



Transportation and Maps

How maps help us understand and visualize complex transportation issues.

What is Transportation?

- Transportation is the process of moving people and goods



Accessible, affordable transportation is critical to the lives we live. We need reliable transportation in order to access:

- Jobs
- Education
- Health care
- Basic needs (food, clothing)
- Social networks

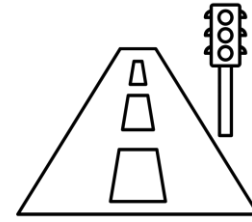
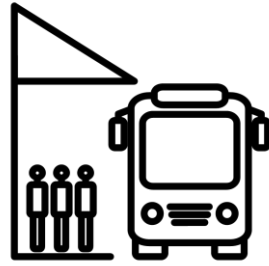
What is Active Transportation?

- Active transportation is a form of transportation that uses physical activity as it's way of moving.

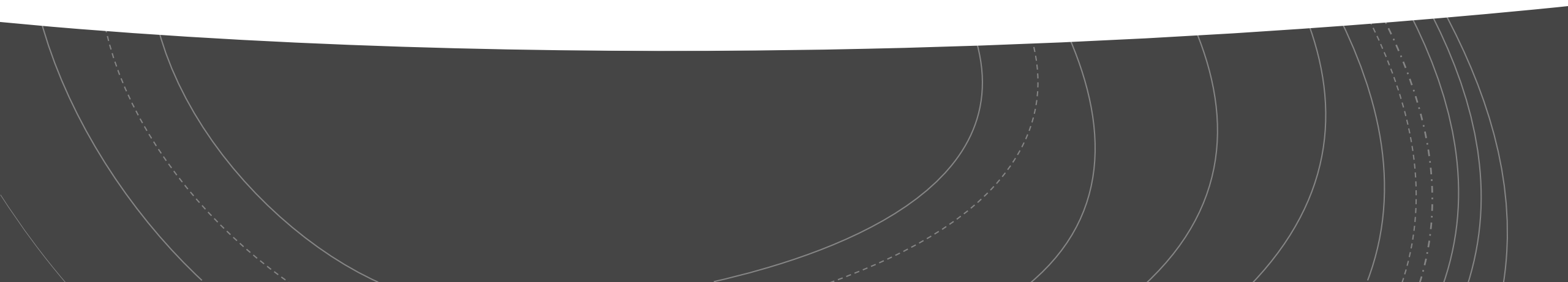


Active transportation is a form of transportation that uses physical activity as it's way of moving. Active transportation allows us to build exercise into our daily routine, and has many benefits:

- Lowers obesity
- Decreases chances of heart disease
- Decreases chances of diabetes
- Improves mental and emotional wellbeing



