

Root Cause

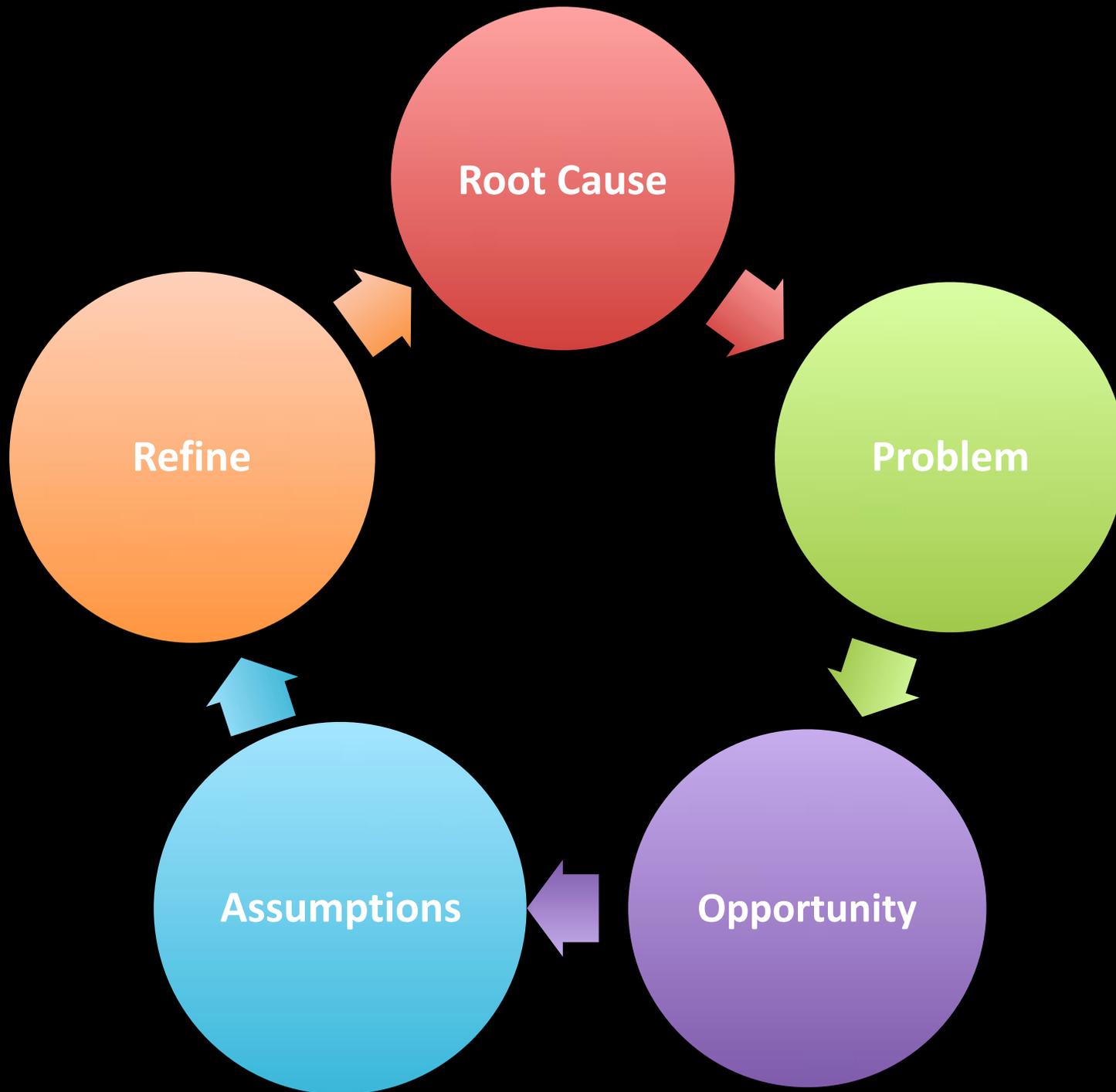
Refine

Problem

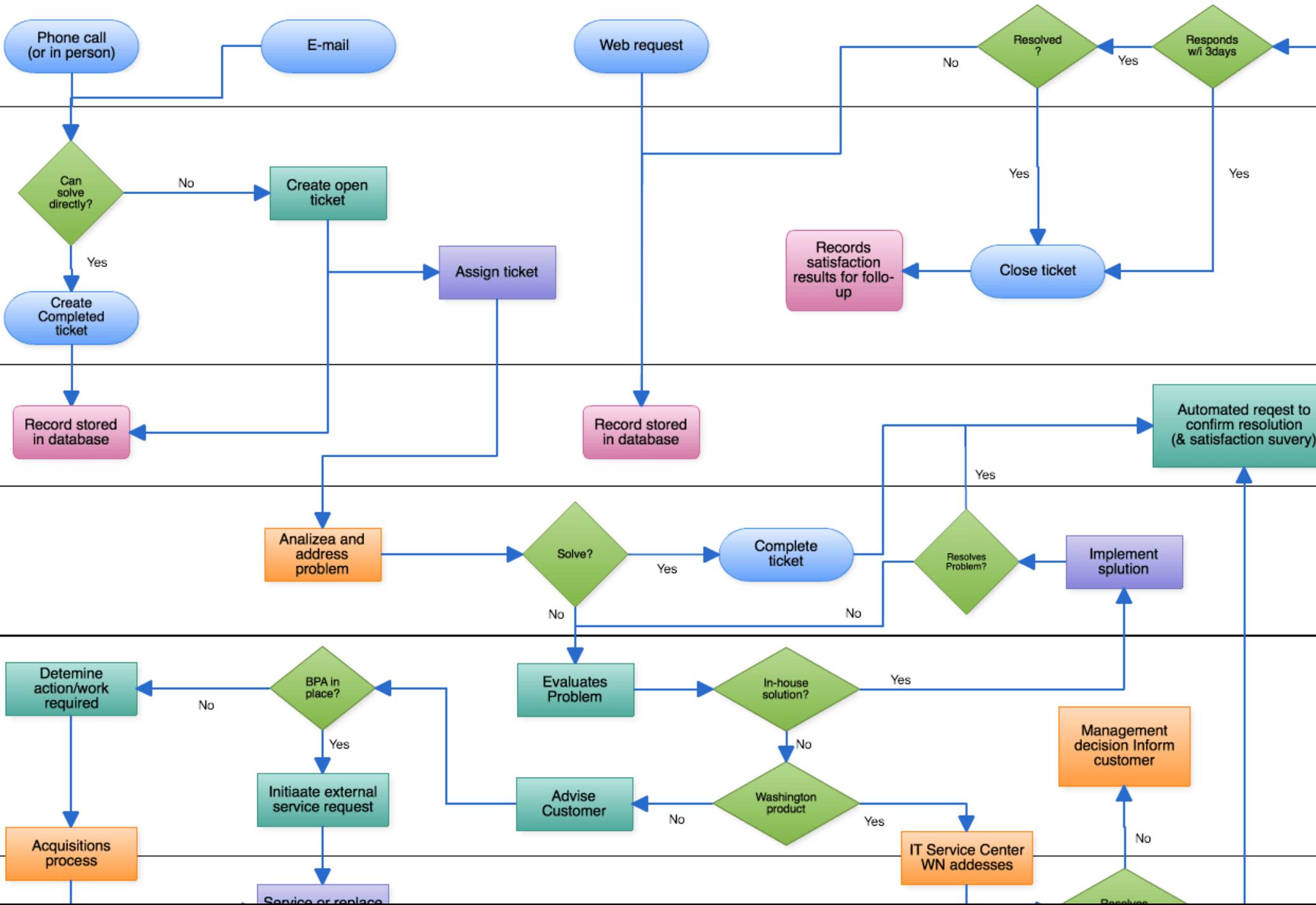
Root Cause Analysis

Assumptions

Opportunity







Service or replace

Resolves



A photograph of a city street in ruins, with a large blue circle overlaid in the center containing the text "Understanding Your Problem". The background shows a street filled with rubble and debris, with several multi-story buildings in various states of destruction. One building on the left has a distinctive diamond-patterned facade. In the background, a building with a water tower is visible. A utility pole stands on the right side of the street. The sky is overcast.

