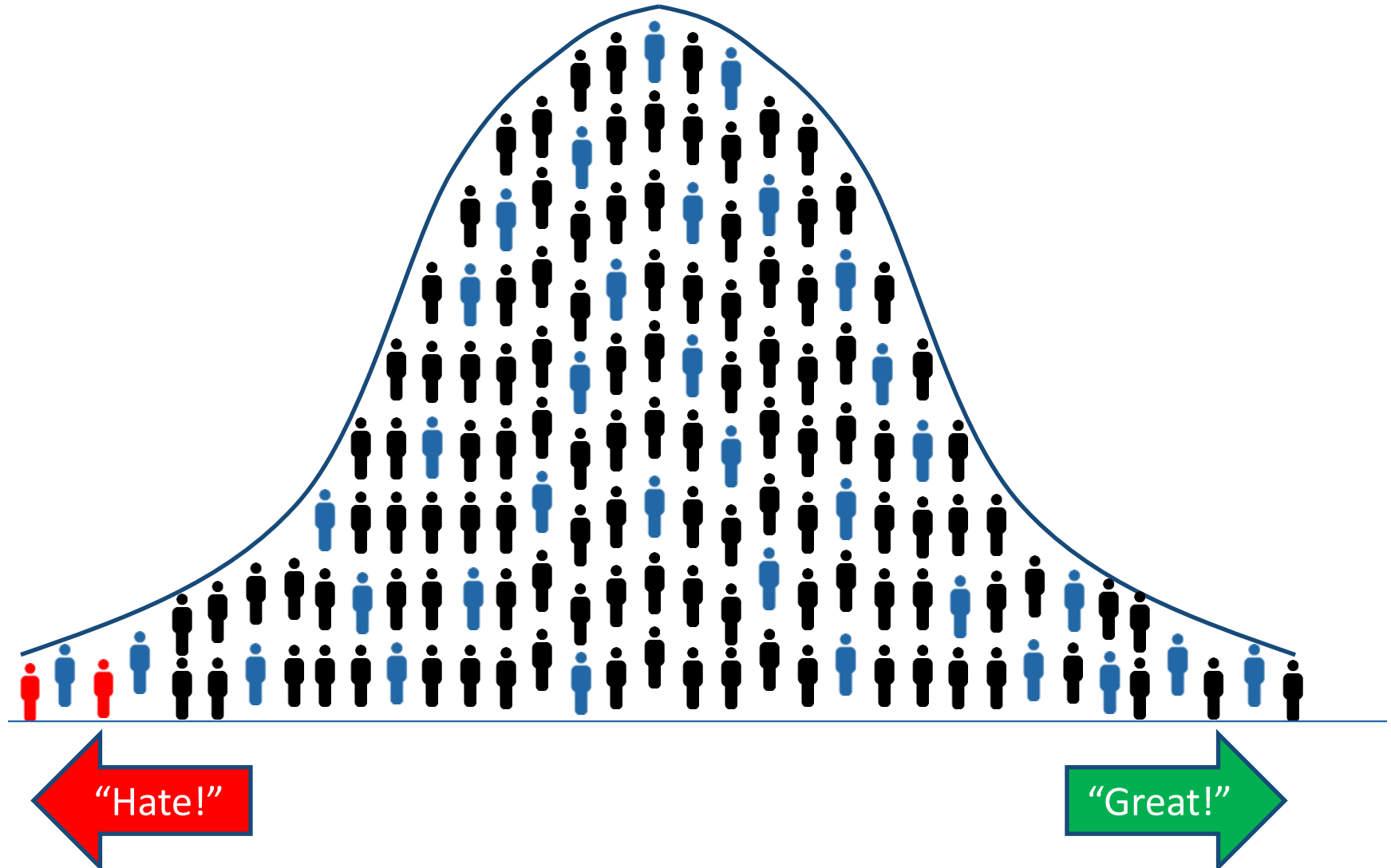
# Or This?... You Have No Idea!