Transportation Infrastructure

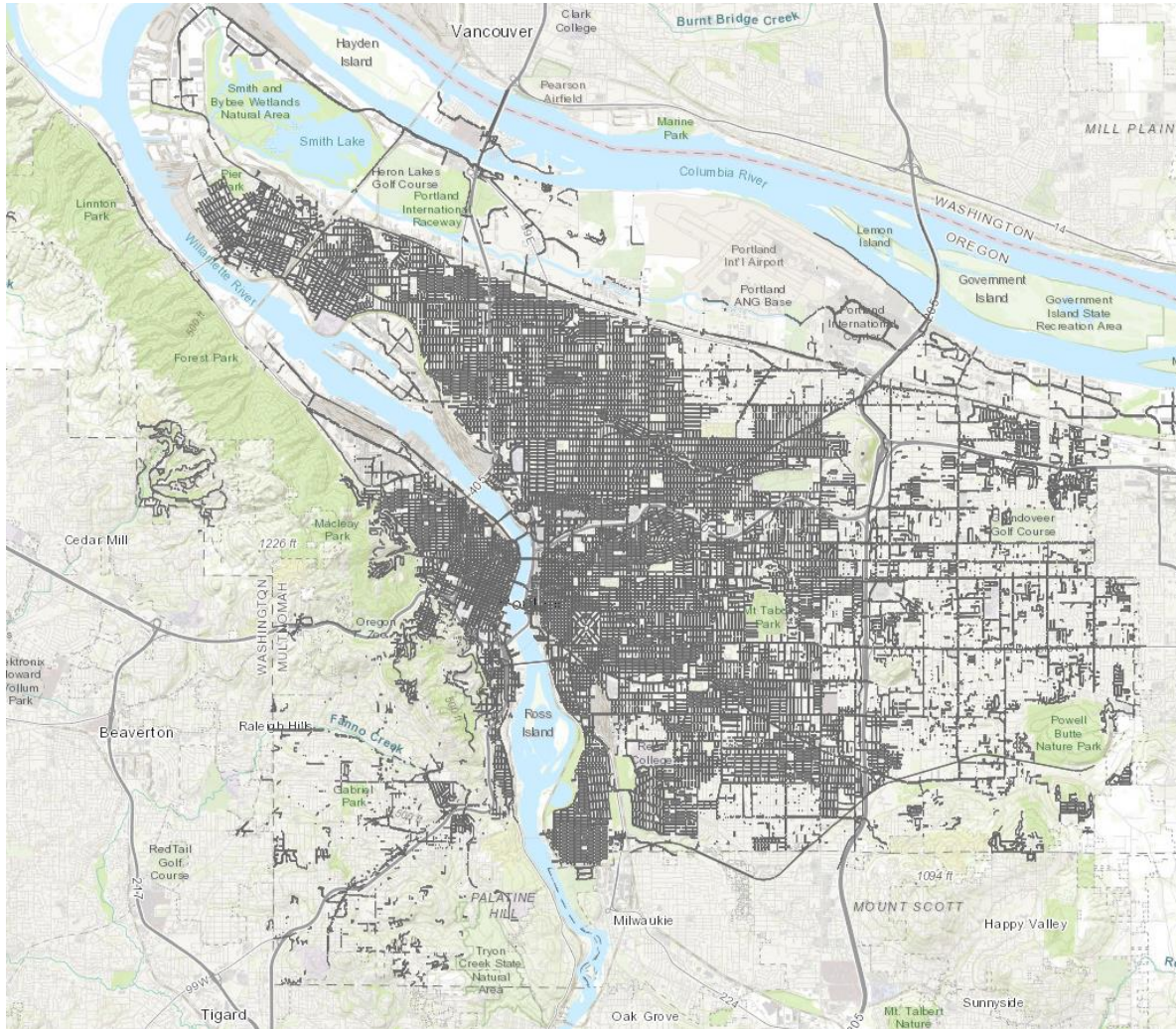




- Roads (neighborhood streets, arterial roads, highways, freeways)
- Rail (light and heavy)
- Sidewalks
- Street signs and street lights
- Traffic calming devices (speed bumps, go-rounds)
- Bike lanes
- Transit stops and stations

