

Gris

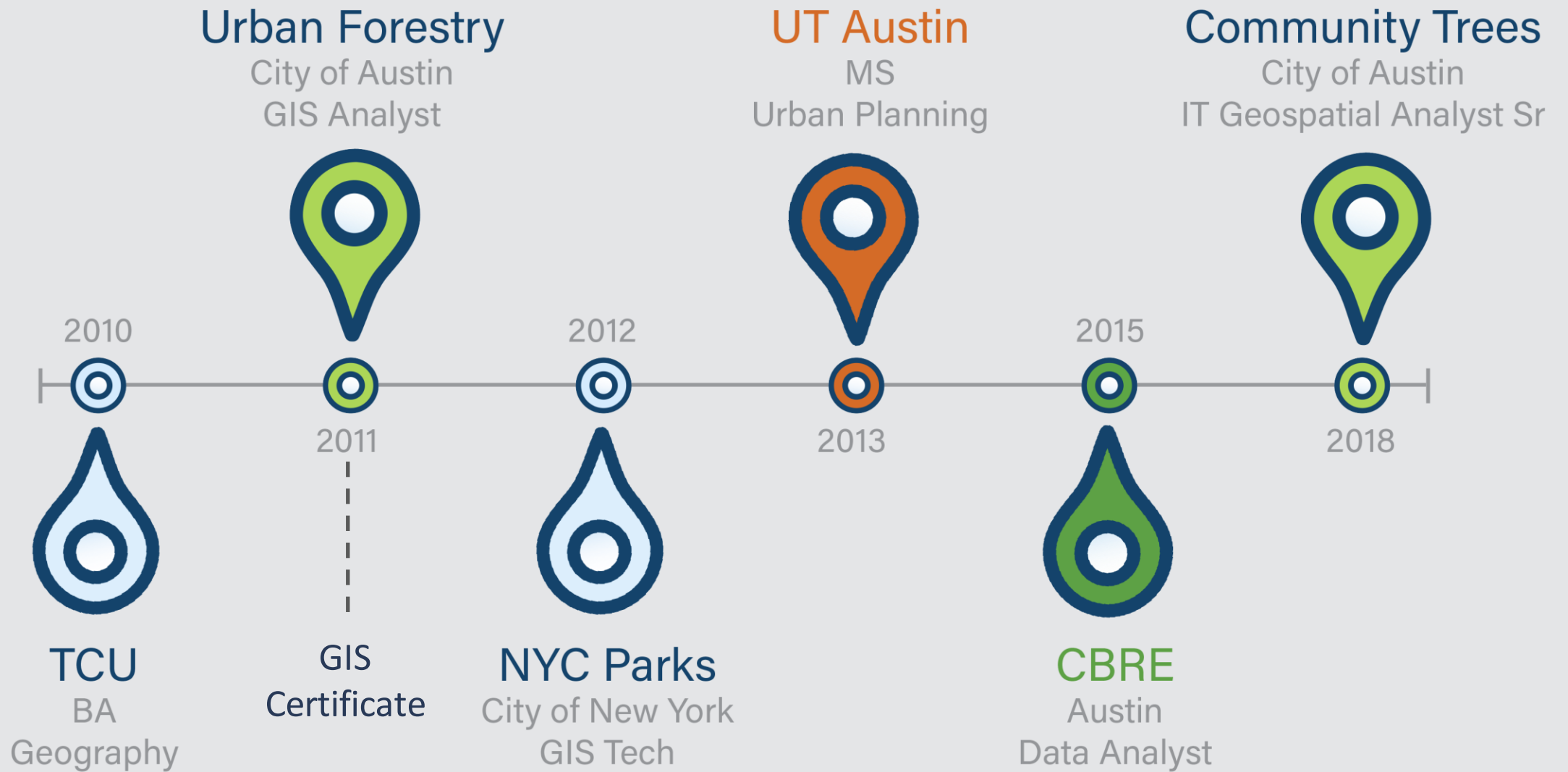
alan halter

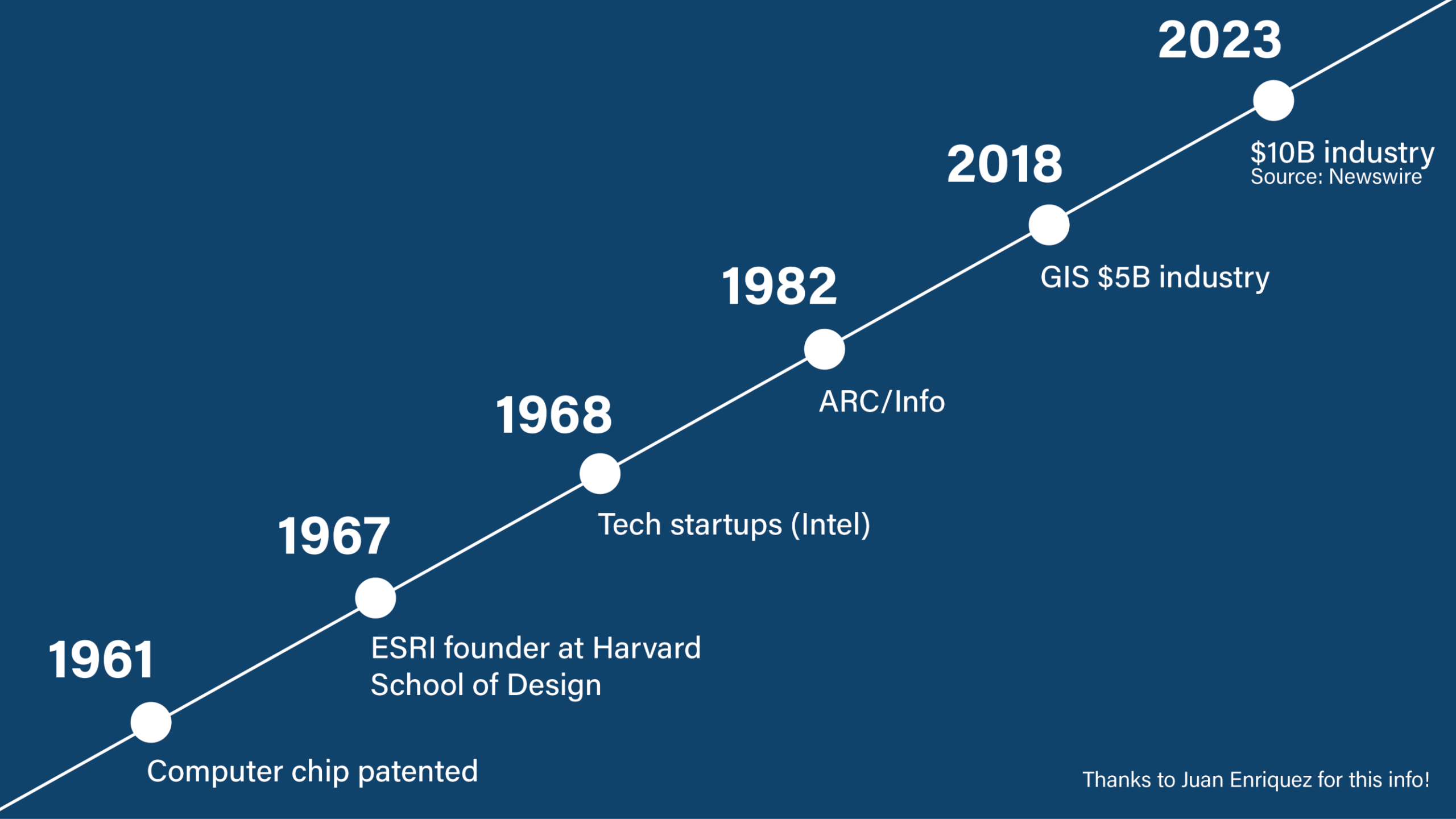
RENDEZVOUS MOUNTAIN 10,450' (3,185 METERS)
VERTICAL RISE 4,139' (1,261 METERS)



JACKSON HOLE®







1961

Computer chip patented

1967

ESRI founder at Harvard
School of Design

1968

Tech startups (Intel)