# But You Know What It Feels Like

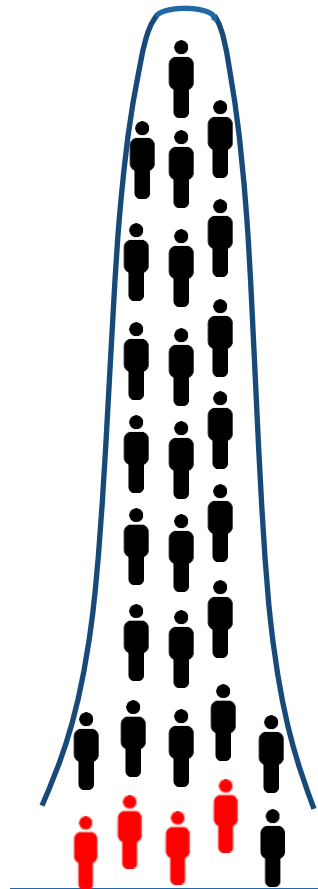


# Missing Representative Reality



# **HOW DOES INPUT PERCEPTION COMPARE WITH REPRESENTATIVE REALITY?**

# Perception: Park Quality



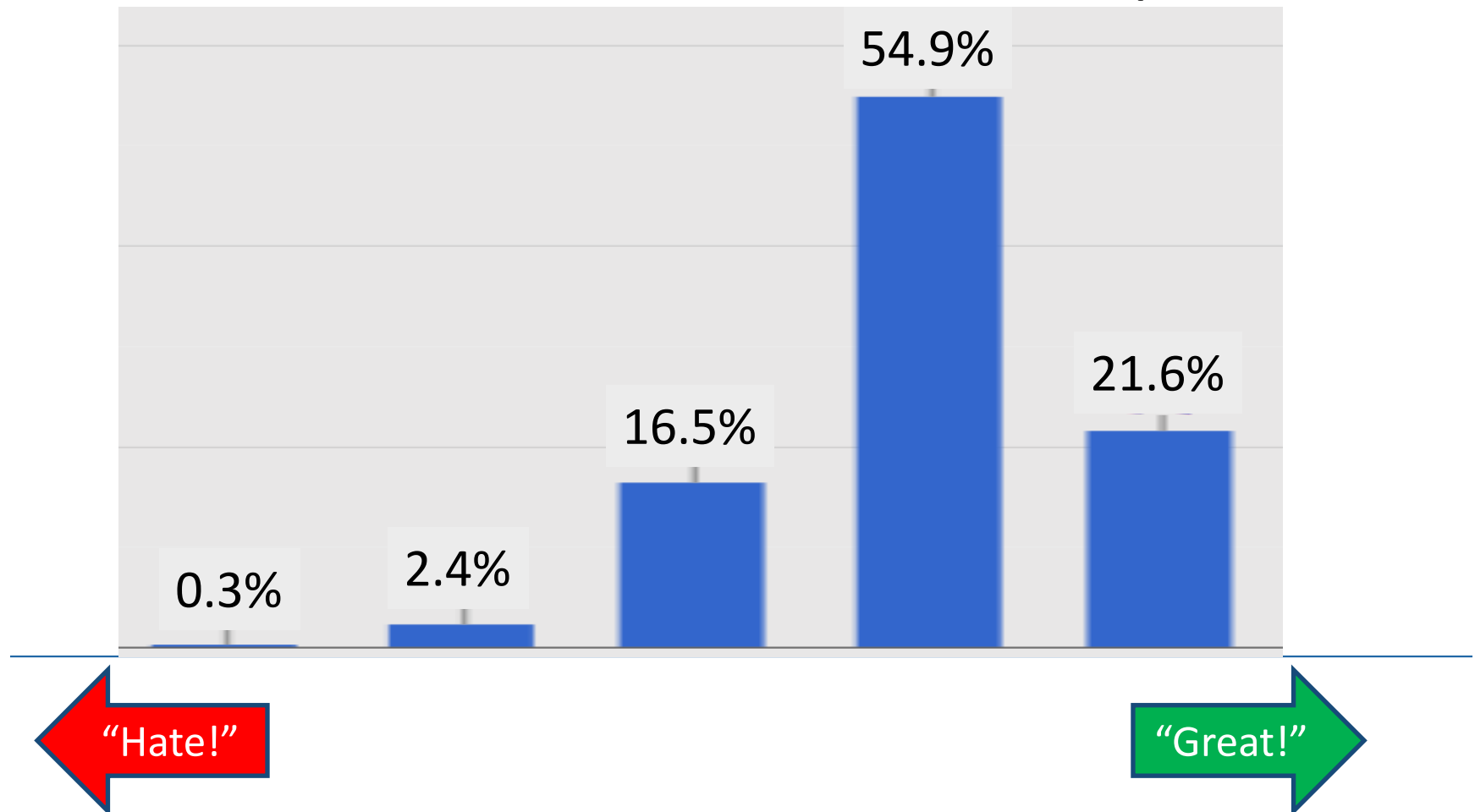
*“Nothing but complaints”*

*“Everyone hates our parks now!”*



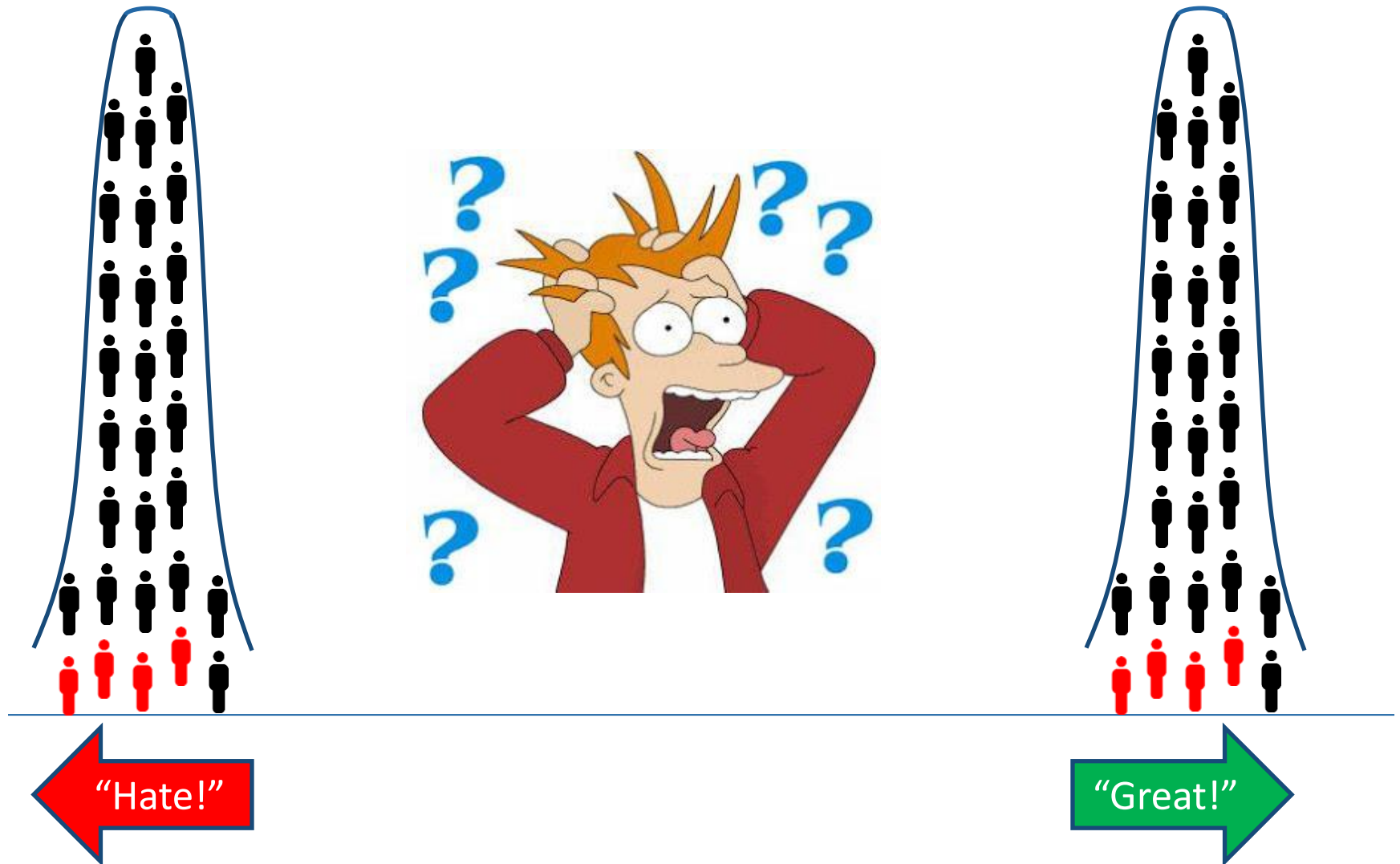
# Reality: Park Quality

4.0 out of 5: “Love, love, love the parks!”



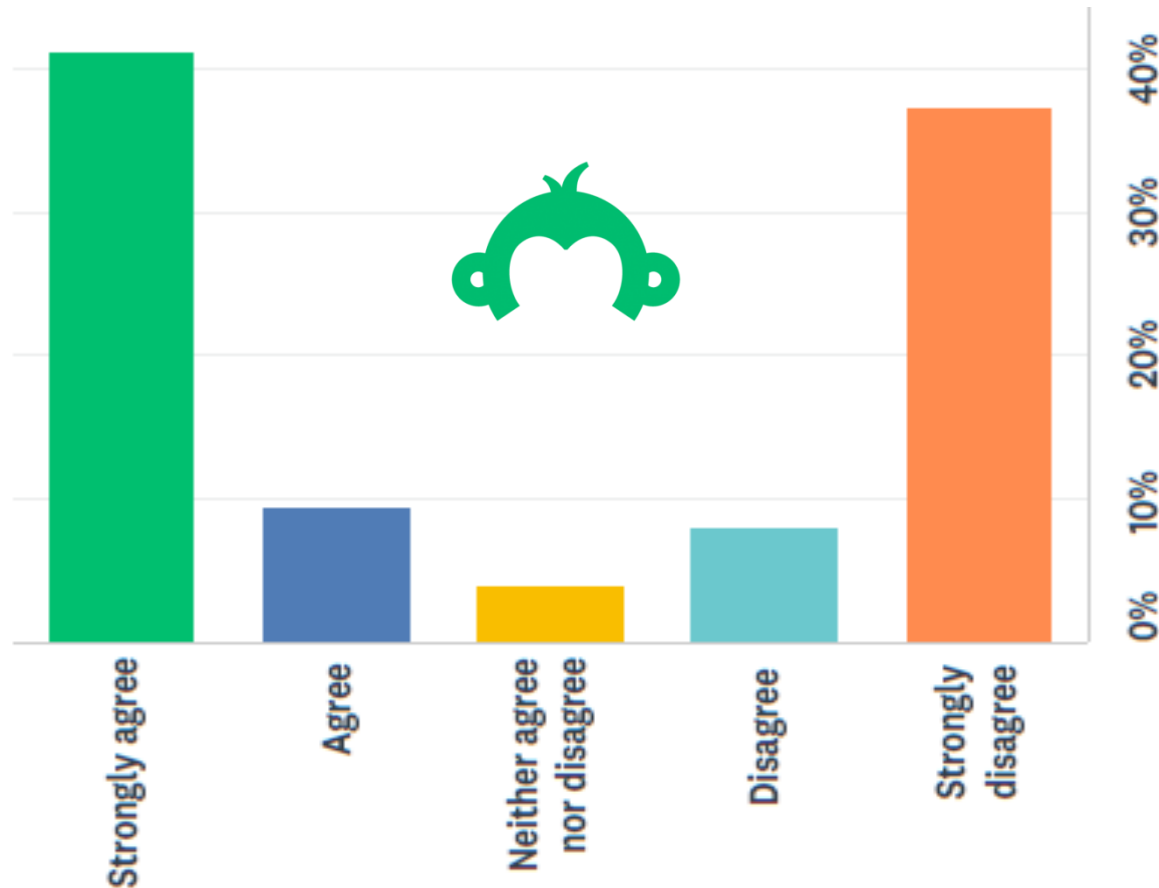


# Perception: School Sex Ed Curriculum



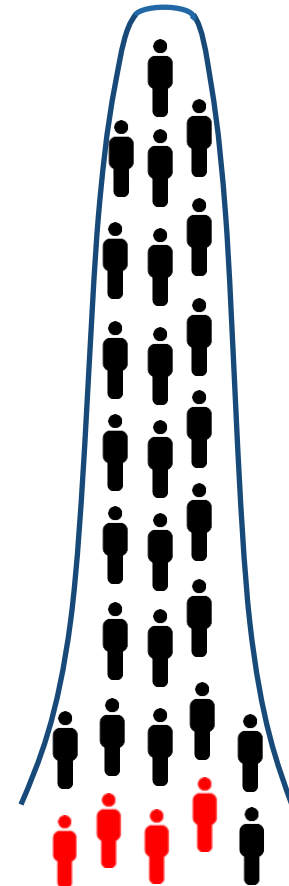
# The “Barbell” Distribution Behind It

Q4 How much do you agree or disagree that the topics presented in the proposed curriculum are appropriate for high school age students (ages 14-18)?



