FieldProgress 🇺🇸

Helping local campaigns’ volunteers travel to their voters more efficiently

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Problem:
Voter turnout is low, and many smaller campaigns (aka "down ballot" campaigns since they are lower on the voting ballot from bigger ones like President or Mayor) ***struggle to get voters to come out and vote for them***.

Solution:
"By far the ***most effective way to turn out voters is with high-quality, face-to-face conversations that urge them to vote.*** How do we know? Nearly two decades of rigorous randomized experiments have proven it."

Presidential turnout
for last 2 decades
~60%

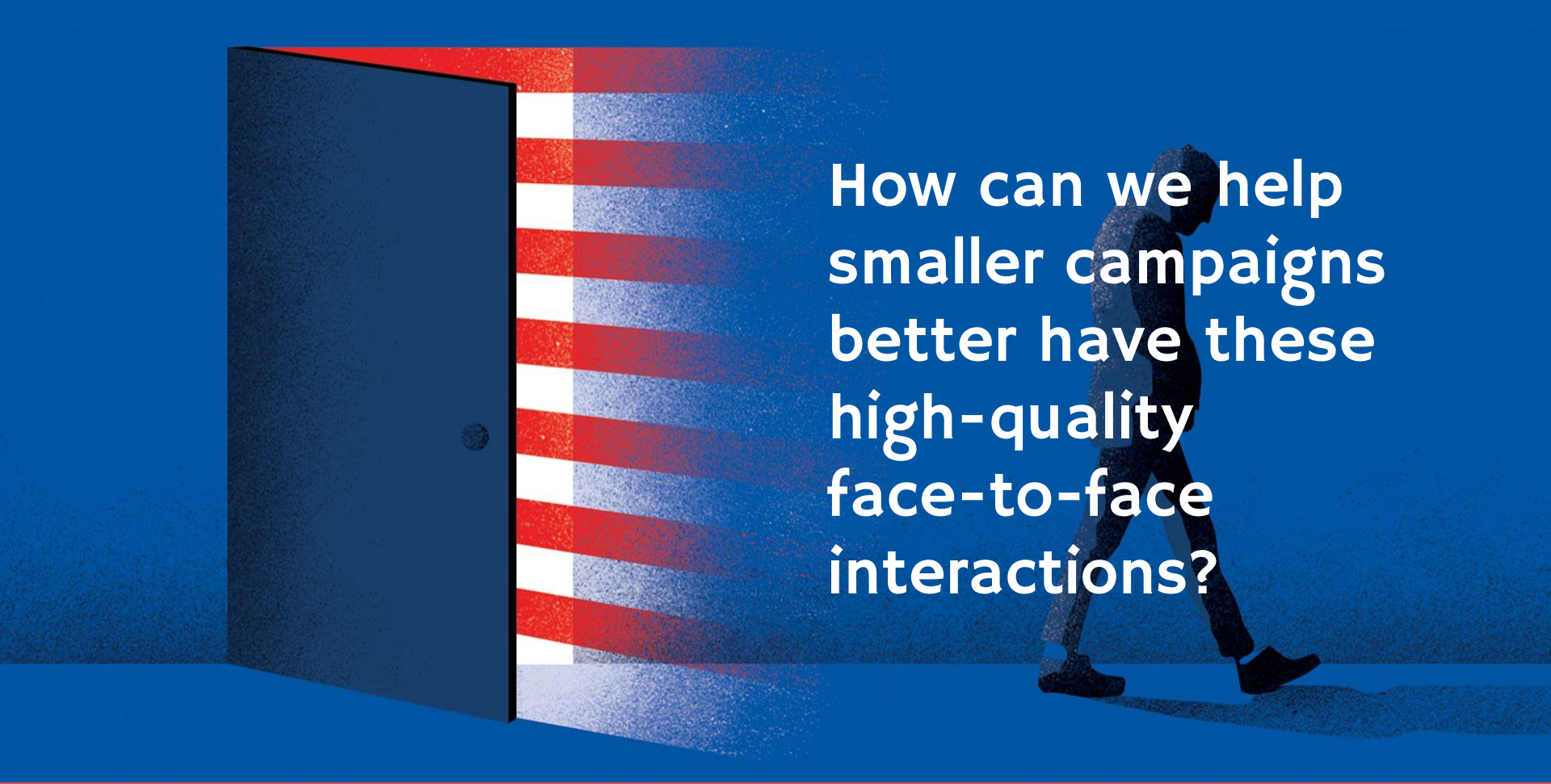
Midterm turnout
for last 4 decades
~40%

https://www.fairvote.org/voter_turnout#voter_turnout_101

+20%

Jump in Voter Turnout
after a high-quality face-to-face conversation

https://www.vox.com/2014/11/13/7214339/campaign-ground-game


How can we help smaller campaigns better have these high-quality face-to-face interactions?

Smaller “Down Ballot” Campaign Obstacles:

- Fewer financial resources
- Fewer volunteer resources
- Less technically-savvy

They need to answer two questions:

- Where are the voters I want to talk to located?
- How can I best get myself and/or my volunteers to voter doors to have high-quality face-to-face interactions?