Understanding Your Problem

Simple

Complicated

Problem Types

Complex

Chaotic

Simple

**Cause & effect
repeatable**

Data provides answers

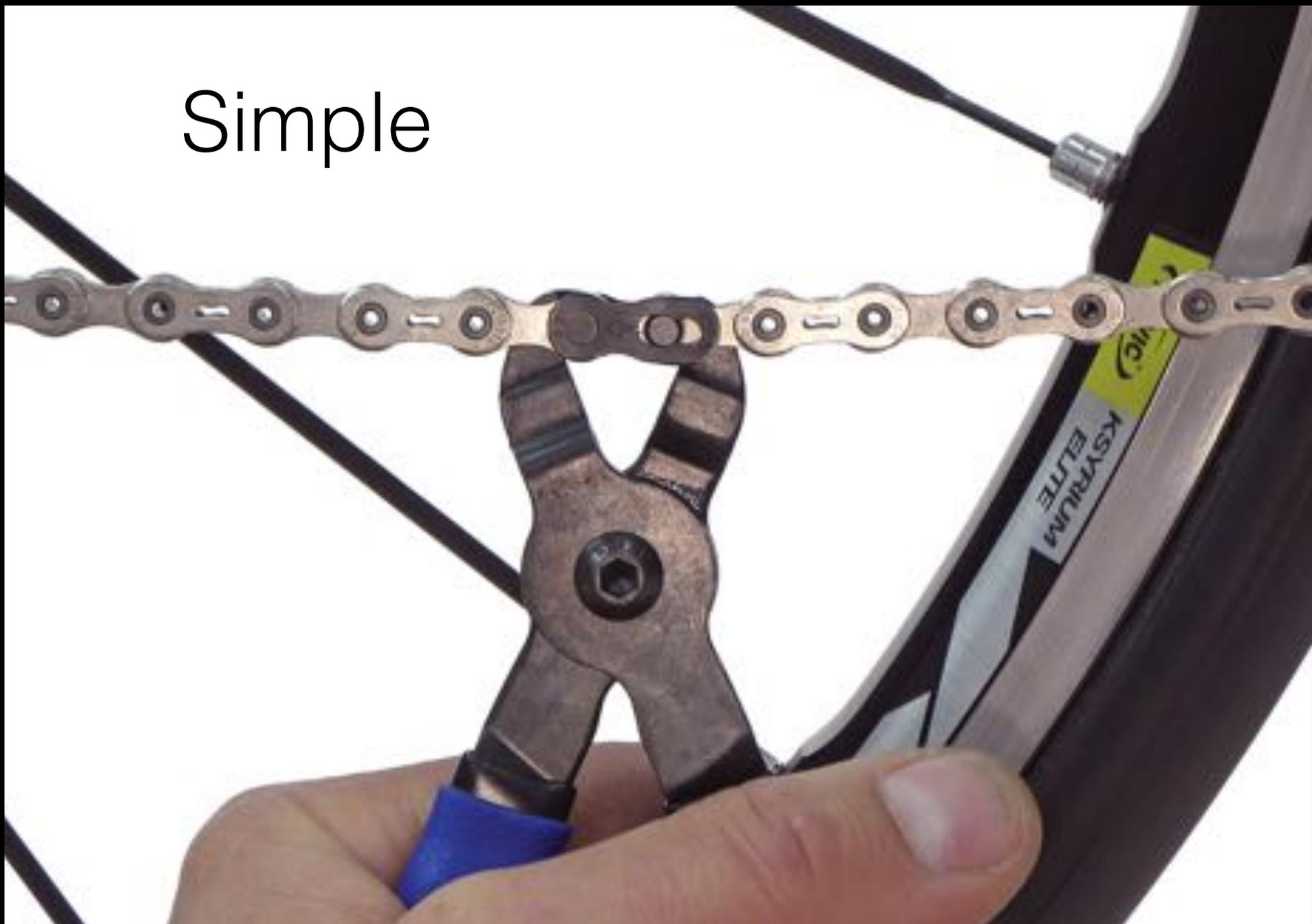
Anyone can interpret

Complicated

Complex

Chaotic

Simple



Simple

Over simplified or
incorrectly classified

Risk:

Condense or ignore
information regardless
of the complexity



Simple

Complicated

**Cause & effect
separated over time**

Data provides options

Experts interpret

Complex

Chaotic

The connection has timed out

The server at www.google.com is taking too long to respond.

- The site could be temporarily unavailable or too busy. Try again in a few moments.
- If you are unable to load any pages, check your computer's network connection.
- If your computer or network is protected by a firewall or proxy, make sure that Firefox is permitted to access the Web.



[Try Again](#)

Complicated

Can take a lot of time