# Reality: School Sex Ed Curriculum

About **90% support** for each element on average

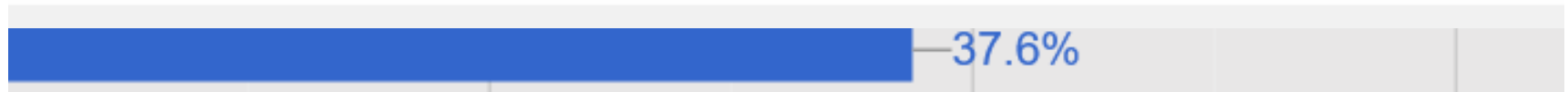


# Perception: Lockdown Protests



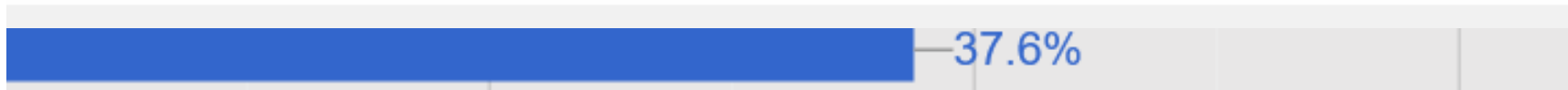
# Reality: Lockdown Protests

Things will open up too slowly, and the economy will get a lot worse

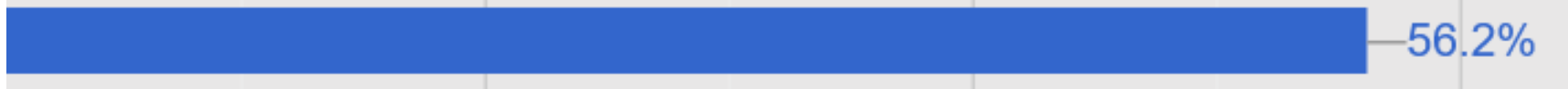


# Reality: Lockdown Protests

Things will open up too slowly, and the economy will get a lot worse



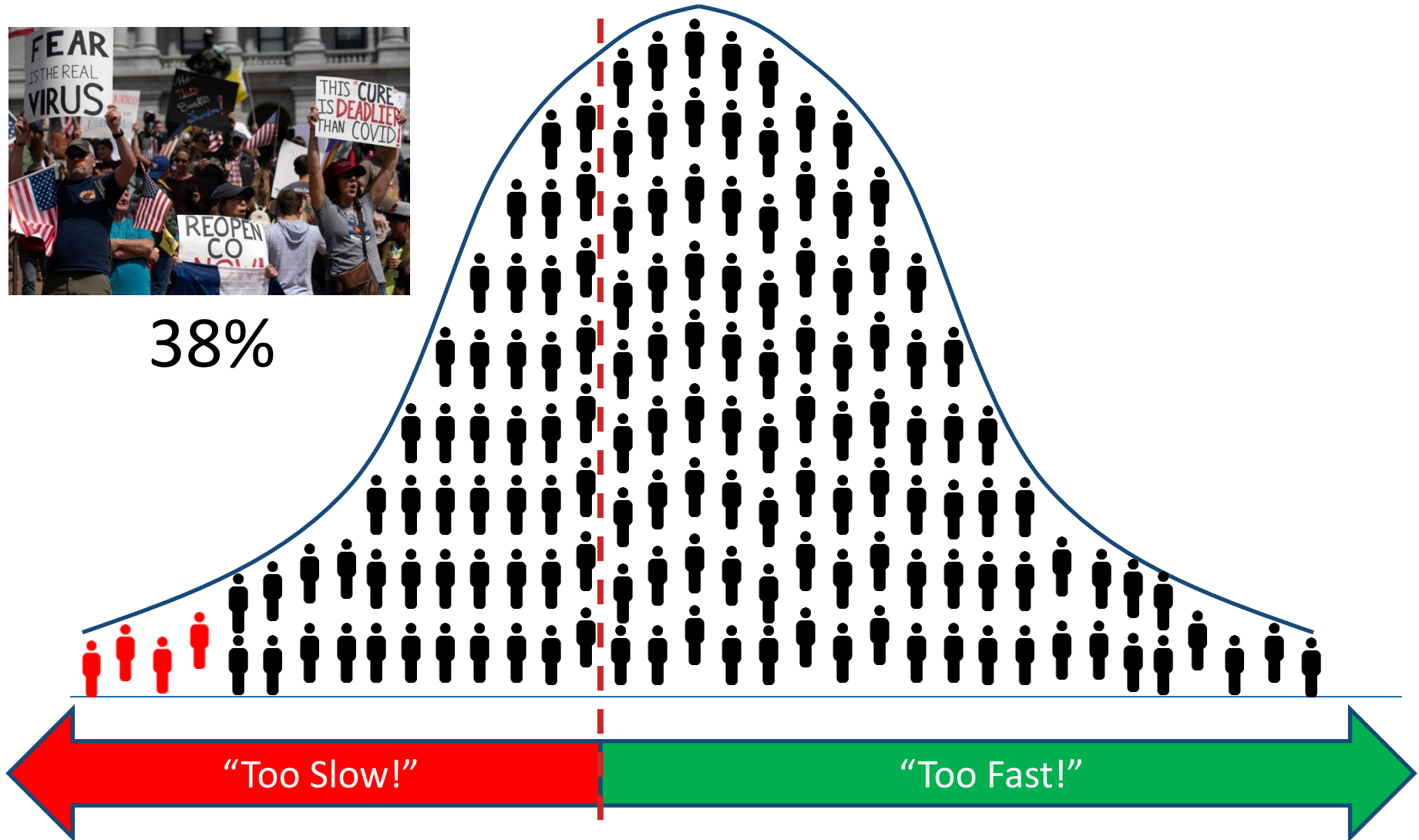
Things will open up too fast, and the outbreak will get a lot worse



# Lockdown Protest Support



38%





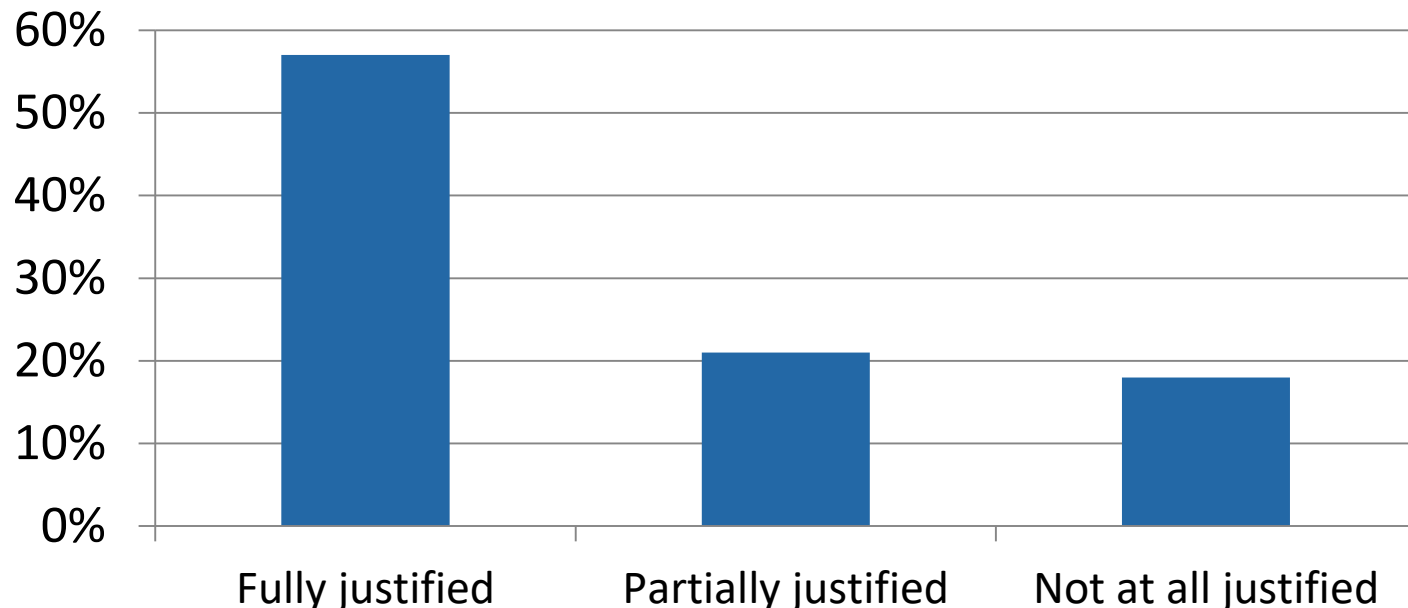
# Perception: Police Protests





# Reality: Police Protests

Regardless of the actual actions taken, do you think the anger that led to these protests was fully justified, partially justified, or not at all justified?