Translation:

Every opportunity for efficient use of resources and volunteers helps spend their time wisely and increases the opportunity to have high-quality face-to-face conversations.

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The focus for this project

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Every opportunity for efficient use of resources and volunteers helps spend their time wisely and increases the opportunity to have high-quality face-to-face conversations.

What is Turf-Cutting?

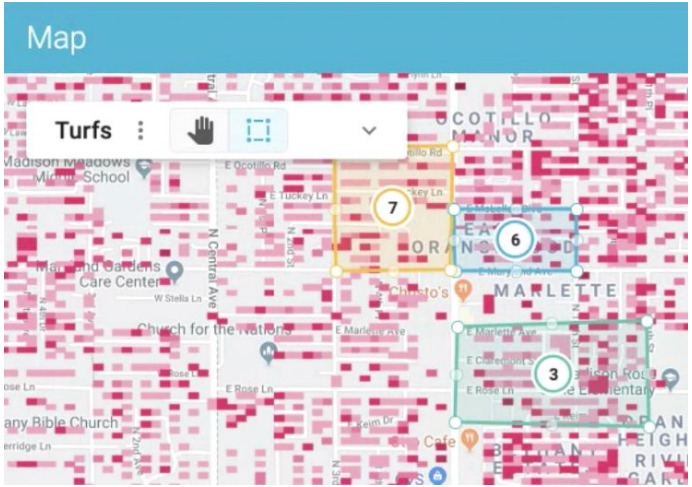
“Plotting canvassing routes for campaign workers to knock on doors.”
– https://politicaldictionary.com/words/cutting-turf/

How is this currently done?

1. **Manually without GIS**
   a. Break up a spreadsheet into lists
2. **Manually on a GIS tool**
   a. Manually create boundaries on a map overlaid with voters
3. **Auto-Cut ***
   a. Automatically cut out turf based on an algorithm
4. **“Distributed Canvassing”**
   a. Not really turf cutting, but instead realtime distribution of voters to volunteers using a smartphone

*** what we want to do**

Existing Turf Cutters



polis

npg van

Auto-Cutting

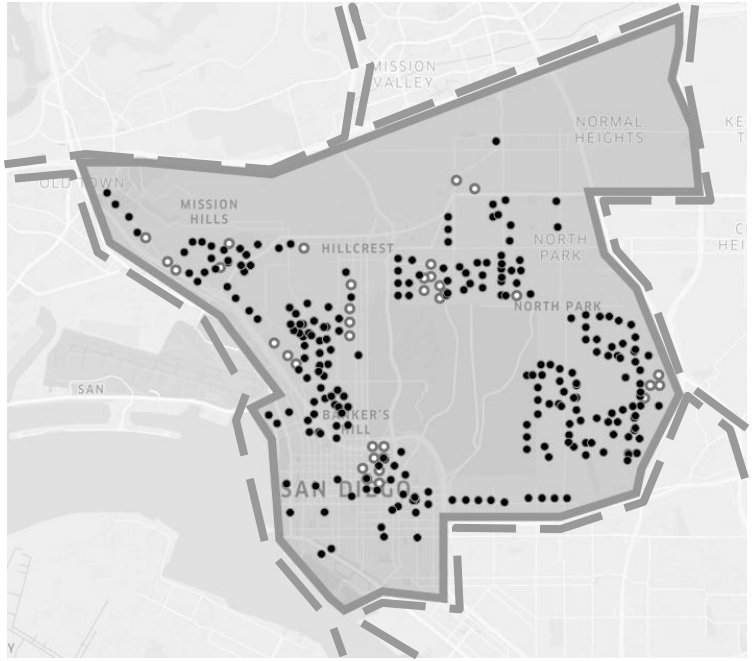
1. Existing Auto cutting doesn't always reflect the terrain, we want to improve that
2. Existing Auto cutting isn't necessarily aware of "walkability", so let's try to improve on that too!

Understanding Precincts, Voters, & Volunteers

Precincts & Districts

1. Precincts are the “atomic” geographical unit of politics
2. Every precinct has the same ballot
    a. Same school board
    b. Same city council
    c. Same US congressman
    d. Etc
3. An election is at the “district” level, which is comprised of Precincts
4. We want to focus on turf-cutting within a precinct