1982

ARC/Info

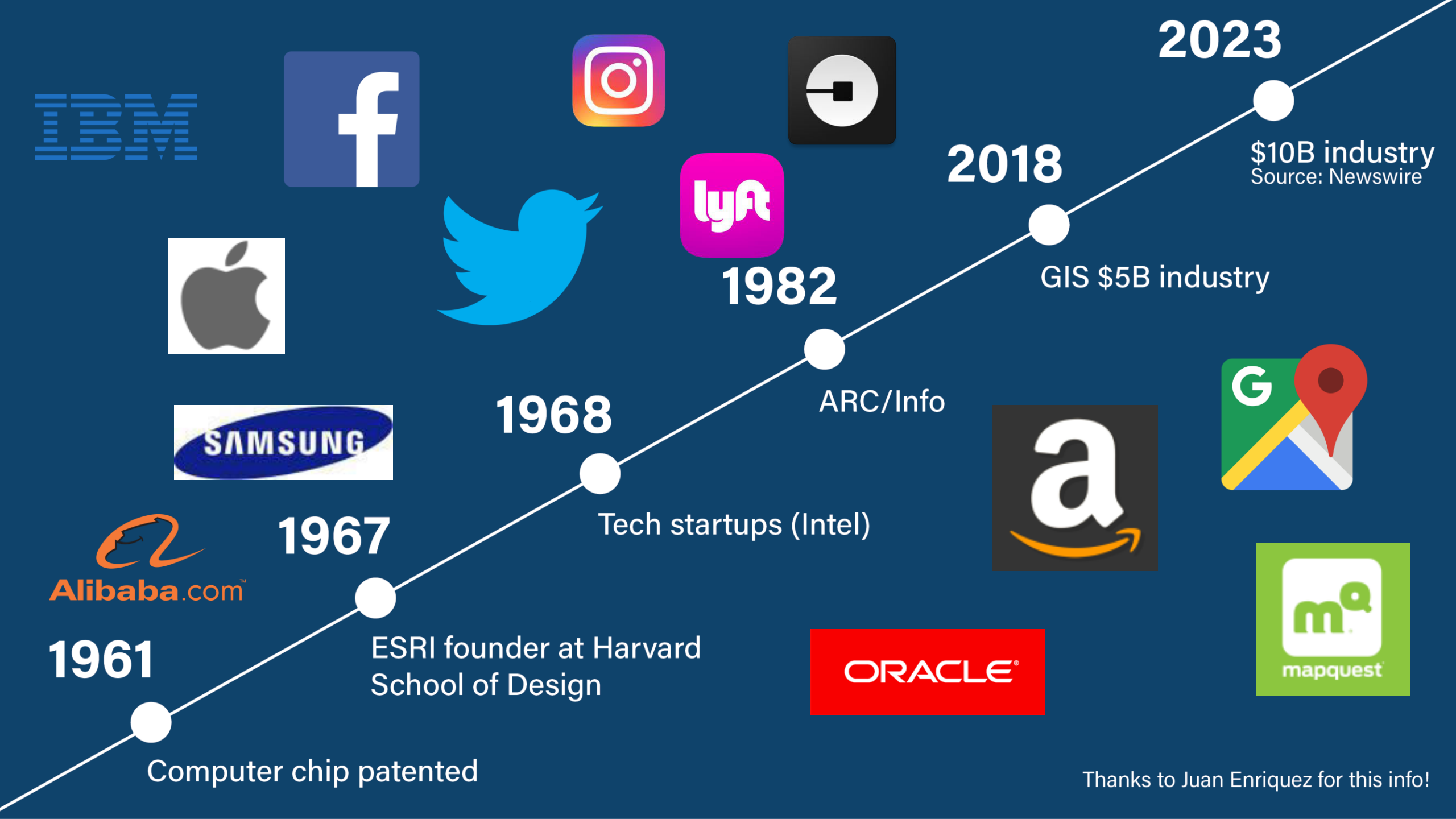
2018

GIS \$5B industry

2023

\$10B industry
Source: Newswire

Thanks to Juan Enriquez for this info!



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work samples



analysis

investigate

cartography

create

language

understand

tree planting prioritization



analysis

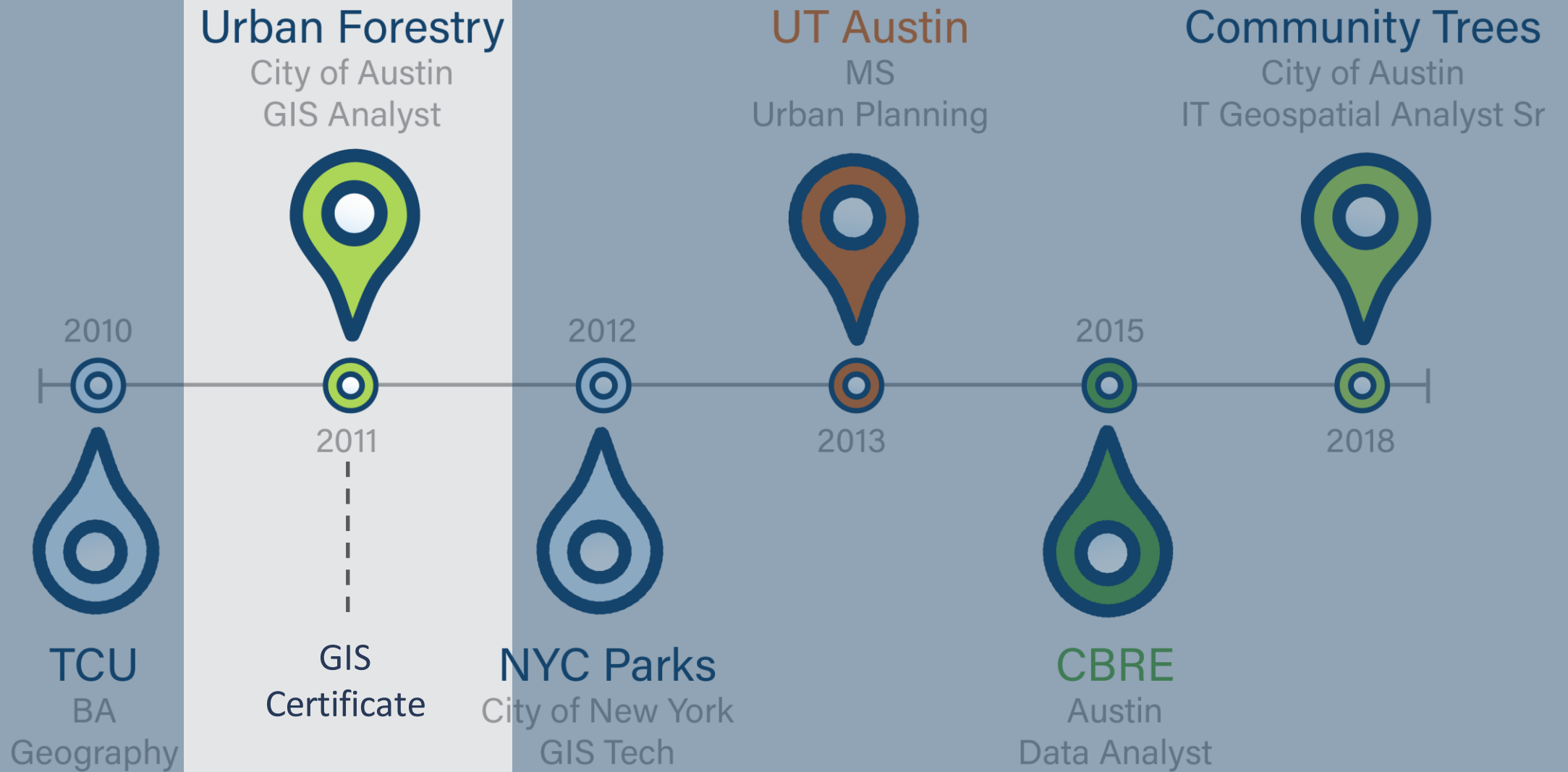
investigate

cartography

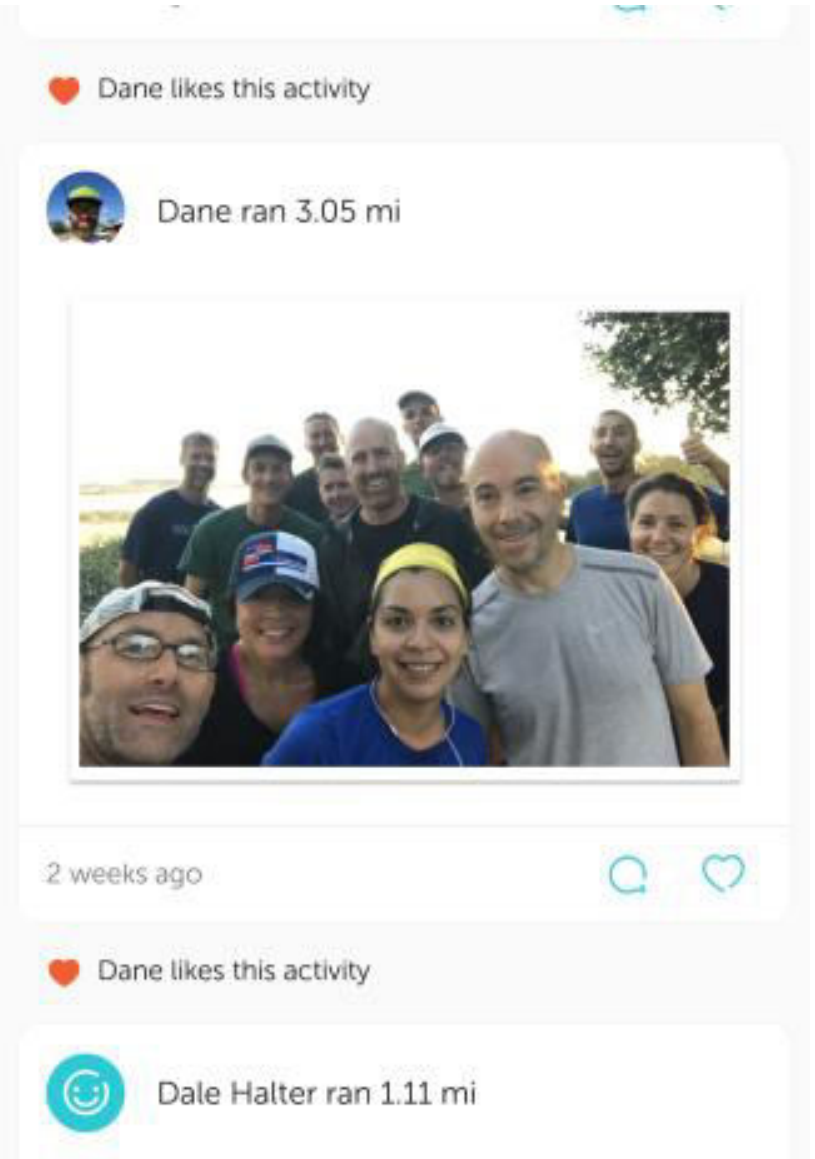
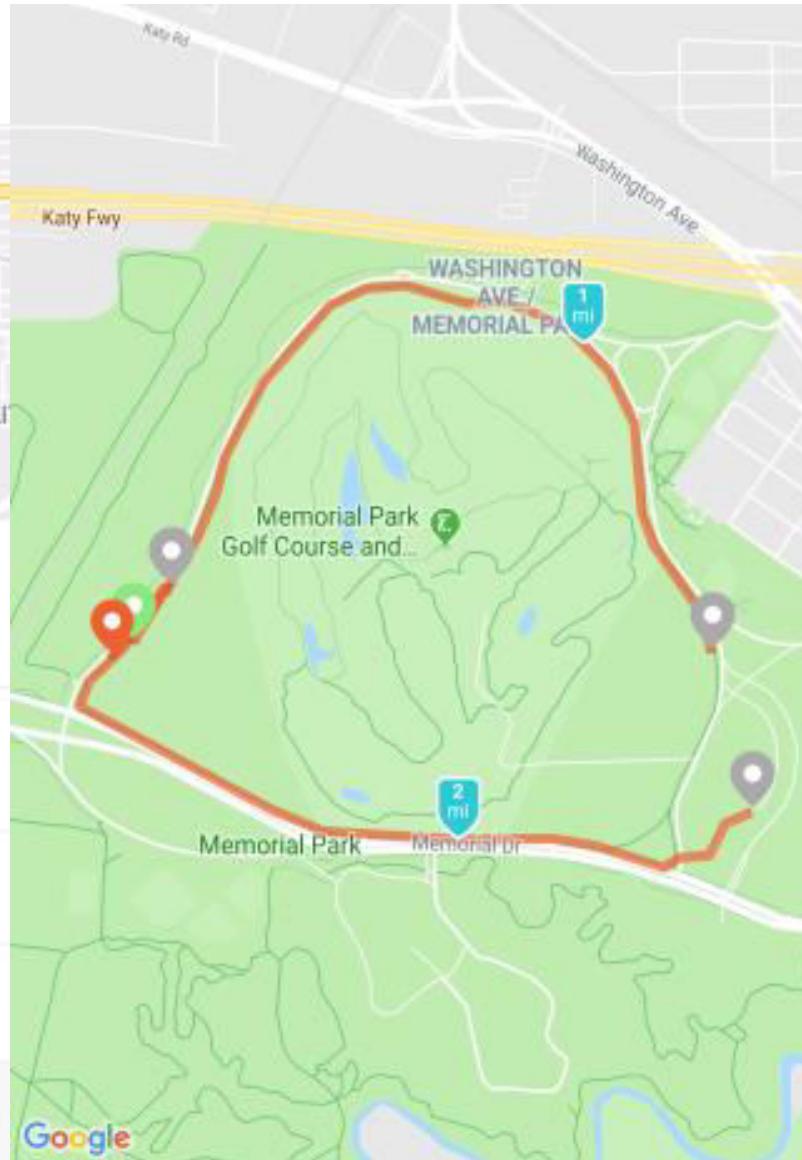
create