*Source: Monmouth University Poll, 6/2/20*

# Police Protest Support



82%

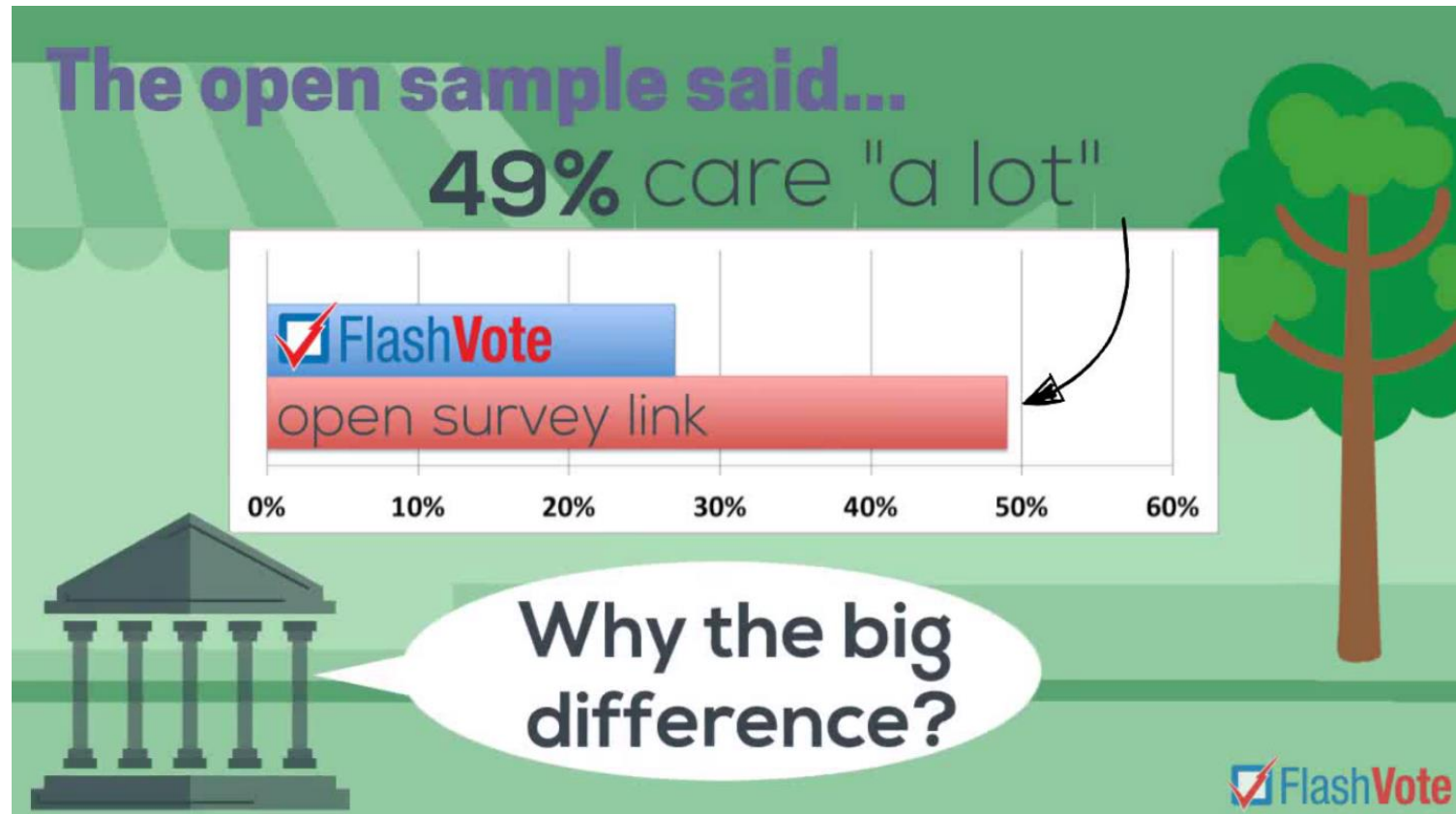


# HOW QUICKLY DOES INPUT GO BAD?

# More Engagement Can Be Worse



# Video



<https://www.flashvote.com/videos#online-engagement>

# What About “No Data”?

---

# What About “No Data”?

---

- How often is public input misleading?

(Never, Rarely, Sometimes, Usually, Always)

# What About “No Data”?

---

- How often is public input misleading?

(Never, Rarely, Sometimes, **Usually**, Always)



# What About “No Data”?

---

- How often is public input misleading?

(Never, Rarely, Sometimes, **Usually**, Always)

- What percentage of “upgrades” by Google/etc are typically NOT improvements when tested?

# What About “No Data”?

---

- How often is public input misleading?

(Never, Rarely, Sometimes, **Usually**, Always)

- What percentage of “upgrades” by Google/etc are typically NOT improvements when tested?

**50%**

# What About “No Data”?

---

- How often is public input misleading?  
(Never, Rarely, Sometimes, **Usually**, Always)
- What percentage of “upgrades” by Google/etc are typically NOT improvements when tested?

**50%**

So guessing doesn't work either...

# You Get The Problem... and Opportunity

---

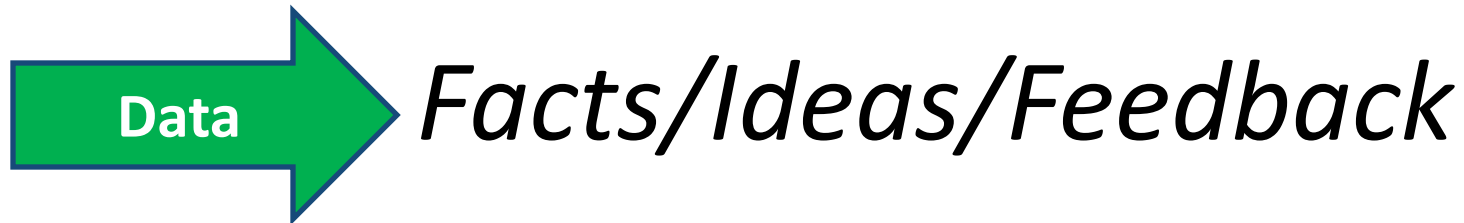
- Need to **make more decisions with data**
- **Need good data** to make good decisions
- Now lets talk about **how to get good data...**

# **PART 3: HOW TO GET GOOD DATA AND AVOID BAD**

# TWO TYPES OF HELPFUL DATA

# Remember These?

“Smarter” = **How** to do

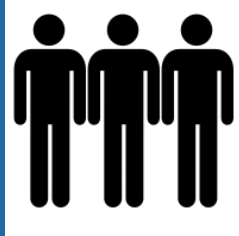


“Wiser” = **What** to do

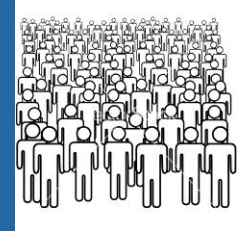


# The Two Types of Input

Individual  
Facts/Ideas



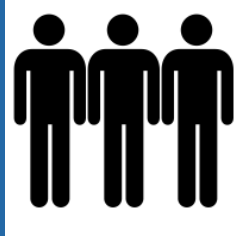
Community  
Preferences



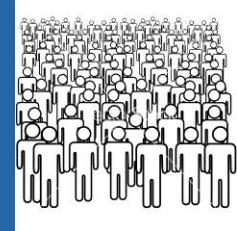


# The Two Types of Input

Individual  
Facts/Ideas



Community  
Preferences



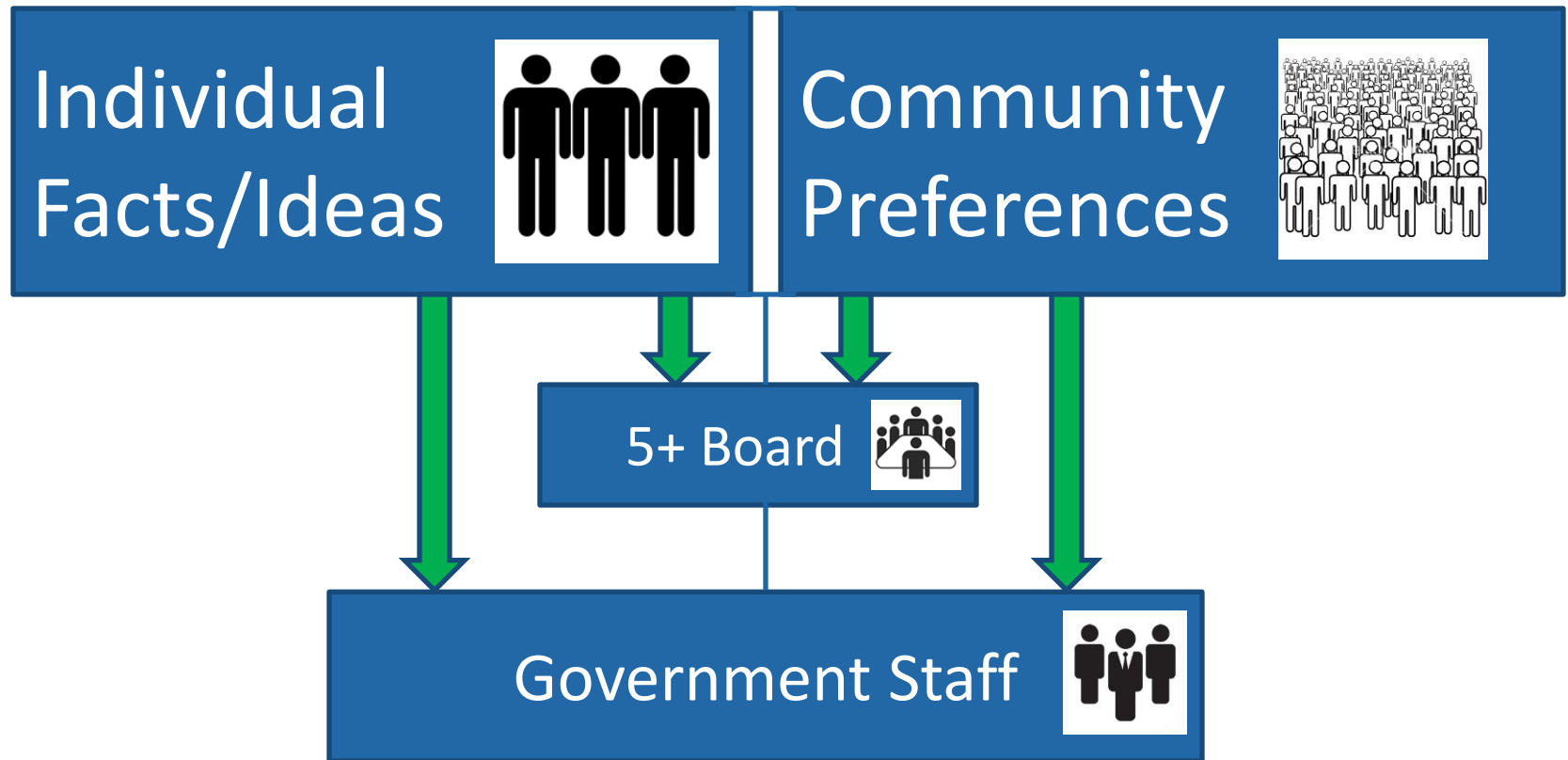
**Everything else is noise!**

# Need Valid Facts and Preferences

- Facts About Opinions
    - Scientific community preferences
  - Facts About Facts
    - Valid/true observations or ideas
- 
- Opinions About Facts
    - Unverified/uninformed statements
  - Opinions About Opinions
    - Unscientific community preferences



# Both Can Be Helpful



# Usually You Want These

- What to Do?

- Community preferences
- Individual facts/ideas



- How to Do It?

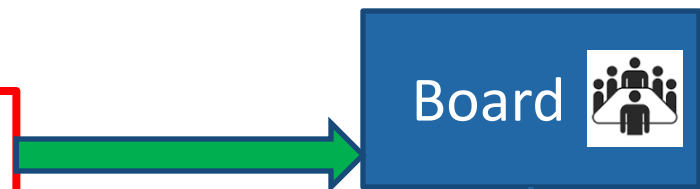
- Community preferences
- Individual facts/ideas



# But Don't Forget These

- What to Do?