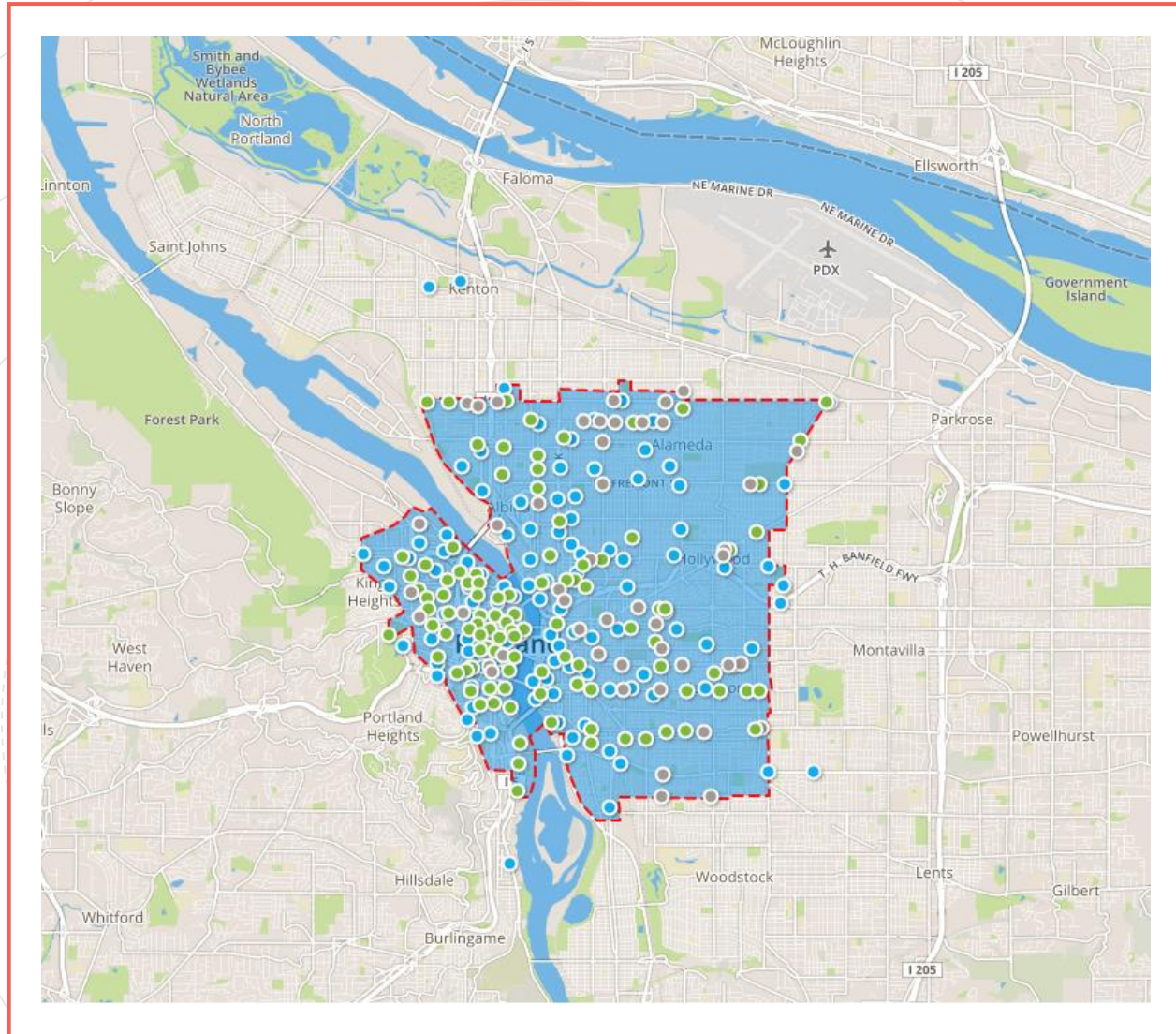
Spot the Infrastructure!

<https://www.youtube.com/watch?v=bembJahfx4w>



Infrastructure is not always evenly distributed for all to benefit from.

<https://cascadiapartners.maps.arcgis.com/apps/View/index.html?appid=30c98e30cecc44fca0f464a5cb9bfe91>