language

understand



tree benefits





tree planting



old way



reactive

new way



proactive

why we plant trees

8 categories

- Public Health & Safety
- Air Quality
- Water Quality
- Environmental Justice
- Critical Places
- Forest Replenishment
- Forest Preservation & Development Impacts
- Urban Heat Island



31 planting factors

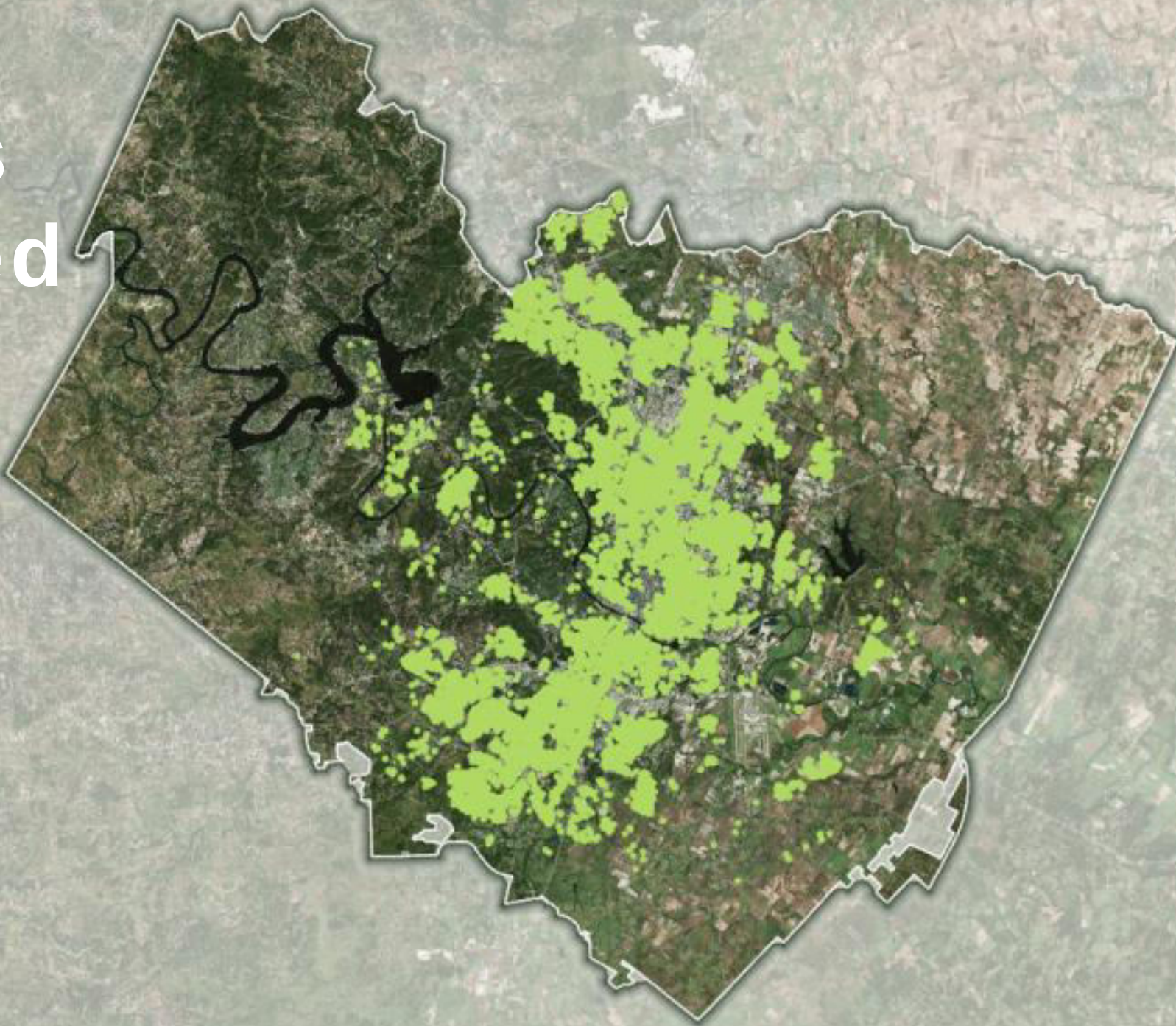
- Trees planted
- Trees removed
- % impervious cover
- % canopy cover
- GHG emissions
- Population density



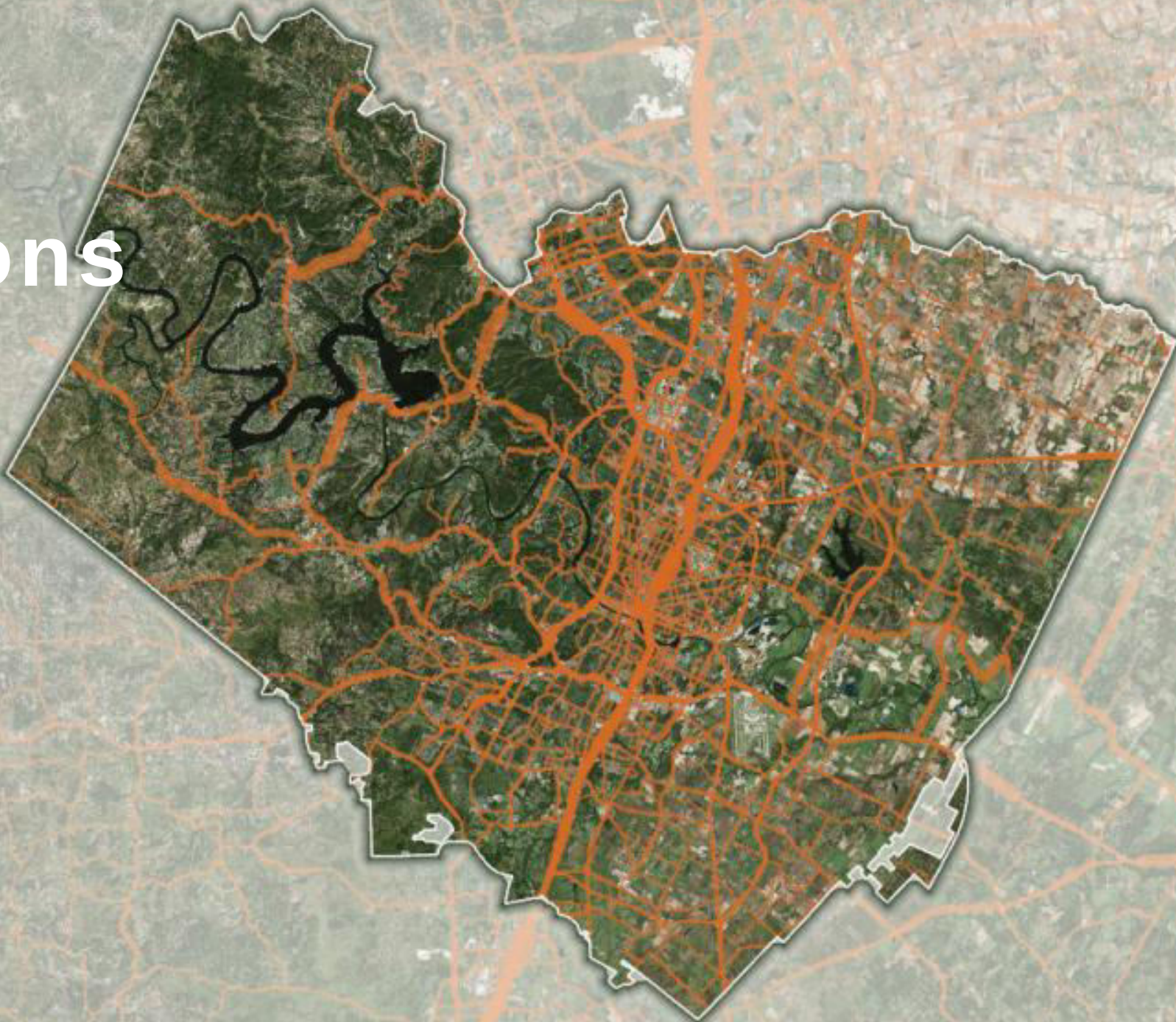
GIS data

- Local data
- Landsat imagery
- US Census
- County health stats
- Regional transportation emissions
- And more...