- Community preferences
- Individual facts/ideas



- How to Do It?

- Community preferences
- Individual facts/ideas



# WHEN DO YOU NEED **COMMUNITY PREFERENCE DATA?**

# Quick Question

---

- Do you want something that is awesome?

Yes

# Quick Question

---

- Do you want something that is awesome?

Yes

- Do you want to pay more taxes?

No



# Tradeoffs Matter

---

- Do you want to pay for something awesome?

Maybe

# Tradeoffs Matter

---

- Do you want to pay for something awesome?

Maybe

- 1) What is the awesome thing?
- 2) How much does it cost?

# What Does Your Community Want?

	<i><b>Get More</b></i>	<i><b>Get Less</b></i>
<i><b>Pay More</b></i>	Maybe	No!
<i><b>Pay Less</b></i>	Yes!	Maybe

# Find Out What To Do Here

	<i><b>Get More</b></i>	<i><b>Get Less</b></i>
<i><b>Pay More</b></i>	<div>Ask About Tradeoffs</div> <b>Maybe</b>	<b>No!</b>
<i><b>Pay Less</b></i>	<b>Yes!</b>	<div>Ask About Tradeoffs</div> <b>Maybe</b>

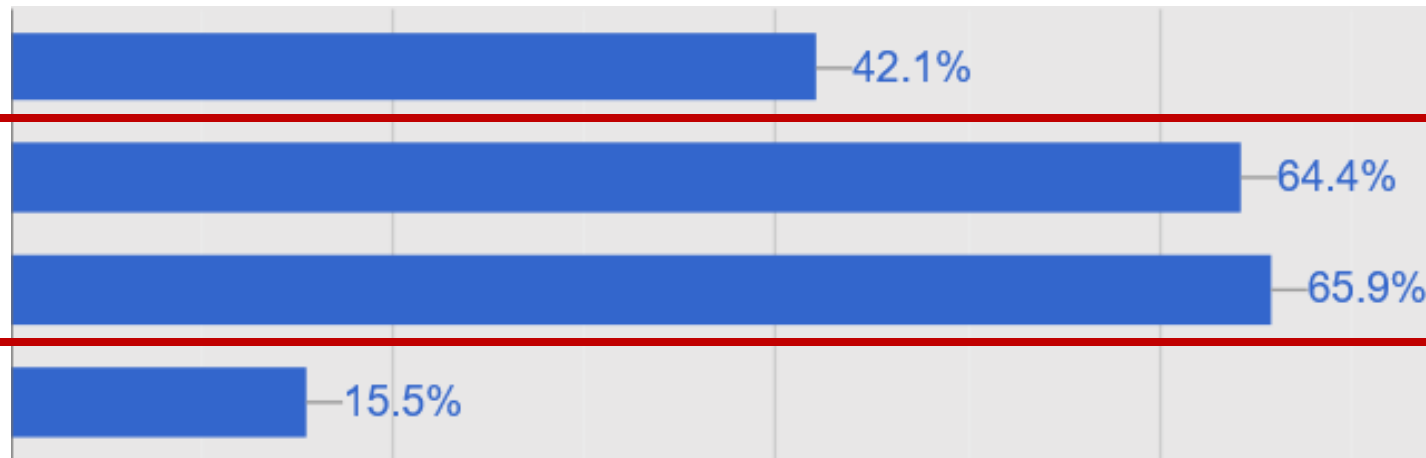
# Example: Recycling

---

- Pay more to keep service the same
- Pay the same, but do more sorting myself
- Pay the same, but cut from weekly to 2 weeks
- Give up recycling

# Example: Recycling

- Pay more to keep service the same
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# HOW **NOT** TO GET **VALID** COMMUNITY PREFERENCE DATA

# Valid Community Preference Data

---

- **Unbiased responses** that are not self-selected
  - Representative sample (>50% response rate)
- **A large number** of representative responses
  - Statistically meaningful (250 to 600 is +/-6% to 4%)
- **Well structured** questions and answers
  - Unbiased questions targeted to resident knowledge



# Meetings

- Do you get sufficiently large numbers?



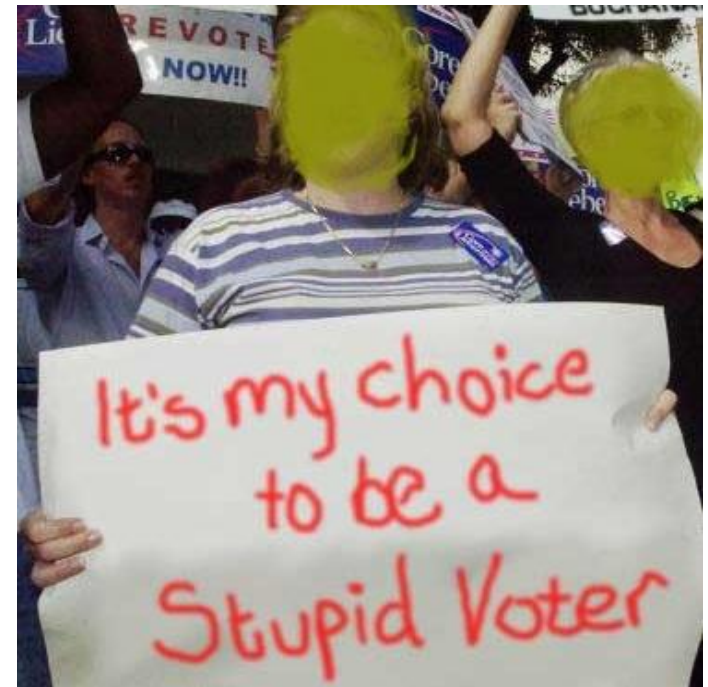
# Meetings

- Do you get representative participation?



# Meetings

- Do you get constructive and informed input?





# Emails

- Are emailers representative of non-emailers?



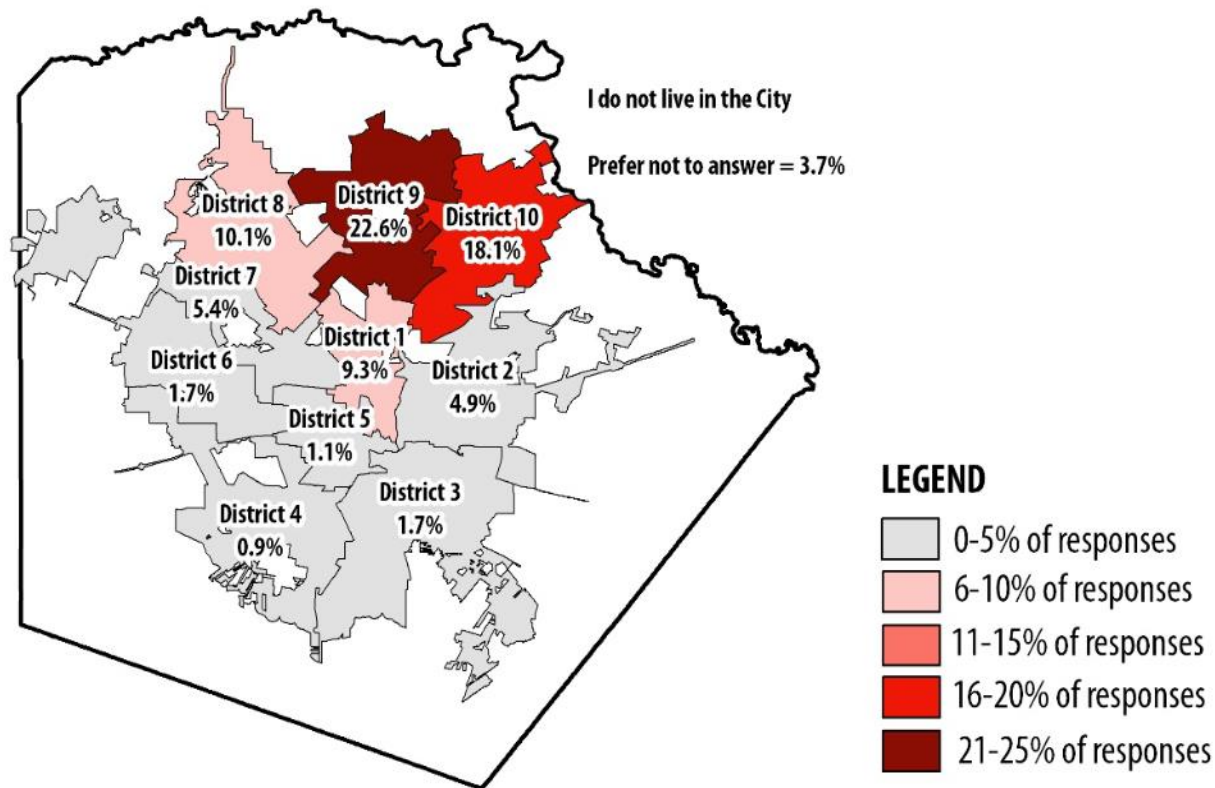
# Social Media

- Are posters representative of non-posters?