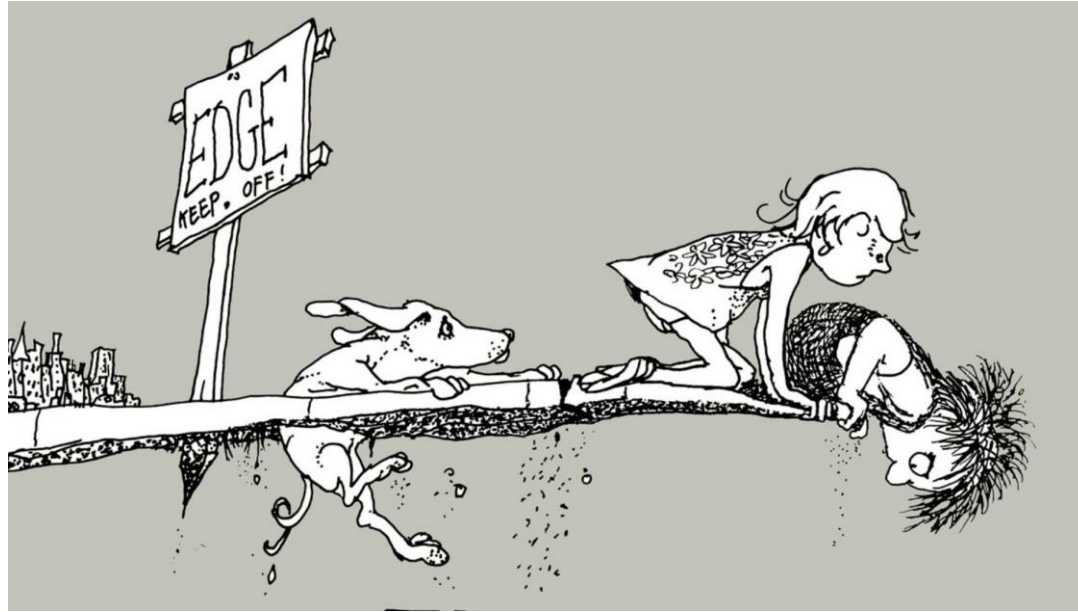
What do you observe about the distribution of Biketown stations in Portland?