Often trade-offs

Risk:
If the answer is
elusive, may have a
complex problem



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The server at www.google.com is taking too long to respond.

- The site could be temporarily unavailable or too busy. Try again in a few moments.
- If you are unable to load any pages, check your computer's network connection.
- If your computer or network is protected by a firewall or proxy, make sure that Firefox is permitted to access the Web.

Try Again

Simple

Complicated

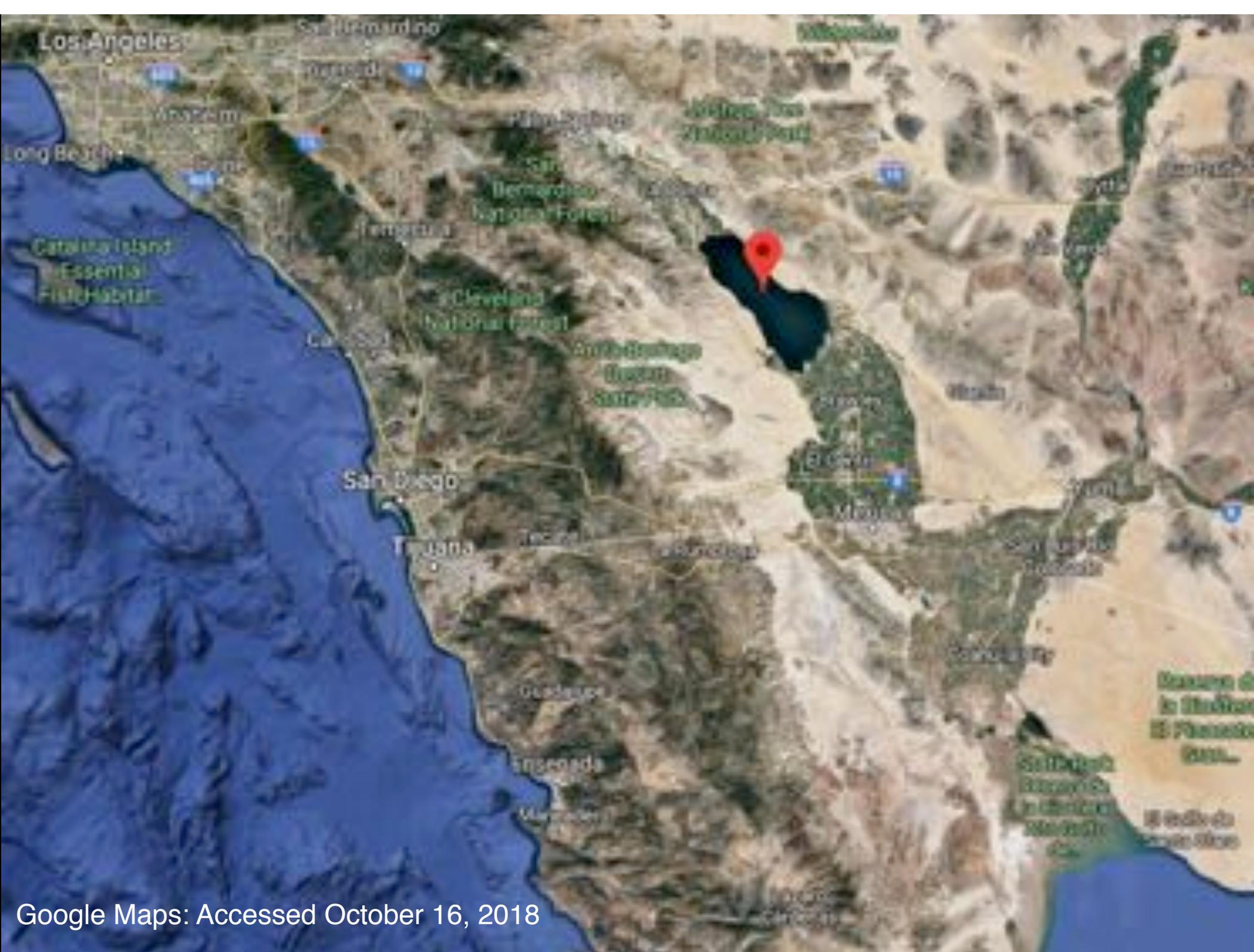
**Multiple perspectives,
causes & effects**

No single answer

**Variables constantly
change**

Complex

Chaotic



Google Maps: Accessed October 16, 2018



Jay Calderon/Desert Sun: December 6, 2015



Simple

Complicated

Complex

Stop the bleeding
Rapid response based
on experience
No time to determine
root cause

Chaotic

Multi-Car Collision



Your turn . . .