$$\frac{\text{Viewing}}{\text{Posting}} > 100x$$

# Online Engagement Tools

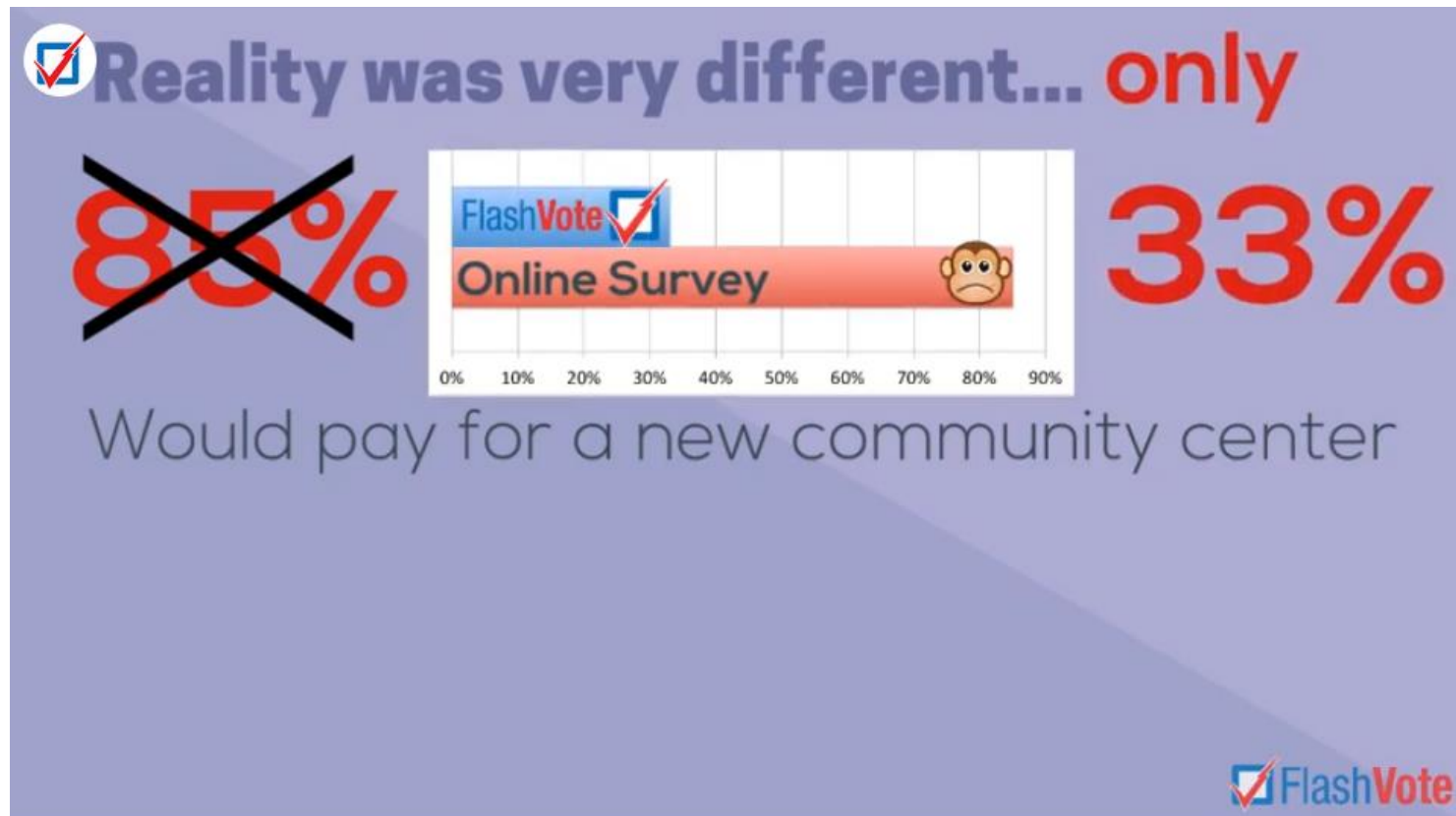
- Are users representative of non-users?



# of respondents (Survey #2): 494

# Online Surveys

- Are responders representative of non-responders?



# What Goes Wrong With All These?

---

- The noisy are not representative of the many
  - People follow the topics they are interested in
  - They participate in a topic because of their interest
  - They tell like-minded friends to participate
  - They can participate multiple times if motivated



# What Goes Wrong With All?

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# HOW TO GET COMMUNITY PREFERENCE DATA THAT IS **VALID**

# Scientific Mailed Surveys



- What percentage of Americans are over 65?

# Scientific Mailed Surveys



- What percentage of Americans are over 65?

16%

# Scientific Mailed Surveys



- What percentage of Americans are over 65?

16%

- What is a typical percentage of completed surveys that come from people over 65?

# Scientific Mailed Surveys



- What percentage of Americans are over 65?

16%

- What is a typical percentage of completed surveys that come from people over 65?

50%

# Scientific Mailed Surveys



- What percentage of Americans are over 65?

16%

- What is a typical percentage of completed surveys that come from people over 65?

50%

# Scientific Phone Surveys



- Response rates to RDD phone surveys

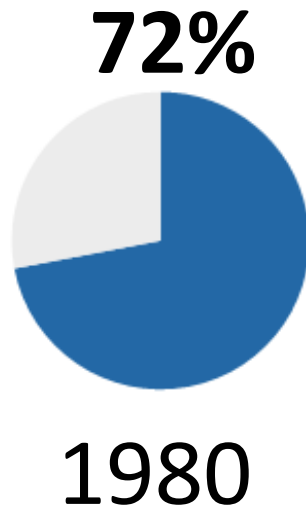
1980



# Scientific Phone Surveys



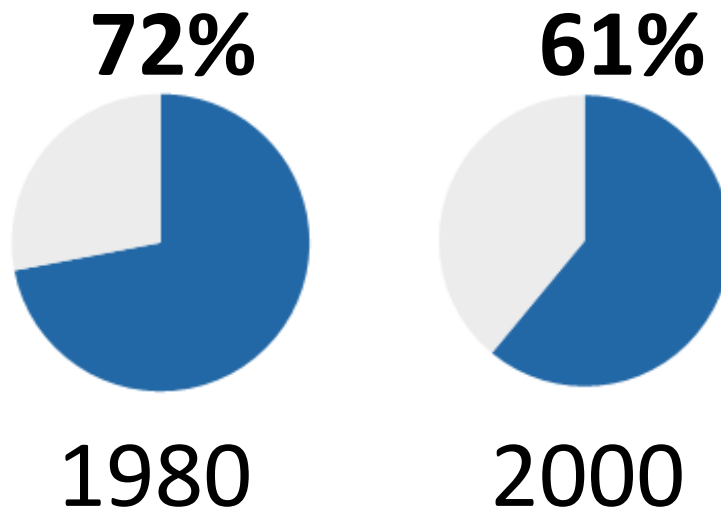
- Response rates to RDD phone surveys



# Scientific Phone Surveys



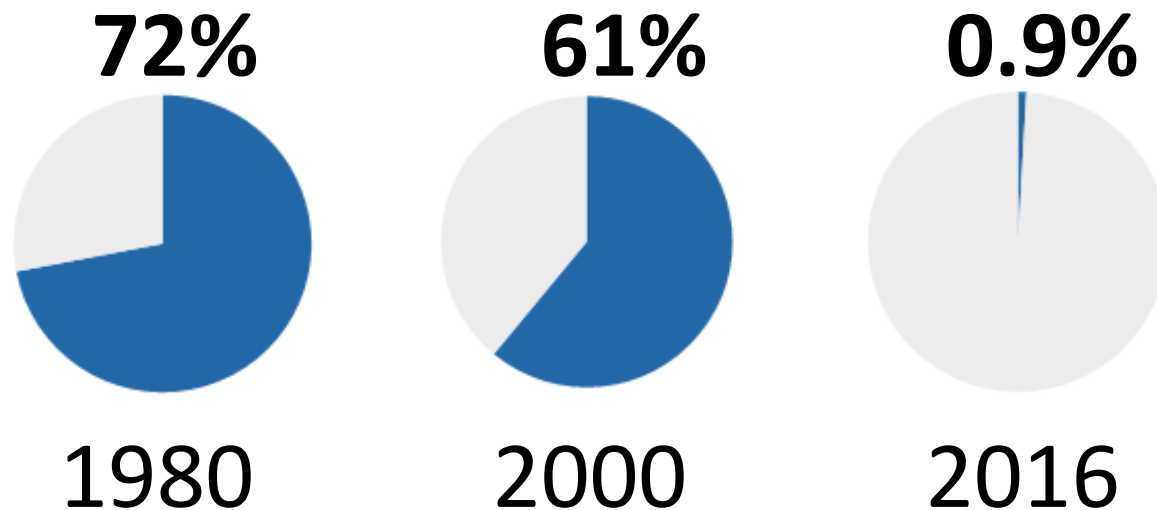
- Response rates to RDD phone surveys



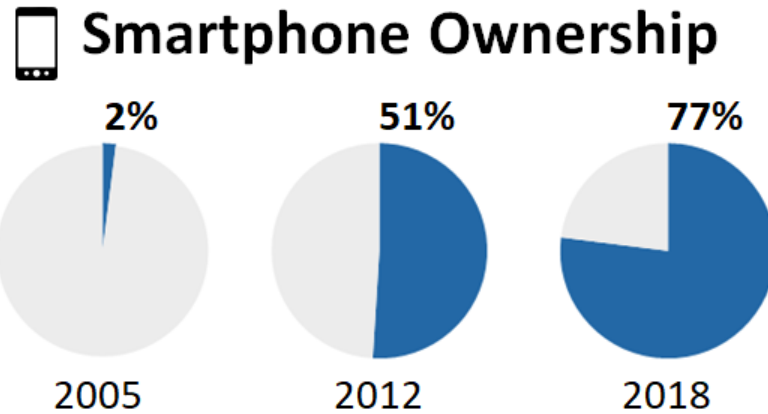
# Scientific Phone Surveys



- Response rates to RDD phone surveys



# Scientific Panels



Pew Research Center

SEARCH...