<https://www.biketownpdx.com/map>



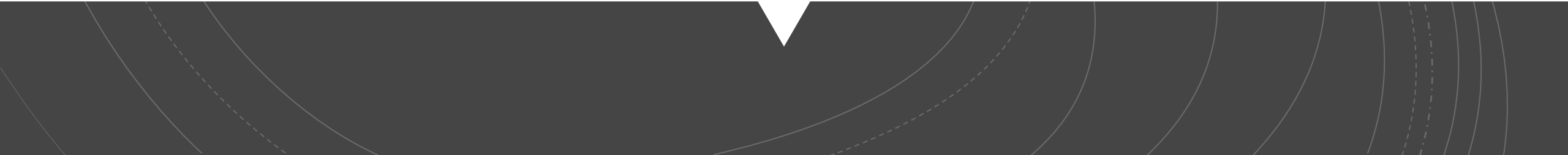
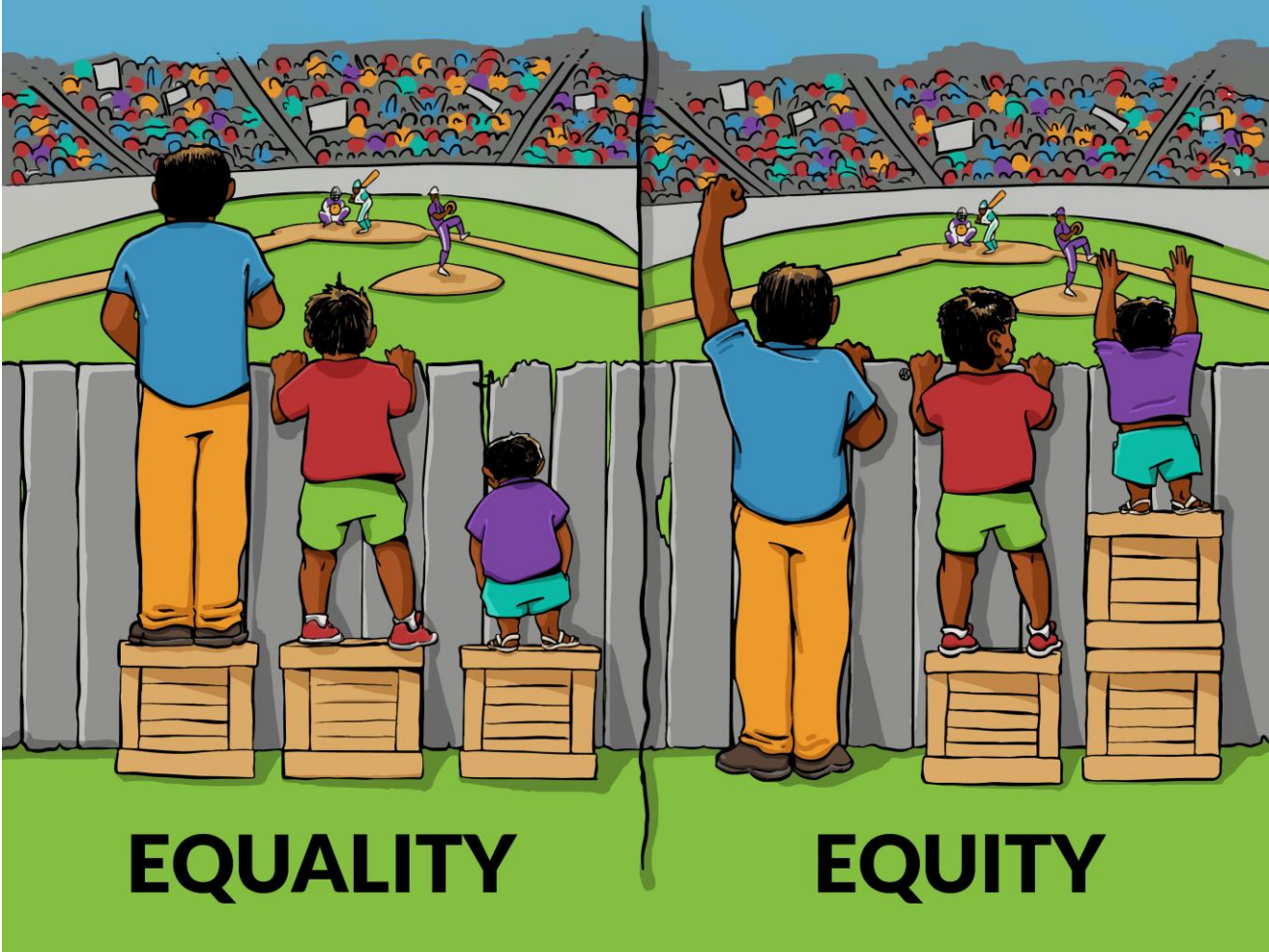
Transportation Equity

Who gets what when where and why?



- Why do some places have better **transportation infrastructure** than others?
- Why do some people have access to more **transportation options** than others?

<https://vimeo.com/channels/freetoridedoc/110084559>



Understanding the history of transportation racism

- Prioritization of automobile, roadbuilding frenzy of mid 20th century decimates inner city communities
- Current transportation policymaking practices favor certain groups, primarily automobile users and suburban commuters, at the expense of other groups, mostly poor and urban minority populations who rely on public transportation
- Cutbacks in transit subsidies
 - Those who cannot afford a car are left with limited mobility
- “Choice” riders vs. “Transit-dependent” riders