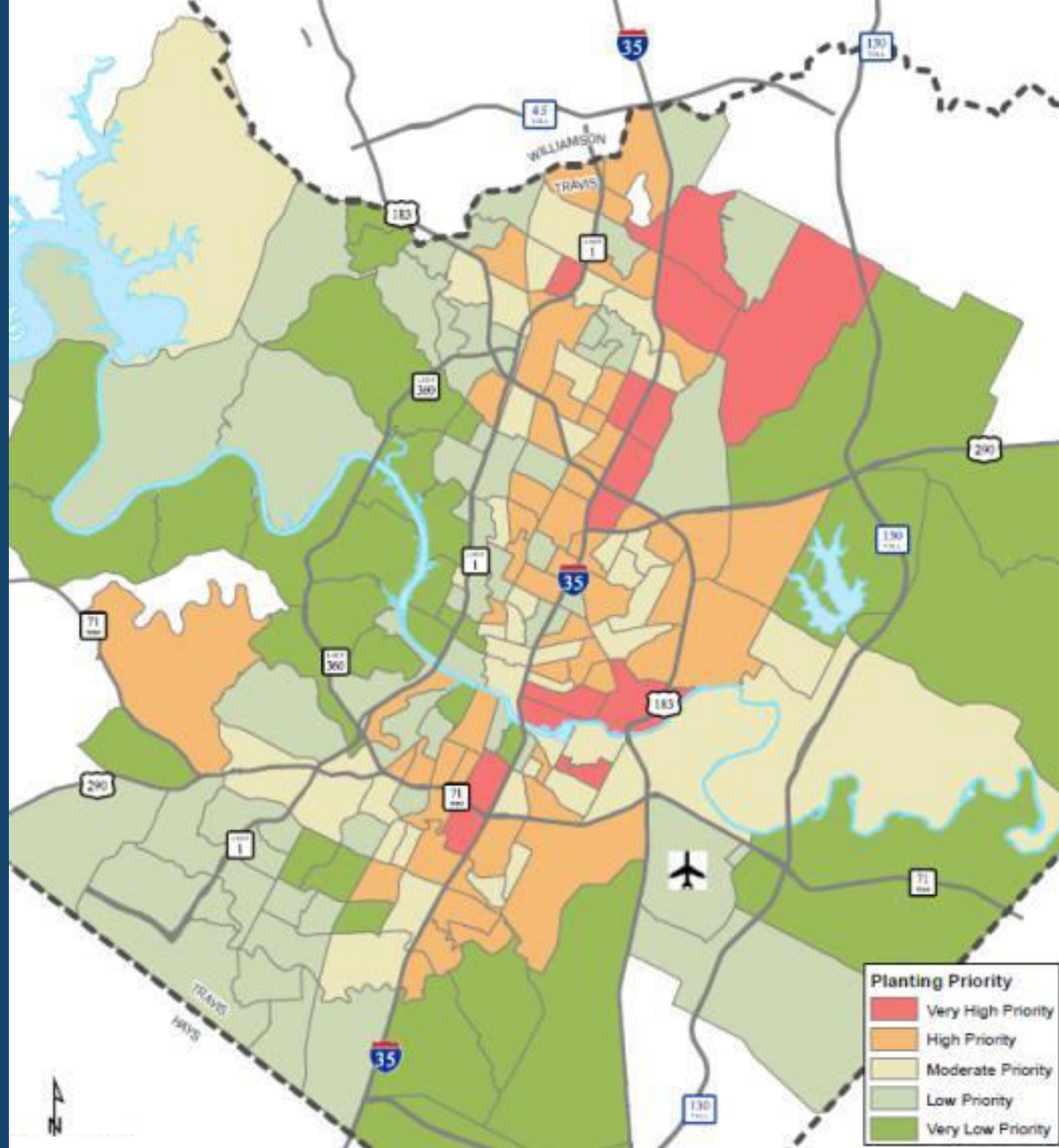
trees
planted



CO2
emissions

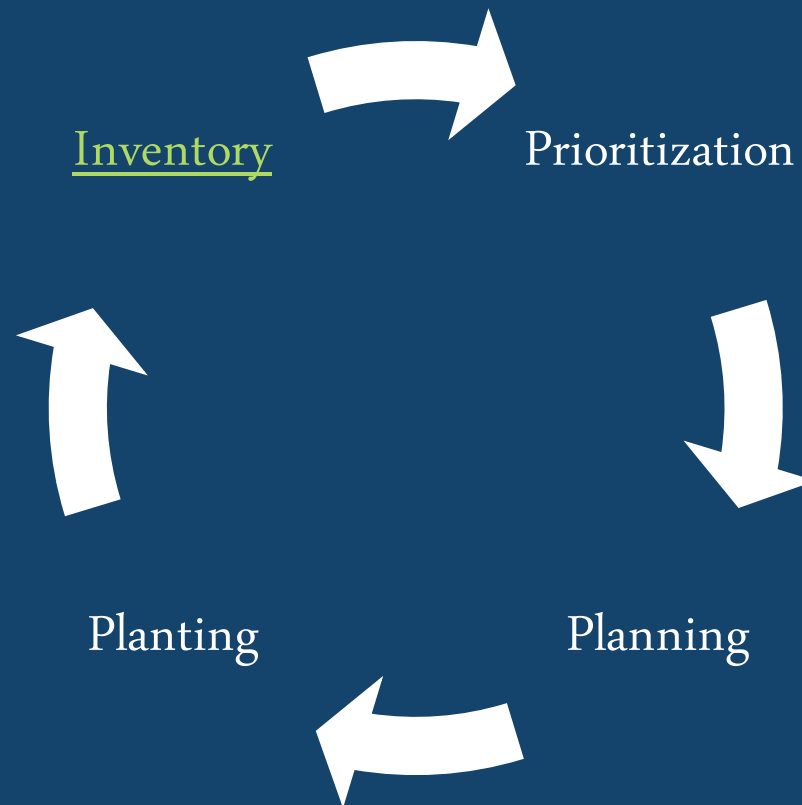


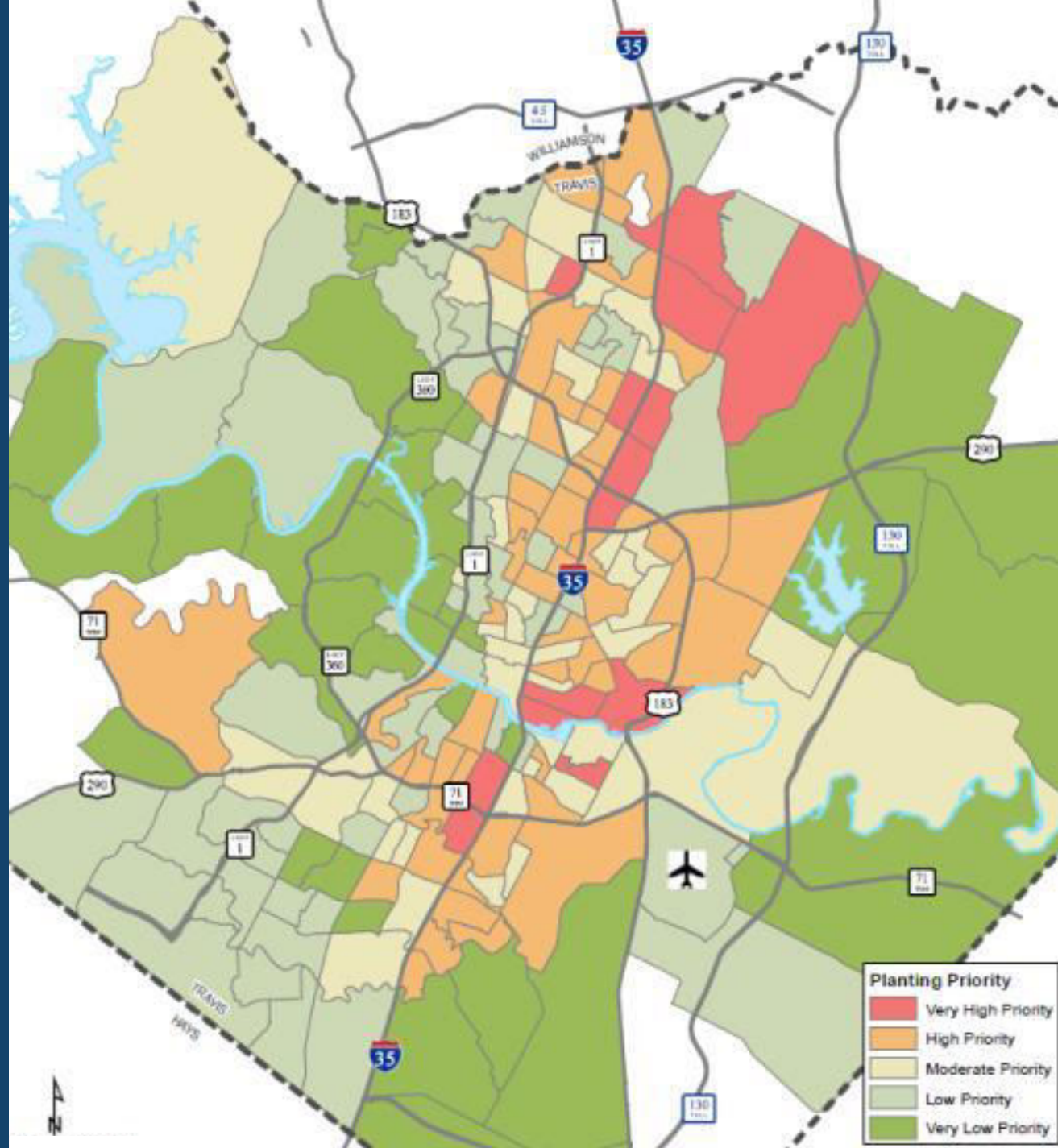
priority planting areas

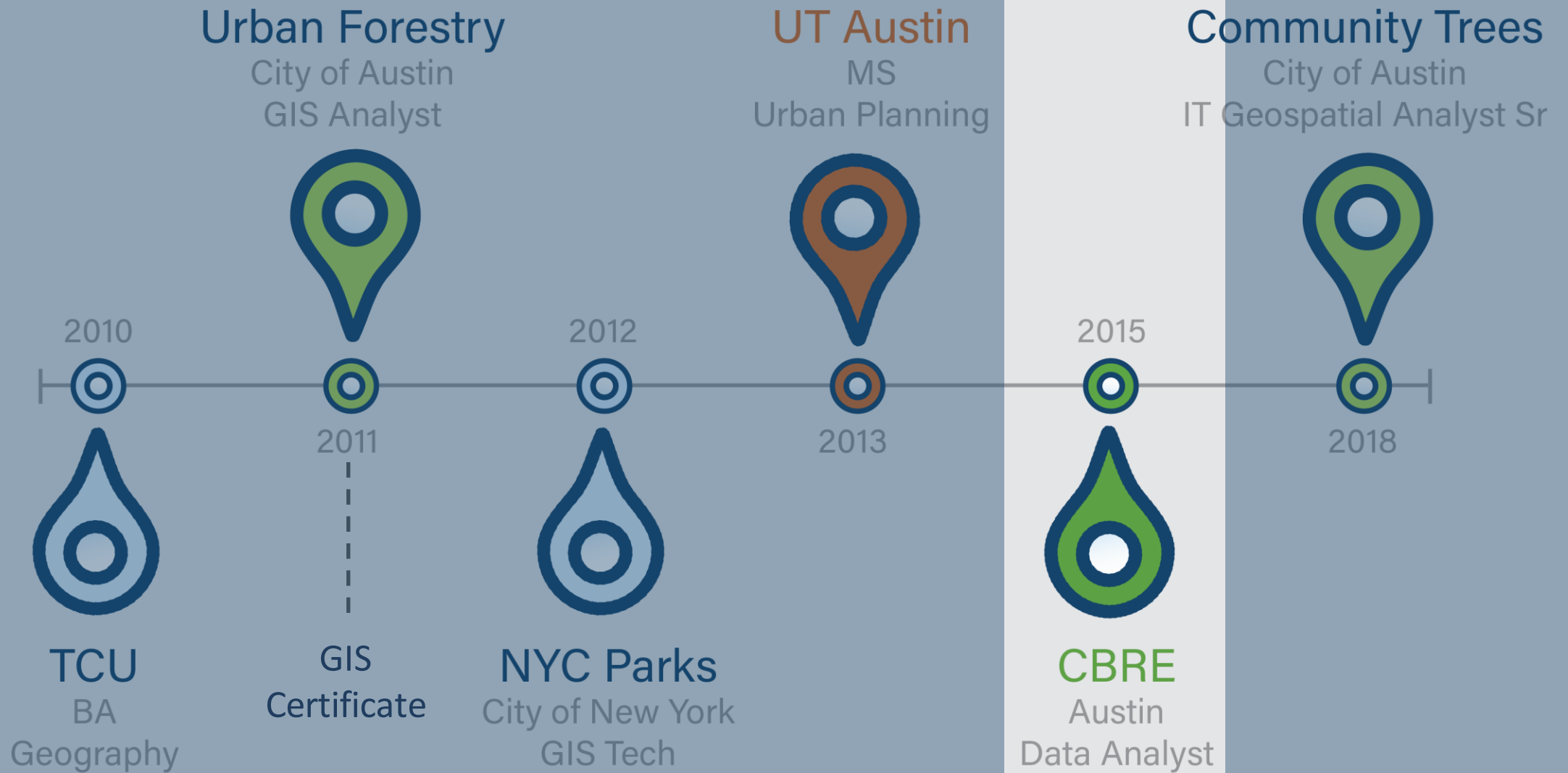




feedback







jackson pollock cartography



analysis

investigate

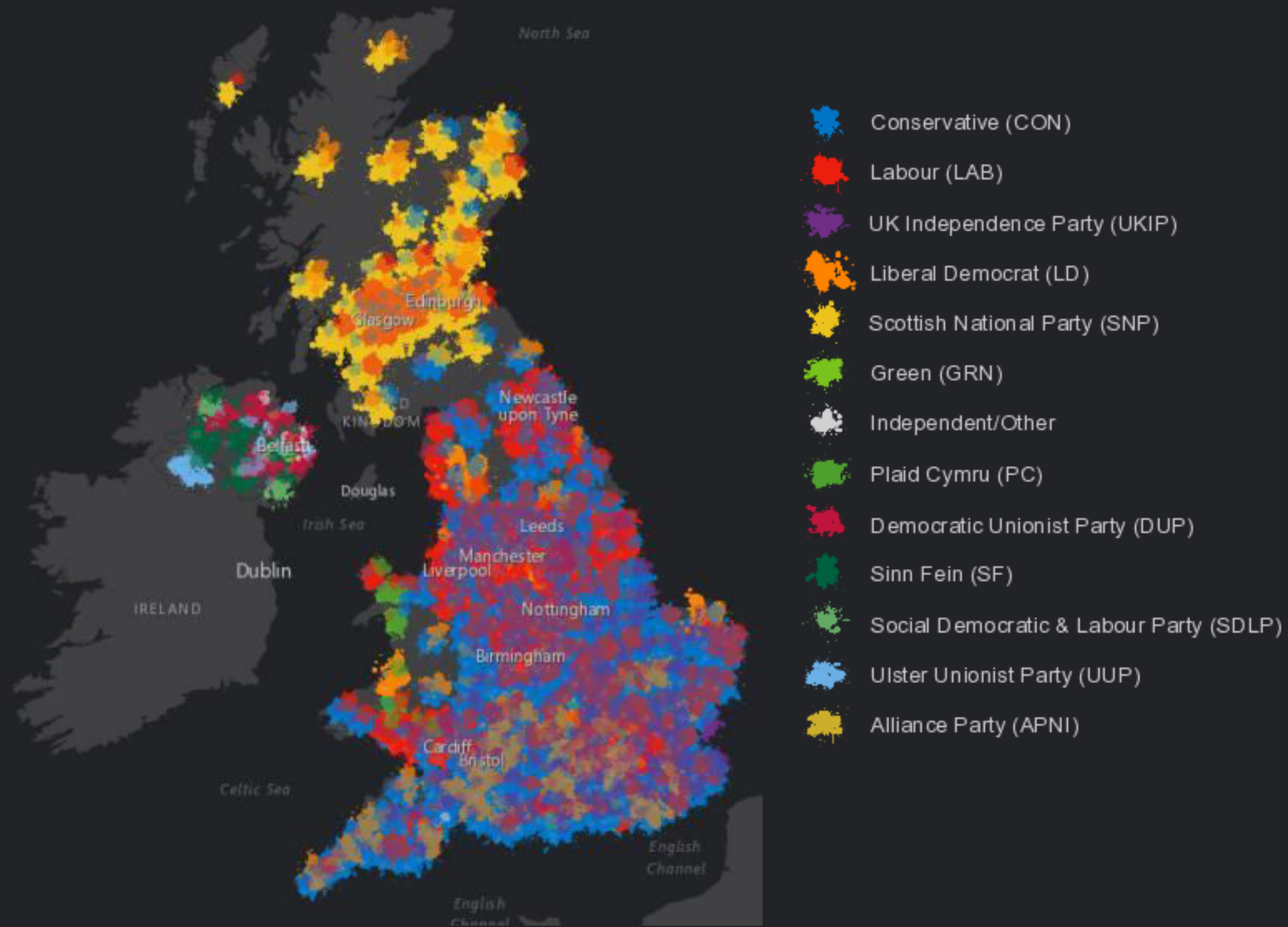