FEBRUARY 27, 2019



## What our transition to online polling means for decades of phone survey trends

BY COURTNEY KENNEDY AND CLAUDIA DEANE

From the 1980s until relatively recently, most national polling organizations conducted surveys by telephone, relying on live interviewers to call randomly selected Americans

### RELATED

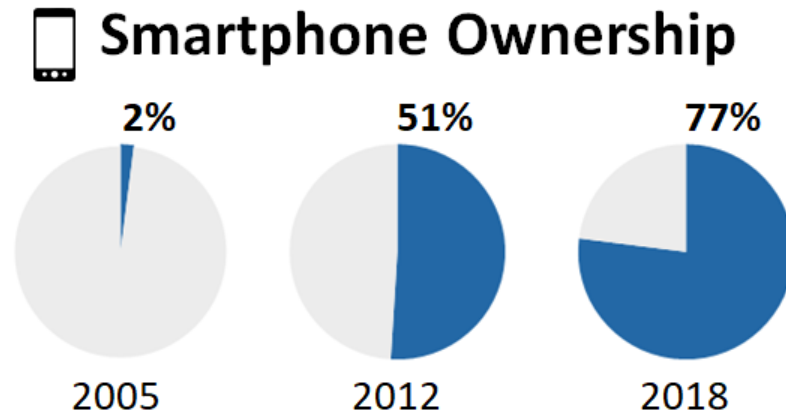
FACT TANK | FEBRUARY 27, 2019

Response rates in telephone surveys have resumed their decline

FACT TANK | JUNE 16, 2017

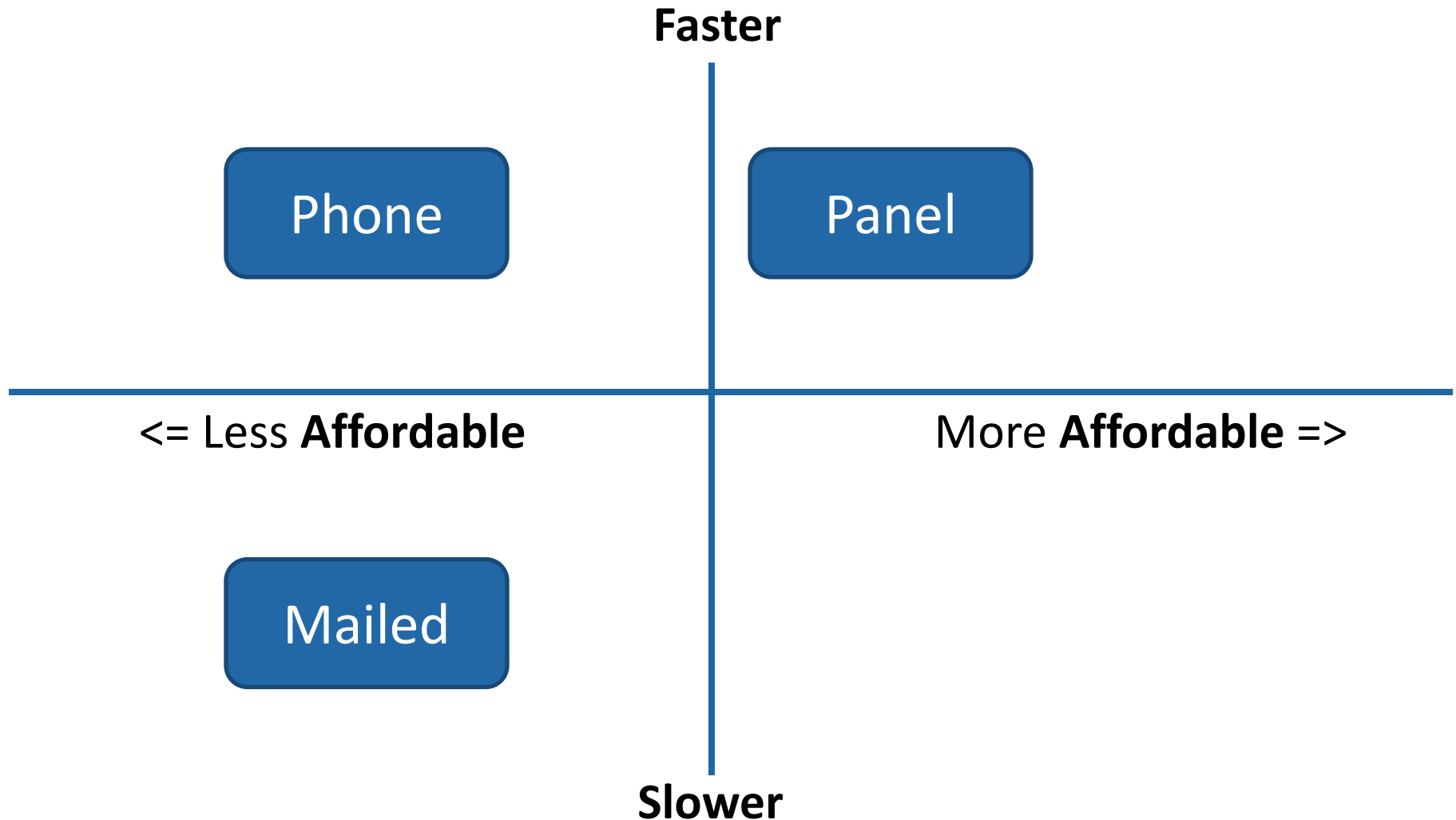
Q&A: Pew Research Center's president on key issues in

# Scientific Panels

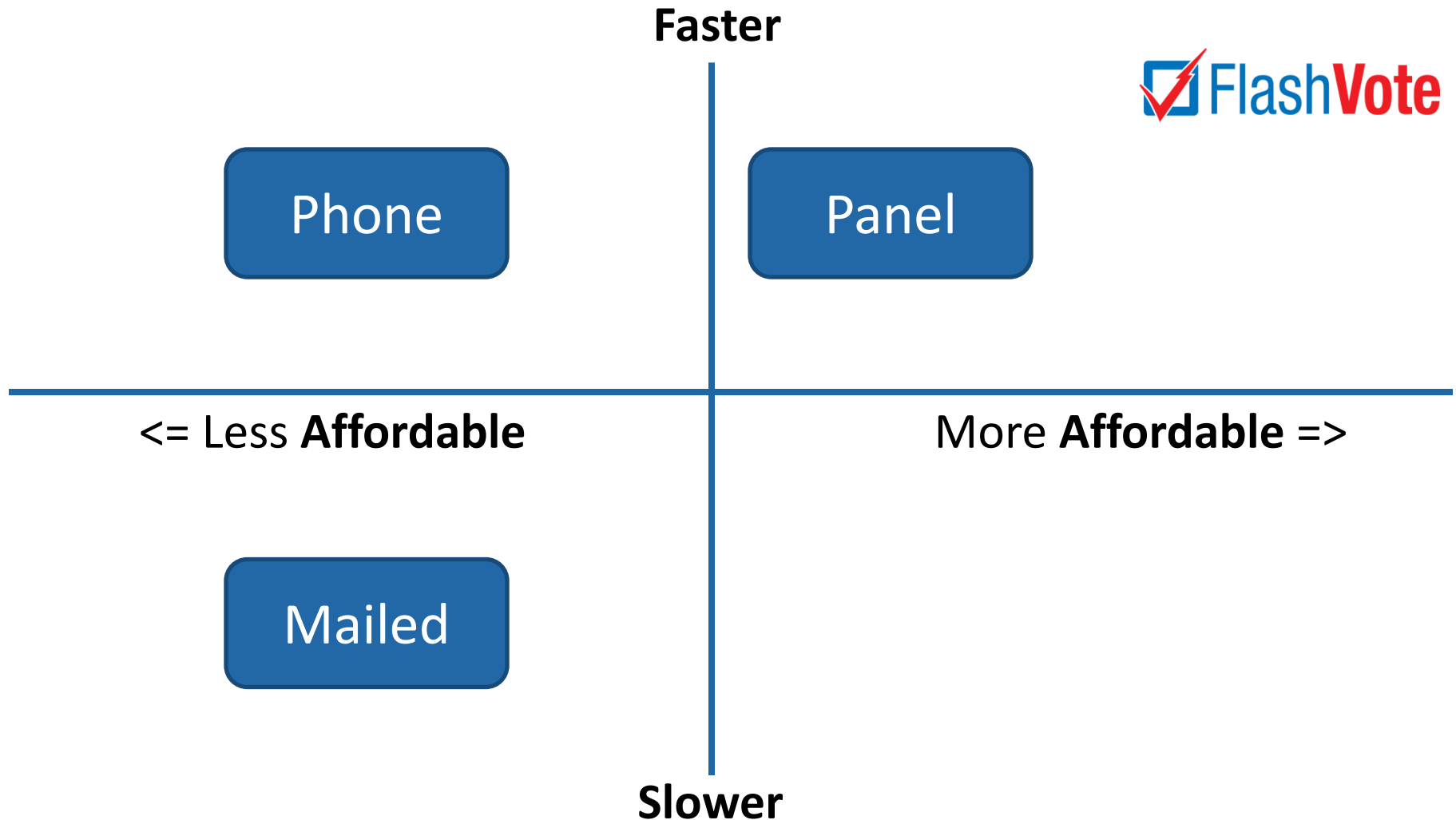


- Upfront effort to create good panel
- Needs to be random/uncorrelated to topic
- Need to track potential biases relative to topics