Example of Transportation Injustice

The Cross Bronx Express



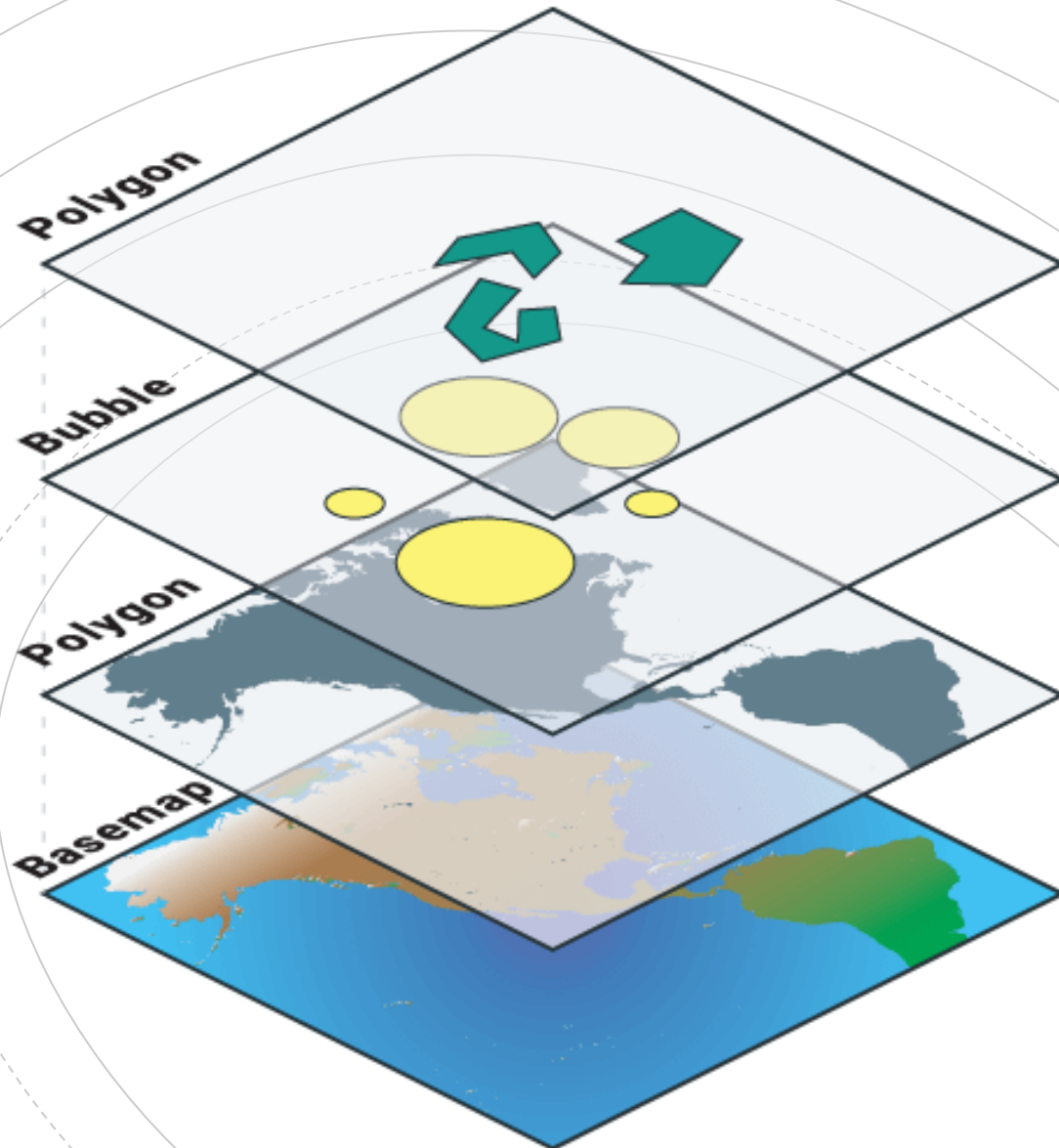
- The Cross Bronx Expressway is a major freeway in the New York City borough of the Bronx built between 1948 and 1963
- Brainchild of Robert Moses, big freeway guy
- Prioritized “car culture” placing an importance on building highways instead of subways in order to grow the city
- Bisected the Bronx, left the south half disconnected and isolated for low-income families. Displaced over 5,000 households.