Sport car is knocking



Recession



Our focus
today...

Simple

**Cause & effect
repeatable**

Data provides answers

Anyone can interpret

Complicated

**Cause & effect
separated over time**

Data provides options

Experts interpret

**Multiple perspectives,
causes & effects**

No one answer

**Variables constantly
change**

Complex

**Stop the bleeding
Rapid response based
on experience**

**No time to determine
root cause**

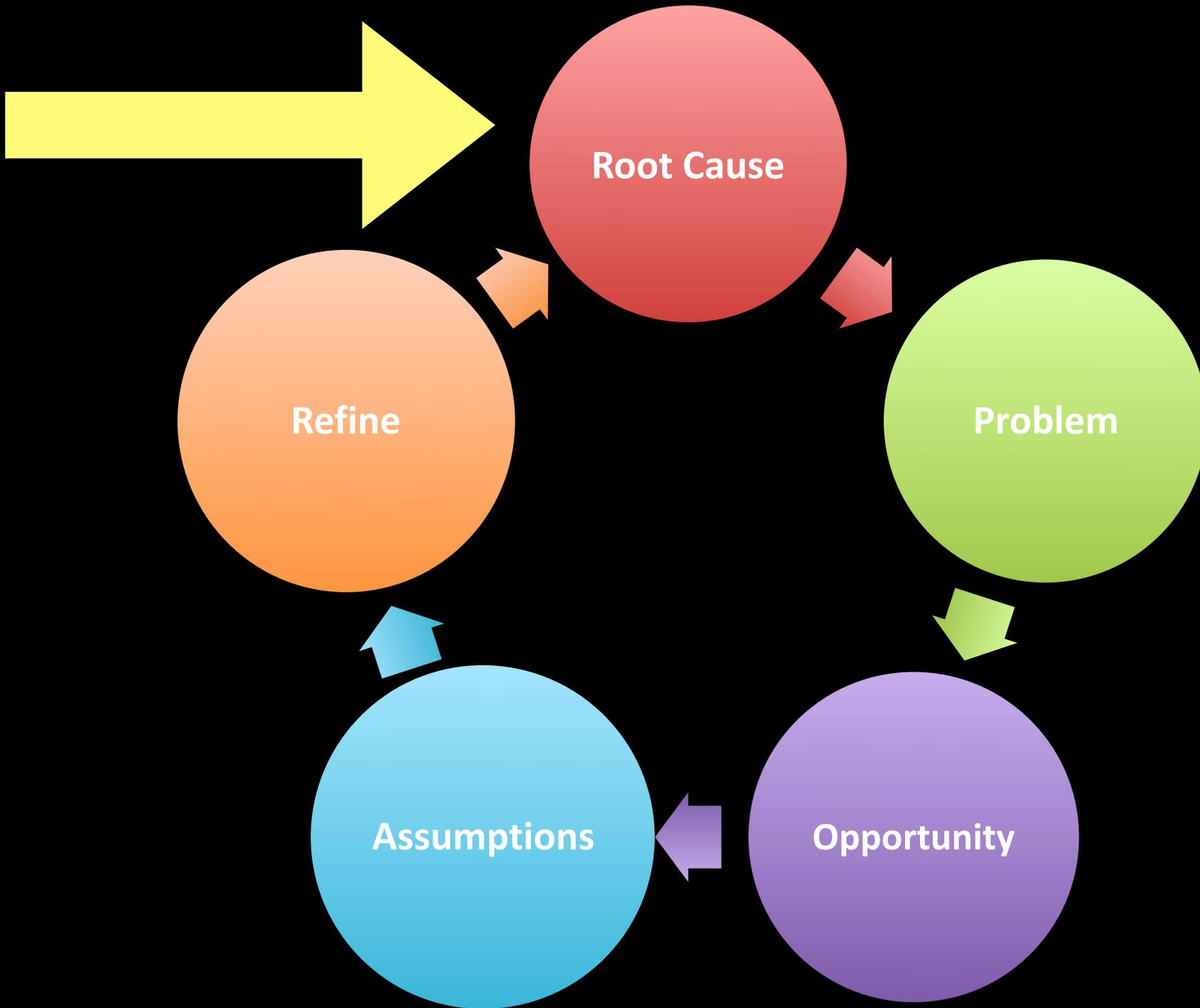
Chaotic

**Multiple perspectives,
causes & effects**

No one answer

**Variables constantly
change**

Complex



5 whys



AQS TV: <https://www.youtube.com/watch?v=voWki-dCRWw>



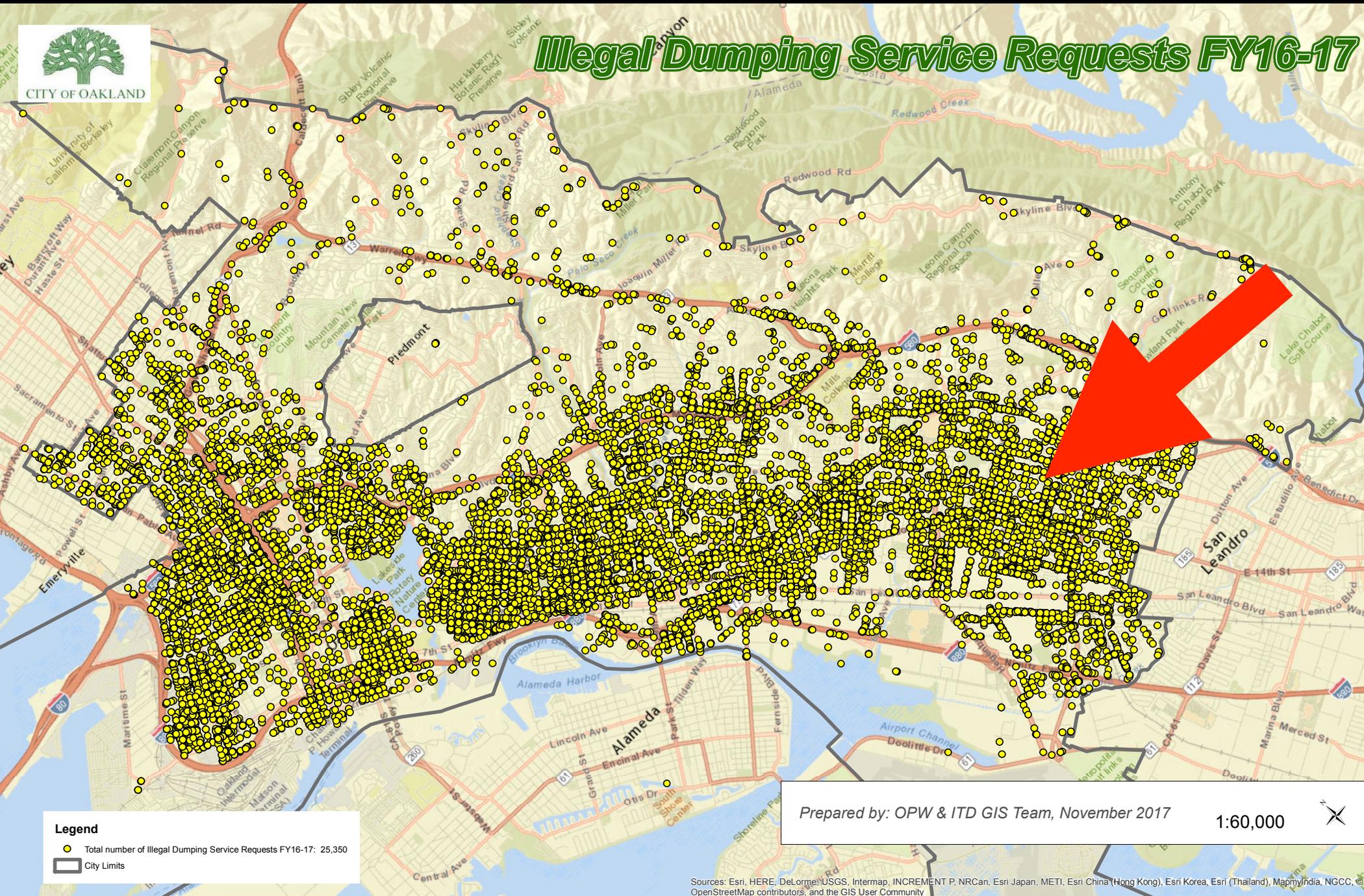
Illegal Dumping: OPW Pick Ups and Requests from Public - Last 5 FYs

■ OPW Pick Ups ■ Requests from Public





Illegal Dumping Service Requests FY16-17



Legend

- Total number of Illegal Dumping Service Requests FY16-17: 25,350
- City Limits

Prepared by: OPW & ITD GIS Team, November 2017 1:60,000

Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, OpenStreetMap contributors, and the GIS User Community

WHY?

State a Problem:

Political

Economic

Social

Environmental

Technological

Legal/Regulatory

Why?

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Why?

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Why?

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Why?

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Why?