cartography

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Election Pollocks



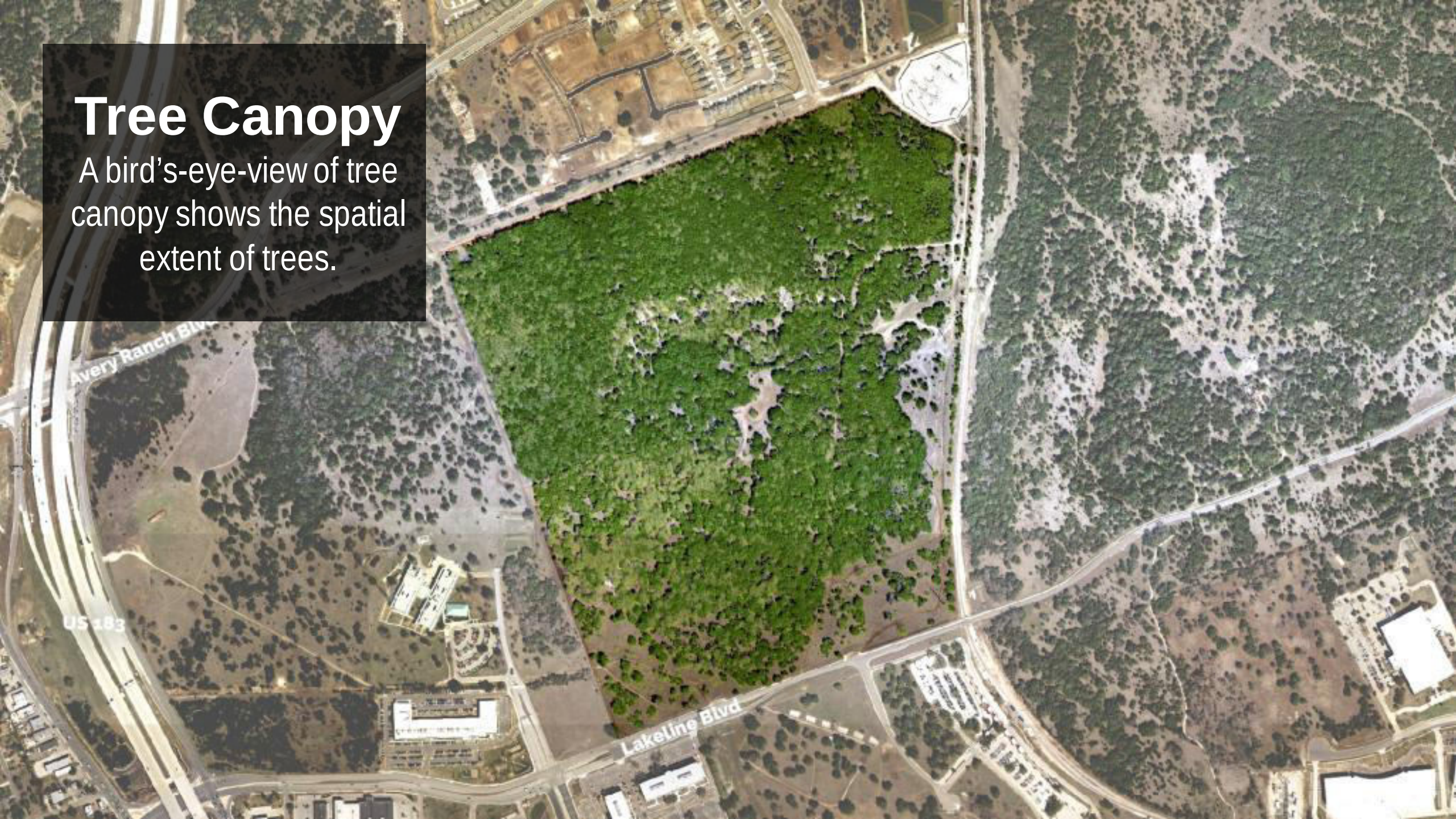
Kenneth field





Tree Canopy

A bird's-eye-view of tree canopy shows the spatial extent of trees.





Tree Families

Lythraceae (292)

crape myrtle
pomegranate

tree
count

Juglandaceae (181)

pecan

Fagaceae (180)