# Rough Comparison



# For Local Governments



**WHEN DO YOU NEED  
INDIVIDUAL  
FACTS/IDEAS/FEEDBACK?**



# Always... If “New? True? For You?”

---

- Is it **new**?
  - Do you already know it? (Yes/No/Not Sure)
- Is it **true**?
  - Is it a statement of fact? (Yes/No/Not Sure)
- Is it **for you**?
  - Does it pertain to your activities? (Yes/No/Not Sure)

# But You Need All Three

- Is it **new**?
  - Do you already know it? (YES)
- Is it **true**?
  - Is it a statement of fact? (YES)
- Is it **for you**?
  - Does it pertain to your activities? (YES)

**Need 3/3**



# New? True? For You? - Examples

- There is a pothole at Main and 1st

- Second report of the same pothole

- I used the new bike lane

- The community wants more bike lanes

# New? True? For You? - Examples



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# New? True? For You? - Examples



- There is a pothole at Main and 1st



- Second report of the same pothole

- I used the new bike lane



- The community wants more bike lanes



# HOW TO **GET** HELPFUL INDIVIDUAL FACTS/IDEAS/FEEDBACK?

# You Can Ask Open Questions

- Ask **open-ended factual** questions
  - Anyone know a good pizza place?
  - Any ideas for the vacant lot near the school?
  - What would you change about trash service?
- Never ask **preference** questions (percentages)
  - Who makes the best pizza?
  - Should we build a field or a playground?
  - Should we change recycling to every other week?

# Good or Bad Online Question?

3. In response to the COVID-19 pandemic, the City is exploring ways to assist restaurants and businesses in meeting the COVID-19 safety protocols. One of those measures is **temporarily** utilizing adjacent parking spaces in the public right-of-way for outdoor dining and business use.

How supportive are you of this temporary measure in light of COVID-19 safety protocols?

- ☐ Very Supportive
- ☐ Supportive
- ☐ Neutral
- ☐ Not Supportive
- ☐ Not at All Supportive

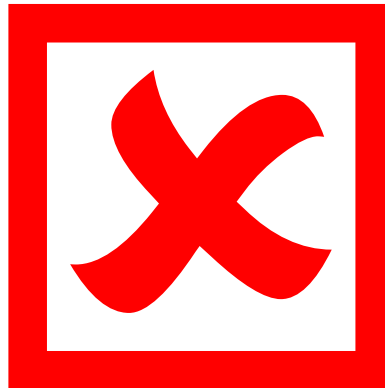


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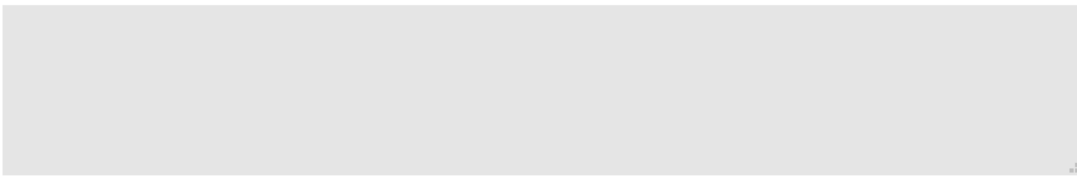
## Individual Preference = Junk Data!

# Good or Bad Online Question?

4. Businesses would be required to comply with City codes and regulations including:

- limit use to business operating hours, but no later than 10 PM,
- maintain sidewalk width for pedestrians,
- provide accessibility for all users,
- adhere to social distancing,
- comply with state requirements for alcohol service,
- provide traffic safety barriers,
- prohibit live entertainment and music, and
- maintain cleanliness.

Are there any additional considerations that should be addressed?

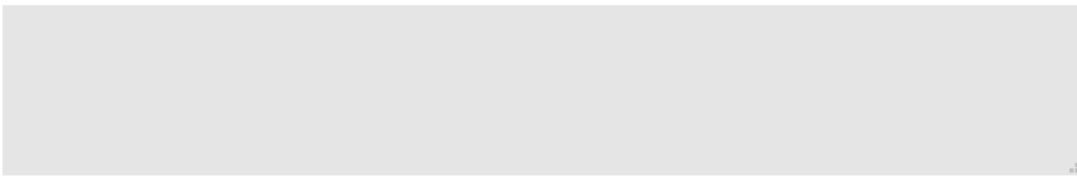


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## Individual Fact/Idea = Good Data!

# Use Whatever You Have



DON'T HESITATE TO USE:

- Meetings
- Complaints
- Emails
- Social Media
- Online Engagement Tools
- Online Surveys

TO COLLECT **INDIVIDUAL FACTS/IDEAS/FEEDBACK**

# Just Not For Community Preferences!



# WARNING

NEVER ATTEMPT TO USE:

- Meetings
- Complaints
- Emails
- Social Media
- Online Engagement Tools
- Online Surveys

TO GAUGE **COMMUNITY PREFERENCES**

# Online Surveys Need Special Warning



# Manage The Individual Input You Get

---



Help me understand...

(IF NEW THING) how doing that would benefit everyone in the community?

# Manage The Individual Input You Get



Help me understand...

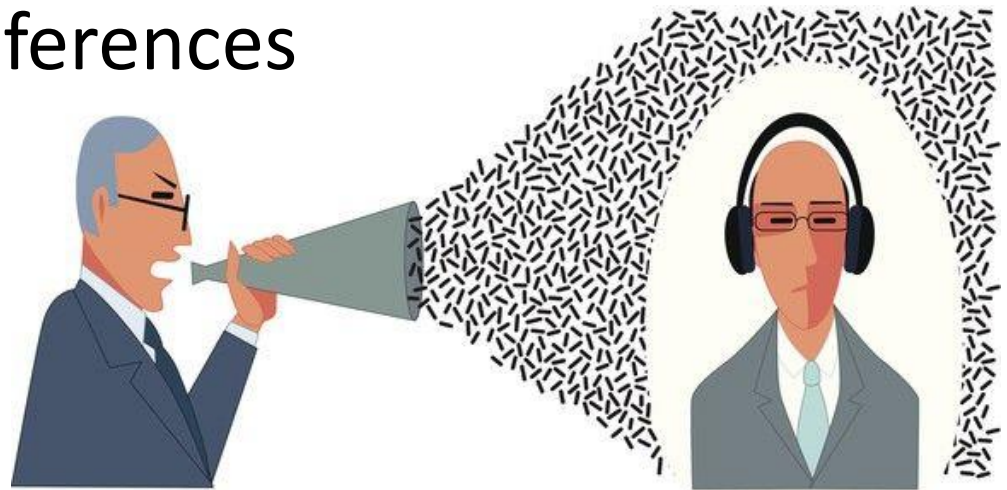
(IF NEW THING) how doing that would benefit everyone in the community?

(IF CHANGE) how doing that would benefit everyone in the community more than doing \_\_\_\_\_?



# Ignore With Scientific Precision

- **Ignore** claims about personal or community preferences



- **Ignore** sentiments or any percentages observed online or in person

# Individual Input $\neq$ Community Input

---

*“I don’t like the cell phone tower”*

*“We don’t need the cell phone tower”*

*“The cell phone tower will cause cancer”*

*“The community doesn’t want or need the cell phone tower”*

**SO WHICH CHANNELS FOR  
WHICH INPUT?**

# Full Guide to Community Input

Input Type	How to Do? -Ideas/Facts	How to Do? -Preferences	What to Do? -Ideas/Facts	What to Do? -Preferences
Meeting/Workshop	Y		Y	
Phone Calls	Y		Y	
Emails	Y		Y	
Social Media	Y		Y	
Online Surveys	Y		Y	
Online Engagement	Y		Y	
311	Y		Y	
Scientific Panel	Y	Y	Y	Y
Scientific Mail	Y	Y	Y	Y
Scientific Phone	Y	Y	Y	Y
Elections				Y

# Simple Guide to Community Input

	Meetings, Emails, Social Media, Online Engagement/Surveys	Scientific Community Surveys
New Facts, Ideas or Feedback	✓ YES	✓ YES
Community Preferences	✗ NO	✓ YES
Interaction (Q&A)	✓ YES	✗ NO

# REMEMBER QUICK POLL #3?

- Which best describes how you feel about online polls/surveys?

☒ (x) Good data, glad we can get it -- Facts/ideas

☐ ( ) Probably not great, but better than nothing

☒ (x) Bad data, would never use it -- Preferences

☐ ( ) Not Sure

# CONCLUSION

# Facts vs Community Preferences

## FACTS

- New?
- True?
- For You?




## COMMUNITY PREFERENCES

- Large Number?
- Not Self-selected?
- Good Questions?






# Helpful

## FACTS

- New 
- True 
- For You 

## COMMUNITY PREFERENCES

- Large Number 
- Not Self-selected 
- Good Questions 

# Useless/Dangerous

## USELESS

- Opinions about Opinions
- Opinions about Facts



## DANGEROUS

- Unrepresentative Voices
- False Facts



# The Three “E”s for Governments

- **Effective** = Do the right things (“Wiser”)
  - What pizza toppings do we get?
- **Efficient** = Do those things right (“Smarter”)
  - How do we get the pizza made?
- **Equitable** = Do right by all (“Fairer”)
  - Who didn’t get good pizza, or any pizza?

**Ask me anything!**

**THANK YOU!**

**[kevin@flashvote.com](mailto:kevin@flashvote.com)**