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Root Cause

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PESTEL

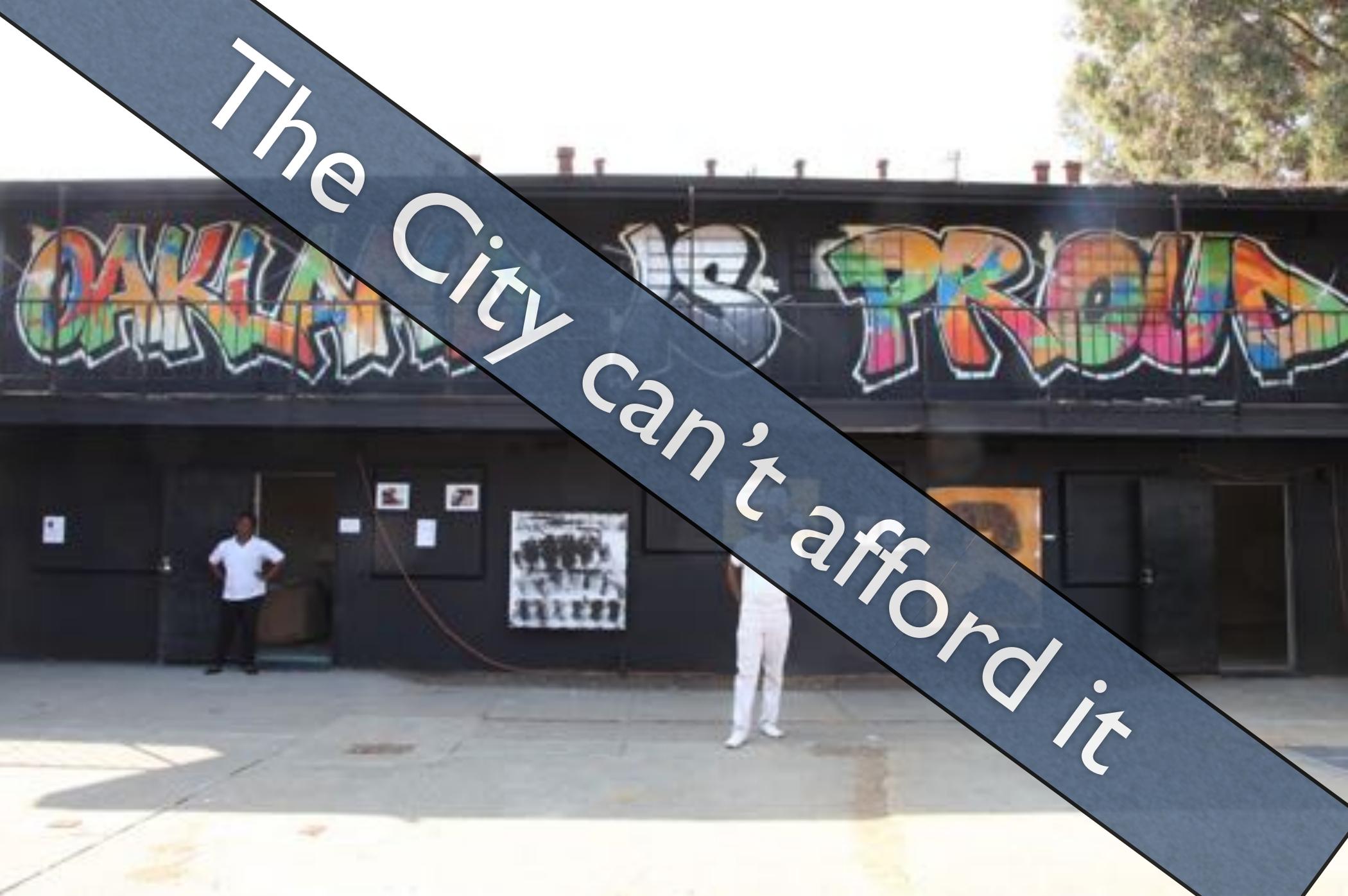


Political

Not doing their job!