oaks: post, live, red, lacey,
blackjack

Cupressaceae (163)

cypress, juniper, cedar, thuja

Ulmaceae (33)

elms: american, cedar, lacebark

Oleaceae (26)

arizona ash
ligustrum

Euphorbiaceae (16)

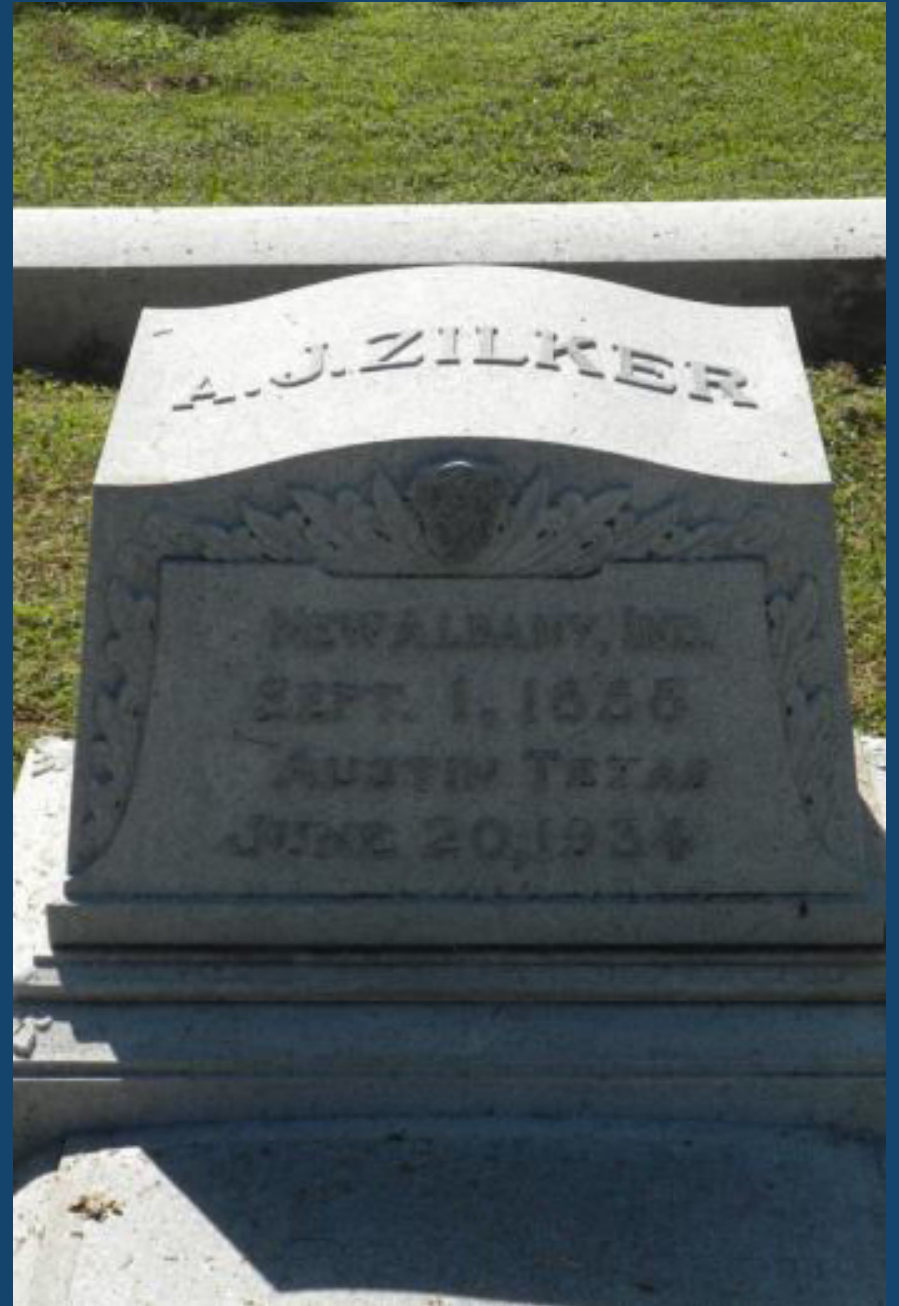
chinese tallow

Fabaceae (16)

Texas mountain laurel,
honeylocust, silk tree

Other Families (30)

