

# Data Tools at DRCOG

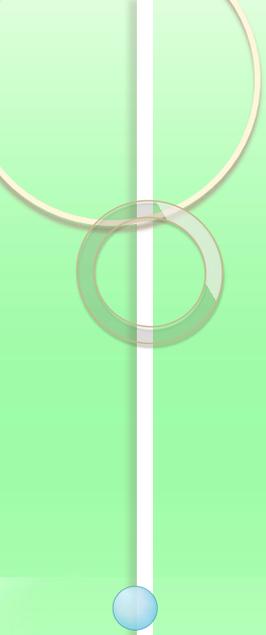
Collection & Distribution of GIS Data



*We make life better!*

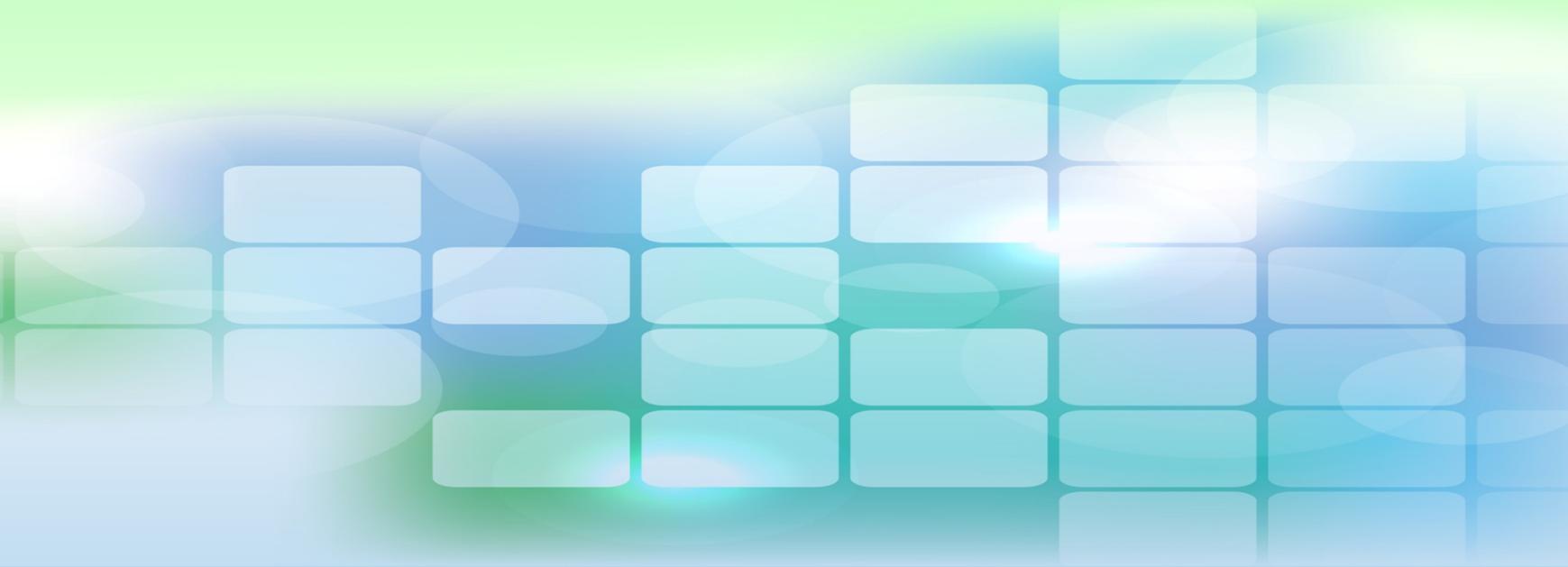
# Key Tools

- **Data Portal** ← Collection
- **Regional Data Catalog** ← Distribution
- **Regional Equity Atlas** ← Decision-Support
- **DIVA** ← Story-telling with Data



Collection

# DATA PORTAL



# Data Portal

- **What is it?**

A secure site for data exchange between DRCOG and its members.

- **Why did we build it?**

Increase and improve data transactions

Increase communication amongst members and between members and DRCOG

Understand and document sharing restrictions →  
Create and share regional datasets when we can.