Accessibility vs mobility - this is some of the greatest tensions in transportation policy

Accessibility VS Mobility



- **Accessibility**
 - Walkable, close. The potential for interaction (how many things can you do, places can you reach)
- **Mobility**
 - The potential for movement, prioritizes speed of travel, generally more car-centric



Maps and GIS

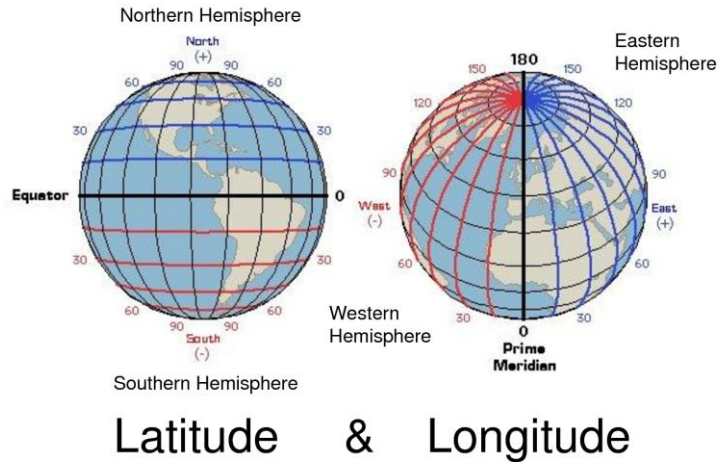
(Spatial Analysis is Rad)

Spatial is Special

Place matters.

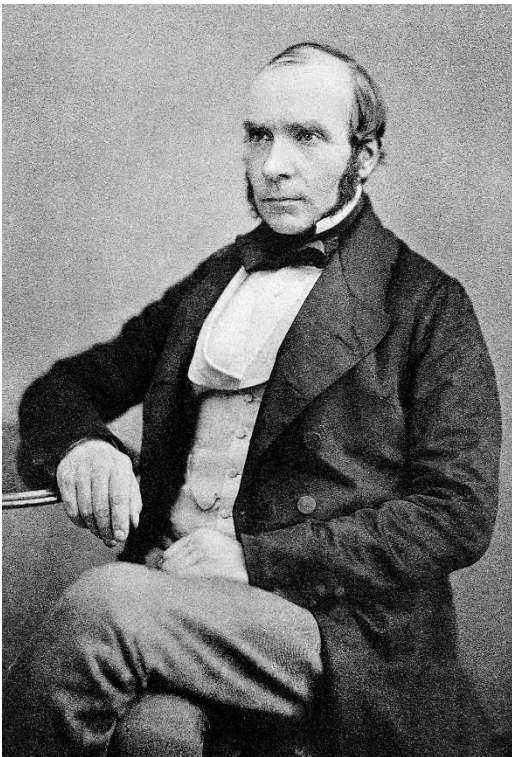


Spatial describes how objects fit together in space, either among the planets or down here on earth. There's a *spatial* relationship between Mars and Venus, as well as between the rose bushes in the backyard. Anything with a spatial component can be mapped.





John Snow's Cholera Map



John Snow



Maps help us to visualize complex transportation issues.

<https://pdx.maps.arcgis.com/apps/MapSeries/index.html?appid=5385b143768c445db915a9c7fad32ebe>

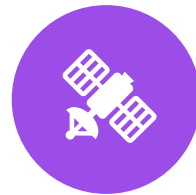


Geographic Information Science (GIS)

GIS is a Powerful Tool



Spatial Analysis



**Imagery and
Remote Sensing**



**Mapping and
Visualization
(Cartography)**



**Data Collection
and
Management**



**Participatory
Mapping**



Web Mapping

<https://www.youtube.com/watch?v=LHDCRjAxpI0>

<https://www.youtube.com/watch?v=659CESxEb5U>

<http://geospatialrevolution.psu.edu/episode2/chapter1>

The background features a series of concentric, overlapping circles in light gray, some solid and some dashed, creating a ripple effect. In the center, there is a large orange callout box with a downward-pointing arrow at its base. The text is centered within this box.

Portland Maps Activity

www.portlandmaps.com