holly, hackberry, frasier, loquat,
magnolia, catalpa, and others



Austin Families

(1) George W. Littlefield

(2) Ima Hogg

(3) Lala Fay Watts

(4) Elisha M. Pease

(5) Mueller

(6) Walter E. Long

(7) Andrew Zilker

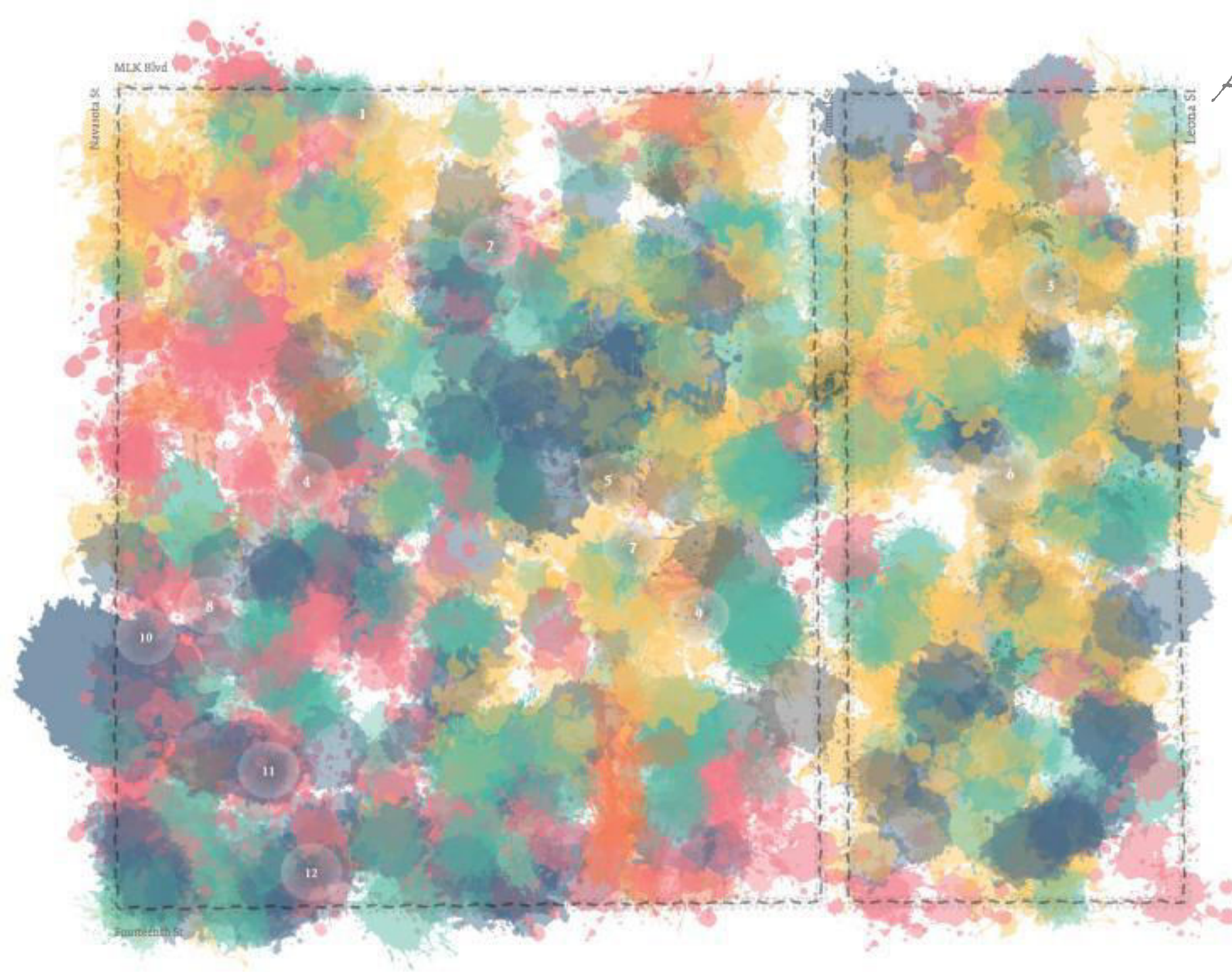
(8) Metz

(9) Steck

(10) Jacob Fontaine

(11) Sir Swante Palm

(12) Anderson



green view index

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Urban Forestry

City of Austin
GIS Analyst

UT Austin

MS
Urban Planning

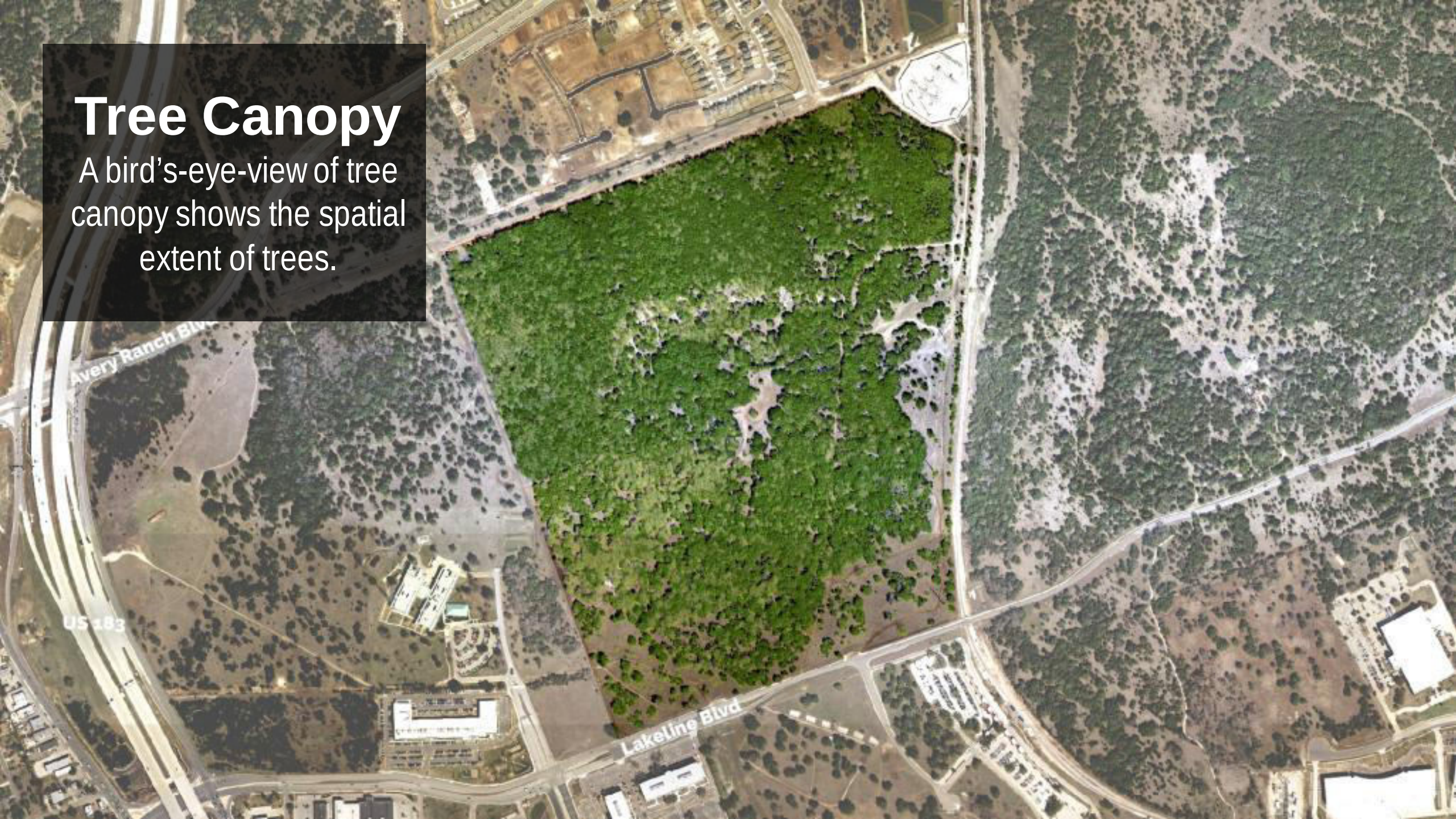
Community Trees

City of Austin
IT Geospatial Analyst Sr



Tree Canopy

A bird's-eye-view of tree canopy shows the spatial extent of trees.



Street-side green view

Vegetative vigor is more apparent at street level. You can really get a feel for the greenness tree canopy provides.