# Data Portal

- Key Features
  - Private and secure
  - Transaction tracking
  - User-friendly upload and download functionality
  - Commenting/forum feature
  - Customizable upload form to gather specific info (e.g. licensing)
  - Participation map
  - Automatic sync with Open Colorado – data “pull”



# Data Portal

- What's under the hood?
  - CKAN platform (same as Open Colorado)
  - Python backend and Javascript frontend
  - Sits on Linux server
    - Development
    - Production
  - Uses PostgreSQL database
  - Web map embedded

# Data Portal

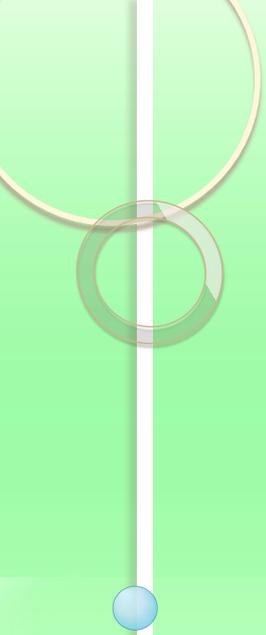
- Look and feel

The screenshot displays the DRCOG Data Portal interface. At the top, the header includes the DRCOG logo with the tagline "We make life better!", the text "DATA PORTAL", and navigation links for "Datasets", "Organizations", "Map", "Inventory", and "About". A search bar is located on the right side of the header.

The main content area is titled "Data Availability Map" and includes a search bar and a "Tools" dropdown menu. On the left side, there is a sidebar with a "Table of Contents" checkbox, "Overlay Layers" (with radio buttons for "County" and "Municipality"), and a "Dataset Count" legend. The legend shows four categories: 0 (red), 1-10 (orange), 11-50 (green), and >50 (blue).

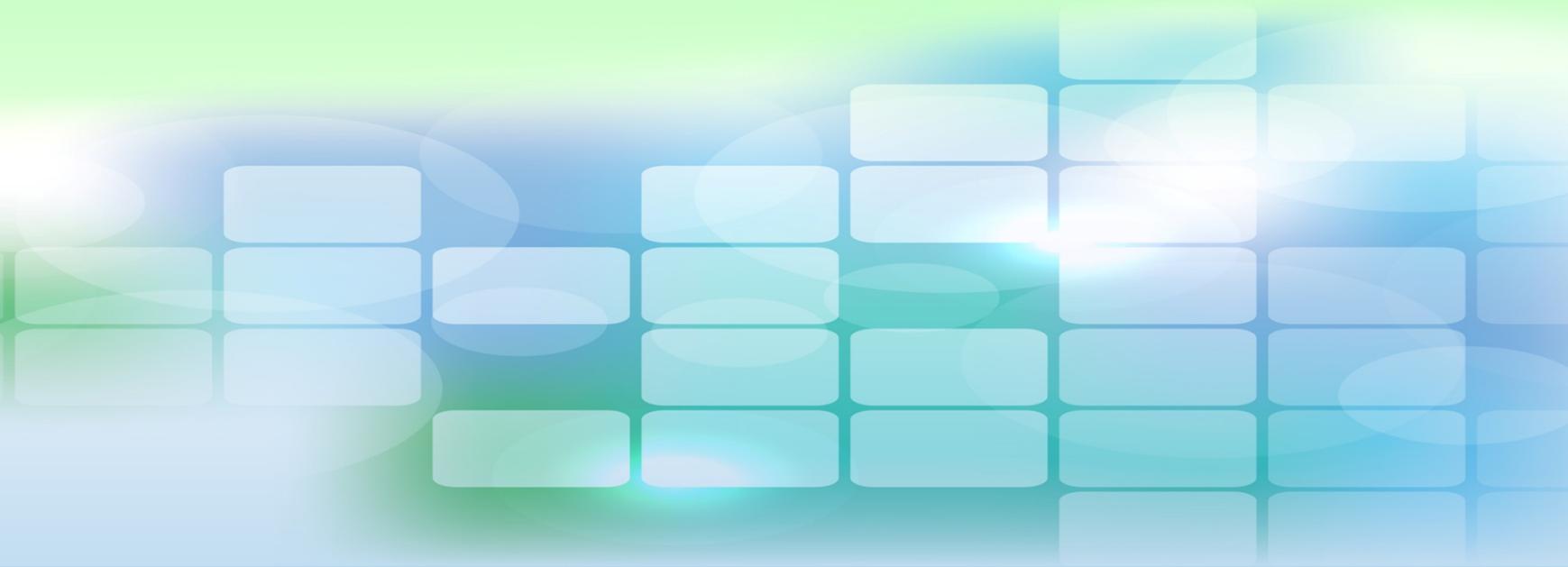
The central map shows the Denver region with various municipalities and national forests highlighted in different colors based on the dataset count. Major highways (I-76, I-70, I-25, US-87, US-34, US-40, US-285, US-24) are also visible. The map includes zoom controls and a scale bar (30 km / 20 mi).