Economic

The City can't afford it



Social

Citizens don't care

CRIME SCENE DO NOT CROSS



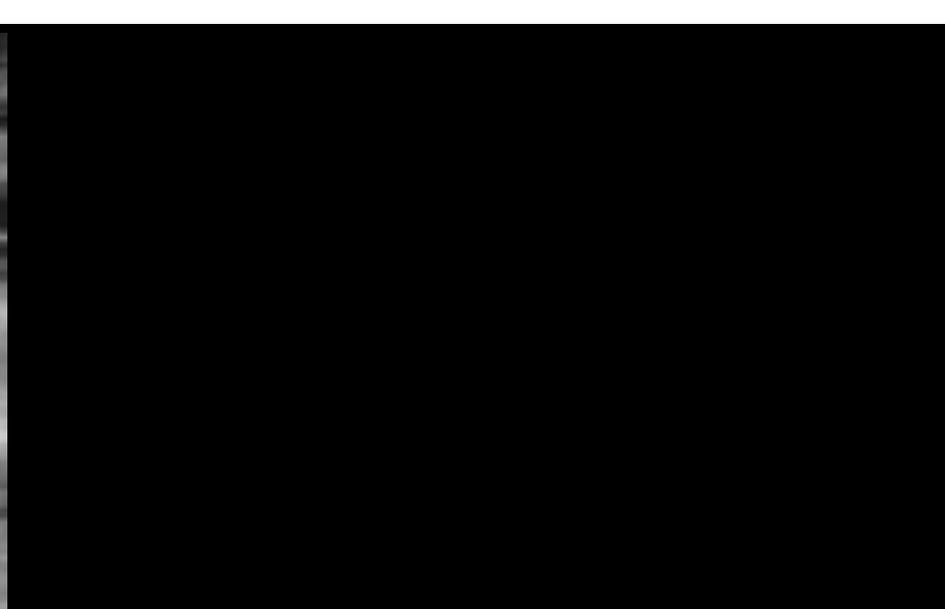
People don't sign up

Technological

Environmental

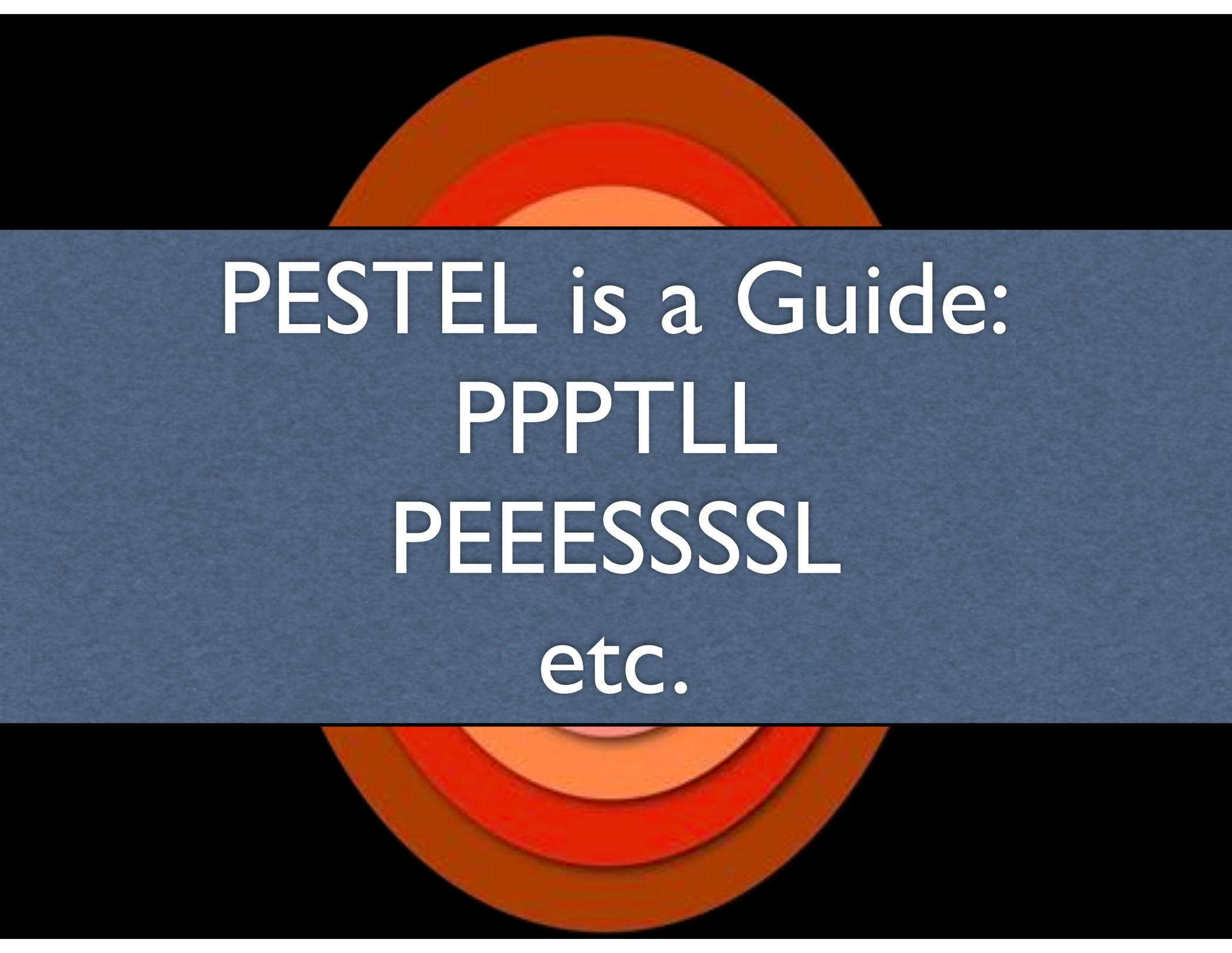
Low Priority

A night photograph of a suspension bridge, likely the San Francisco-Oakland Bay Bridge, spanning across a body of water. The bridge is illuminated with warm lights, and its reflection is visible on the water's surface. In the foreground, several wooden pilings or buoys are visible in the water. A large, blue, diagonal banner with a white border is overlaid on the image, containing the text "Low Priority" in white, sans-serif font.



Dump garbage in streets

Legal/
Regulatory



PESTEL is a Guide:
PPPTLL
PEEESSSL
etc.

Evaluate the root cause of a
problem



State a Problem:

Illegal dump sites in East Oakland



Political

Economic

Social

Technological

Environmental

Legal/Regulatory

Why?

Why?

Why?

Why?

Why?

Root Cause



Political

Why?

PW doesn't clean up
illegal dump sites

Why?

Elected officials don't
think it's important

Why?

They get reelected
anyhow

Why?

The people aren't
informed

Why?

There's no local news or
watchdog agency

Root Cause: Lack of civic knowledge

Economic

Why?

The City can't afford to pick it all up

Why?

PW budget hasn't kept up with the problem

Why?

Trade offs in budgeting compared to revenues

Why?

Low tax revenues

Why?

The loss of working class jobs over decades

Root Cause: Low tax base

Social

Why?

Many citizens don't care about the issue

Why?

Bigger issues with more serious consequences

Why?

Lack of opportunities for education and jobs

Why?

Low quality education and low graduation

Why?

No city-wide effort to improve education/skills

Root Cause: Low tax base

Technological

Why?

People don't sign up for waste pickup

Why?

Waste collection rates have increased

Why?

City lacked leverage to negotiate rates

Why?

WM sued the city to win the franchise back