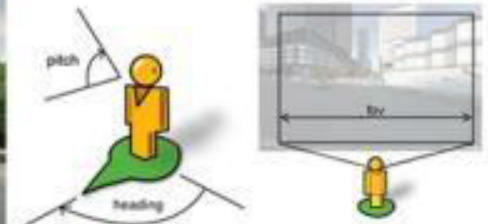
point sampling & imagery retrieval

Step 1: Sampling



Sampling process in Hartford, CT

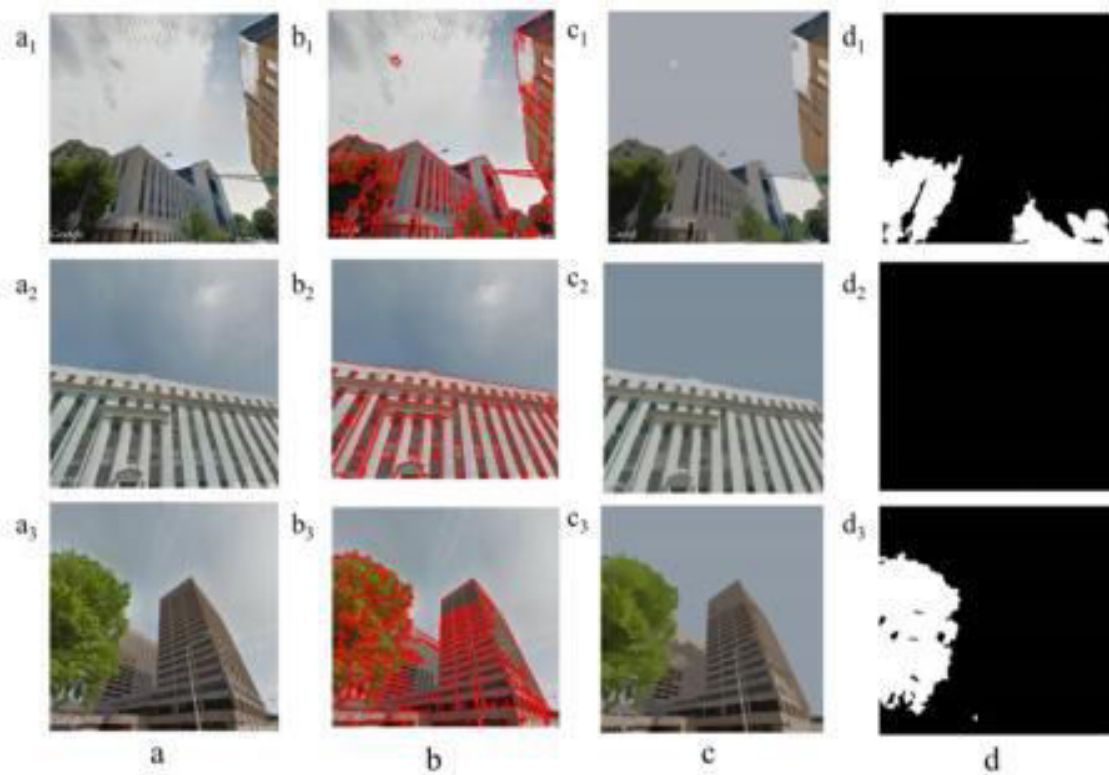
Google Street View static image API



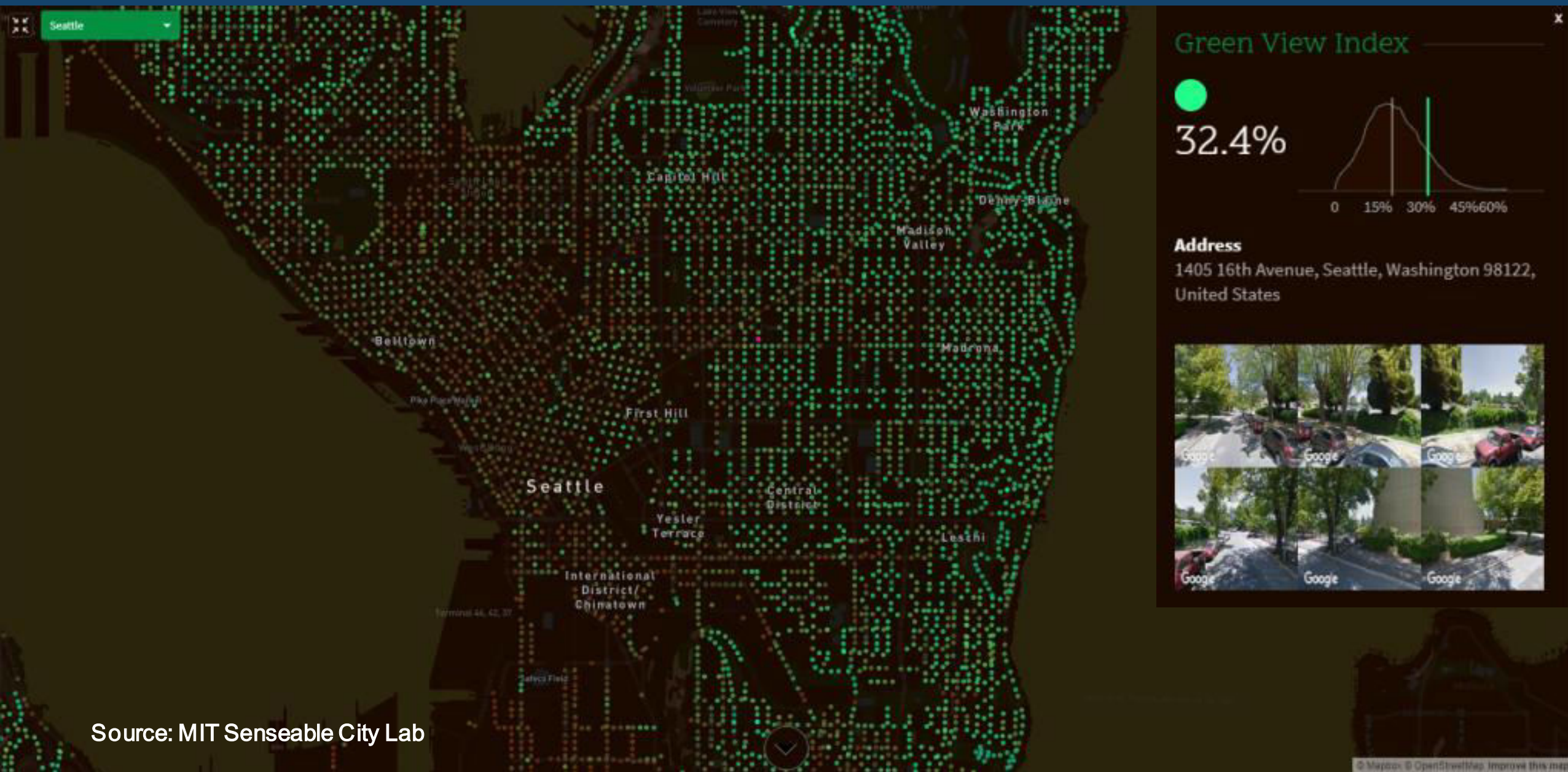
<http://maps.googleapis.com/maps/api/streetview?size=400x400&location=40.7225780677,-73.9871877804&fov=60&heading=270&pitch=10&sensor=false>

image processing

Step 2b: GSV images processing



seattle



treepedia




Source: MIT Senseable City Lab

green view index (GVI)

The screenshot shows a GitHub repository page for 'mittrees / Treepedia_Public'. At the top, there are buttons for 'Watch' (1), 'Star' (18), and 'Fork' (7). Below this is a navigation bar with links for 'Code', 'Issues' (1), 'Pull requests' (0), 'Projects' (0), 'Wiki', and 'Insights'. A large banner for 'Join GitHub today' is present, with a 'Sign up' button. Below the banner, the text 'Treepedia package for public use' is displayed. A summary bar shows '4 commits', '1 branch', '0 releases', '1 contributor', and 'BSD-2-Clause' license. Below this, there are buttons for 'Branch: master', 'New pull request', 'Find file', and 'Clone or download'. The main content area shows a list of files and folders with their commit history:

File/Folder	Commit Message	Time
Treepedia	copy from private	4 months ago
docs	update description	4 months ago
images	copy from private	4 months ago
sample-spatialdata	copy from private	4 months ago
LICENSE	copy from private	4 months ago
README.md	update links	4 months ago
img.jpg	copy from private	4 months ago



green view index downtown austin

GVI: % Green

- <25%
- 25-50%
- 51-75%
- 75-100%

GVI 2%



GVI 45%



urban heat island



green view index surface temperature

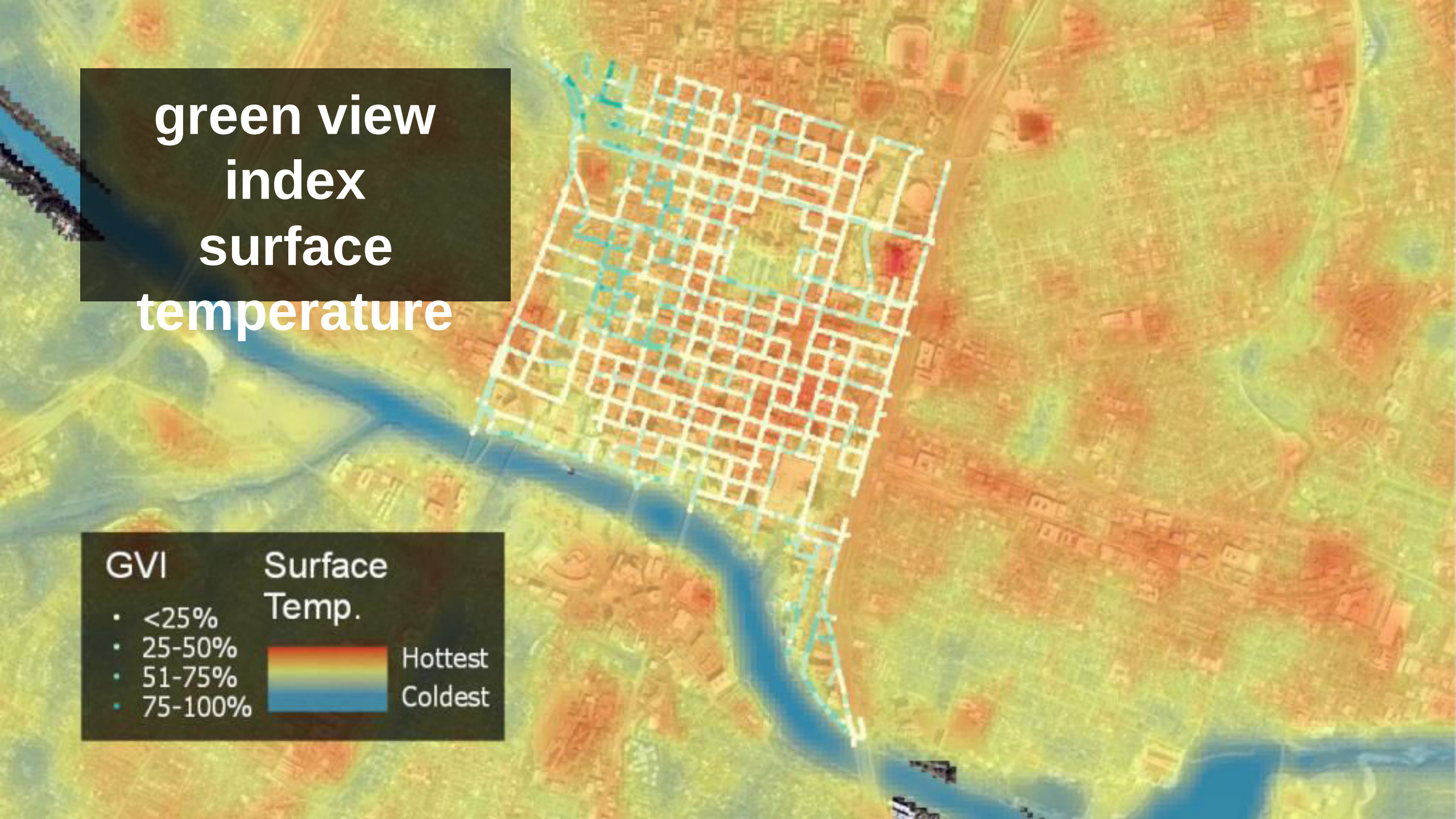
GVI

- <25%
- 25-50%
- 51-75%
- 75-100%

Surface
Temp.



Hottest
Coldest



wrap up



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A scenic view of the Austin skyline across a river. In the foreground, a river flows with a bridge spanning it. Several people are in a small boat on the left. The background is filled with various high-rise buildings under a clear blue sky. The text 'NATURE in the CITY Austin' is overlaid on the right side of the image.

NATURE in the CITY *Austin*

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[#natureinthecity](https://austintexas.gov/trees)

[@naturecityatx](https://austintexas.gov/trees)

<https://austintexas.gov/trees>