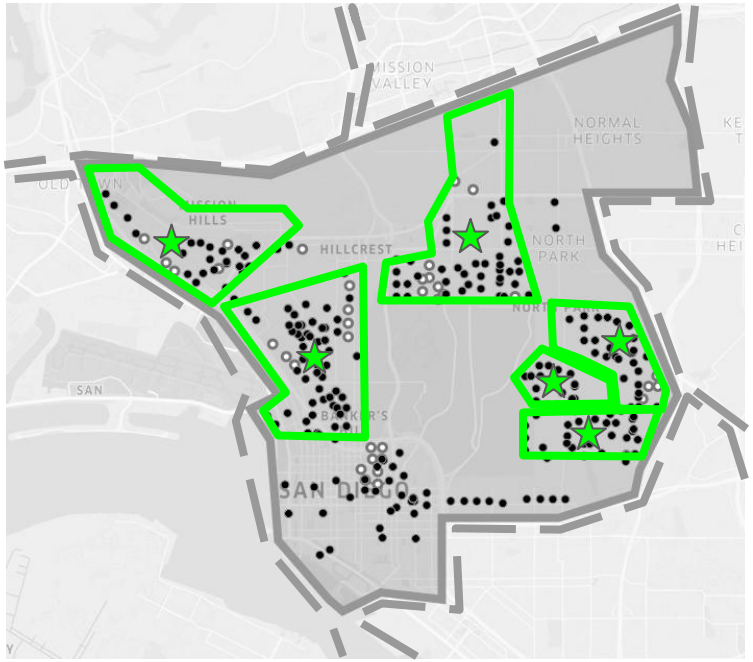
Districts



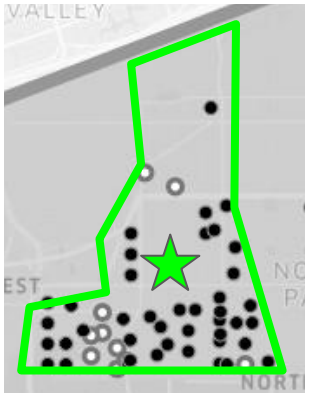
Precincts

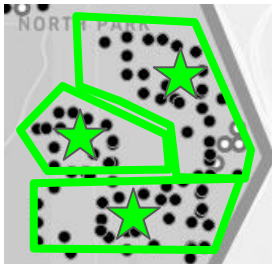
☆ = Every precinct has a voting or polling location

Best Precincts



Best Way to Cut Precinct Turf?





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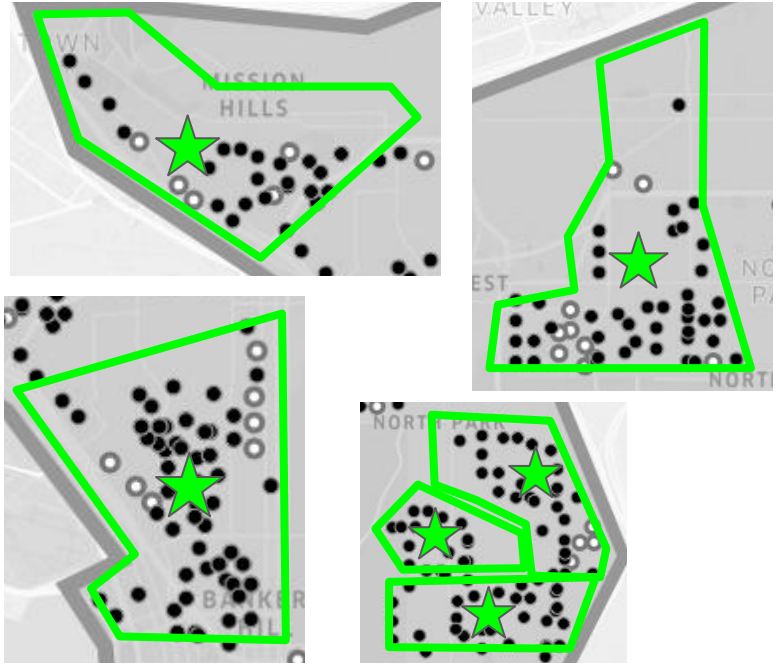

Considerations

- **Boundaries**
  - Make sure the cuts are within the precinct lines
- **Obstacles**
  - Crossing highways?
  - Gated communities?
- **Transportation**
  - Walking?
  - Driving?
- **Volunteers**
  - Number?
  - Demographics?
- **Others?**

Voters & Volunteers

Voters & Volunteers

1. **More than one voter can live at an address**

2. **Cut turf based on certain parameters**
    a. Given *n* volunteers who we want to spend 5 minutes with each voter, and who can volunteer for 4 hours

How We Do This

Generate a List of Voters

1. **Use a real-estate "parcels" file to randomly create voters assigned to a Parcel**
   a. Possibly need to think about doing different random distributions to emulate different clusters for testing
2. **Use district shapefiles to identify voters within precincts**
3. **We will provide you with an initial script that does**
   a. Generates random voter data from a parcel file
   b. Imports precincts from a shape file
4. **We got our parcel data file and district shapefile from SAN GIS**
   a. http://rdw.sandag.org/Account/gisdtview?dir=Parcel (login required)

Resources / Possible Algorithms

1. Research ways of clustering Geographic entities
    a. AI vs Heuristics?
2. Research ways of looking at “walksheds” or other ways of evaluating how to identify walkable clusters of points
3. Identify how to take into account geography and streets

Measuring Success

I. **How do we know how good our cut turf is**
   a. Evaluate walking routes for all auto-cut turf in a precinct with a routing tool (e.g. Mapbox) to check total walkable time
   b. Perhaps identify local features where we know the geography can be tricky (i.e. canyon neighborhoods, neighborhoods straddling freeways)
   c. Existing research on evaluating these types of algorithms

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Next Steps

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1. We share a github repo to you of our initial scripts to get started (python based)
2. You begin doing you requirements gathering and research
3. We meet again!

THANK YOU!

For helping to field progress in our democracy!