Why?

WM won contract with higher rates

Root Cause: Cost of pickup increasing

Environmental

Why? Environmental problems aren't a priority

Why? Citizens do not view garbage as their issue

Why? Little public education on the issues/impacts

Why? Env. orgs. aren't in poor neighborhoods

Why? Lack funding for env. nonprofits

Root Cause: Lack of environmental awareness and organizations

Legal/ Regulatory

Why?

People dump their garbage the streets

Why?

They know there will be no consequences

Why?

City doesn't enforce dumping laws

Why?

People aren't complaining

Why?

Lack of civic pride to keep litter off the streets

Root Cause: Lack of civic pride

State a Problem:

Illegal dump sites in East Oakland

Political

Economic

Social

Technological

Environmental

Legal/Regulatory

Why?

The city PW doesn't clean up illegal dump sites

The City can't afford to pick it all up

Many citizens don't care about the issue

People don't subscribe to waste pickup

Environmental problems aren't prioritized

People dump their household garbage in the streets

Why?

Elected officials do not consider it important

PW budget hasn't kept up with the growing problem

Crime is a bigger problem with more serious consequences

Waste collection rates have increased significantly

Citizens do not view garbage as their issue

They know there will be no consequences

Why?

Because they get reelected without doing anything about it

Environment is not prioritized by elected officials

Lack of opportunity for education and jobs

City lacked leverage to negotiate rates due to lawsuit

There is little public education on the issues/ impact

City doesn't enforce dumping laws

Why?

Because the people aren't be informed

Trade offs to manage budgets with low tax revenues

Low quality education and low graduation rates

WM sued the city to win the franchise back

Environmental orgs aren't located in poor neighborhoods

People aren't complaining or voting

Why?

There is no local news source or watchdog agency

The loss of working class jobs over decades

No city-wide effort to improve education and build job skills

WM regained lucrative contract with even higher rates

Lack funding for environmental orgs in Oakland

There's a lack of civic pride around keeping litter off the streets

Root Cause

Lack of civic knowledge

Low tax base

Lack of opportunities

Cost of pickup

Lack of Env Awareness/Presence

Lack of civic pride

Root Causes for My Problem

P - Lack of civic knowledge

E - Low tax base

S - Lack of opportunities, especially youth

T - Cost of pick up

E - Lack of environmental awareness/
presence

L/R - Lack of civic pride for litter in streets

Explore your influence and impact



Impact

High

Low

High Impact
Low Probability

Have a plan

High Impact
High Probability

Take active steps

Low Impact
Low Probability

Think about it
“just to be sure”

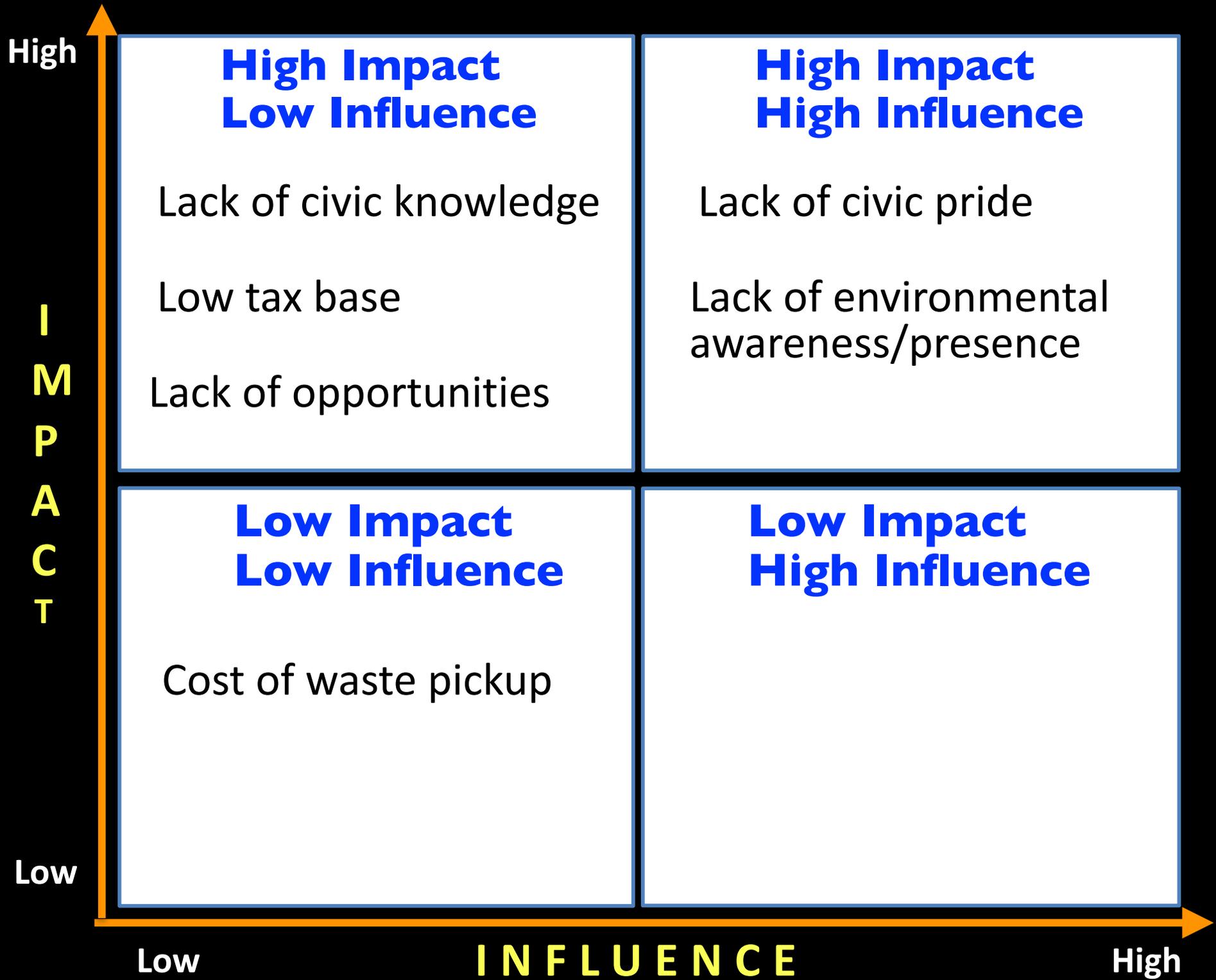
Low Impact
High Probability

Think about it
“just to be sure”

Probability

Low

High



High

I
M
P
A
C
T

**High Impact
Low Influence**

Lack of civic knowledge

Low tax base

Lack of opportunities

**High Impact
High Influence**

Lack of civic pride

Lack of environmental awareness/presence

**Low Impact
Low Influence**

Cost of waste pickup

**Low Impact
High Influence**

Low

I
N
F
L
U
E
N
C
E

Low

High

State a Problem:

[Empty box for stating the problem]



Political

Economic

Social

Environmental

Technological

Legal/Regulatory

Why?

Grid of six empty boxes for identifying causes under the 'Why?' label.

Select at least one High-High root cause

Why?

Row of six empty boxes for identifying causes under the 'Why?' label.

Why?

Row of six empty boxes for identifying causes under the 'Why?' label.

Root Cause

Horizontal line with colored segments corresponding to the categories above.

Develop Next Steps / Action Plan