At the bottom of the map, it says "Map data ©2014 Google Terms of Use Report a map error".



Distribution - <http://gis.drcog.org/datacatalog/>

# **REGIONAL DATA CATALOG**





# Regional Data Catalog

- **What is it?**

An online data catalog that is open to the public and features GIS data and map data available for download.

- **Why did we build it?**

To better serve the GIS power-users in our communities (from universities to local governments)

To reduce data requests that had to be manually handled by a GIS staff member

To promote and support open data



# The Regional Data Catalog

- Key Features –
  - Data preview
  - Download functionality
  - Multiple data formats
  - Data and Map Gallery



# The Regional Data Catalog

- What's under the hood?
  - Drupal: Open source content management system
  - Content rendered through views and blocks
  - PostgreSQL database

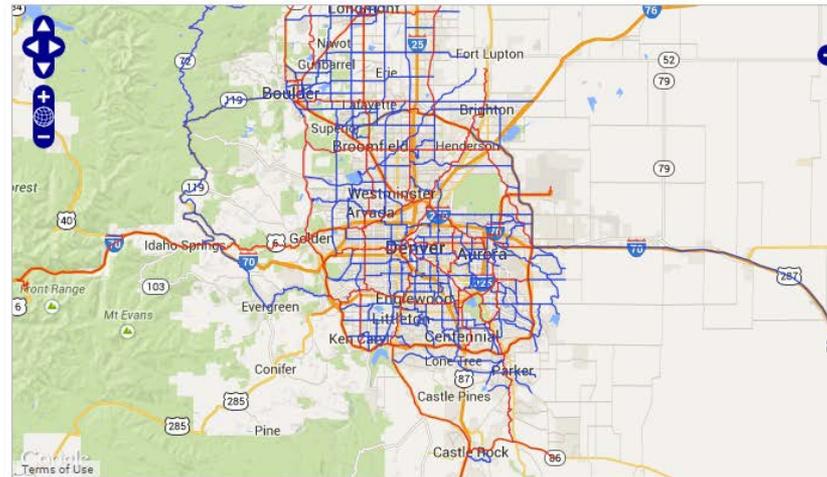
# Regional Data Catalog

- Look and Feel



Home » 2035 Regional Bicycle Corridors System Vision

## 2035 Regional Bicycle Corridors System Vision



Click on the map to see feature information.

### Geodata Links

KML URL: [KML](#)  
WMS URL: [WMS](#)  
Shapefile: [reg\\_bike\\_corridor.zip](#)

### Metadata

### Data Spotlight

2013 Community Profiles are now available!

The Data Portal is now online for our member governments.

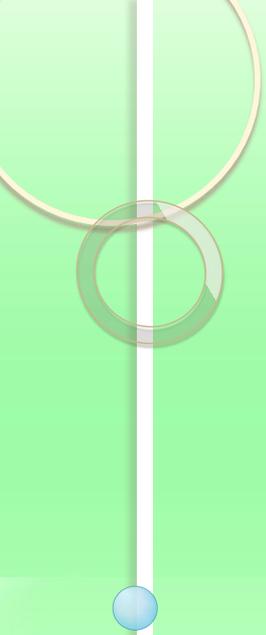
### DRCOG Geo-Data API

Explore the docs and demos!

### Search

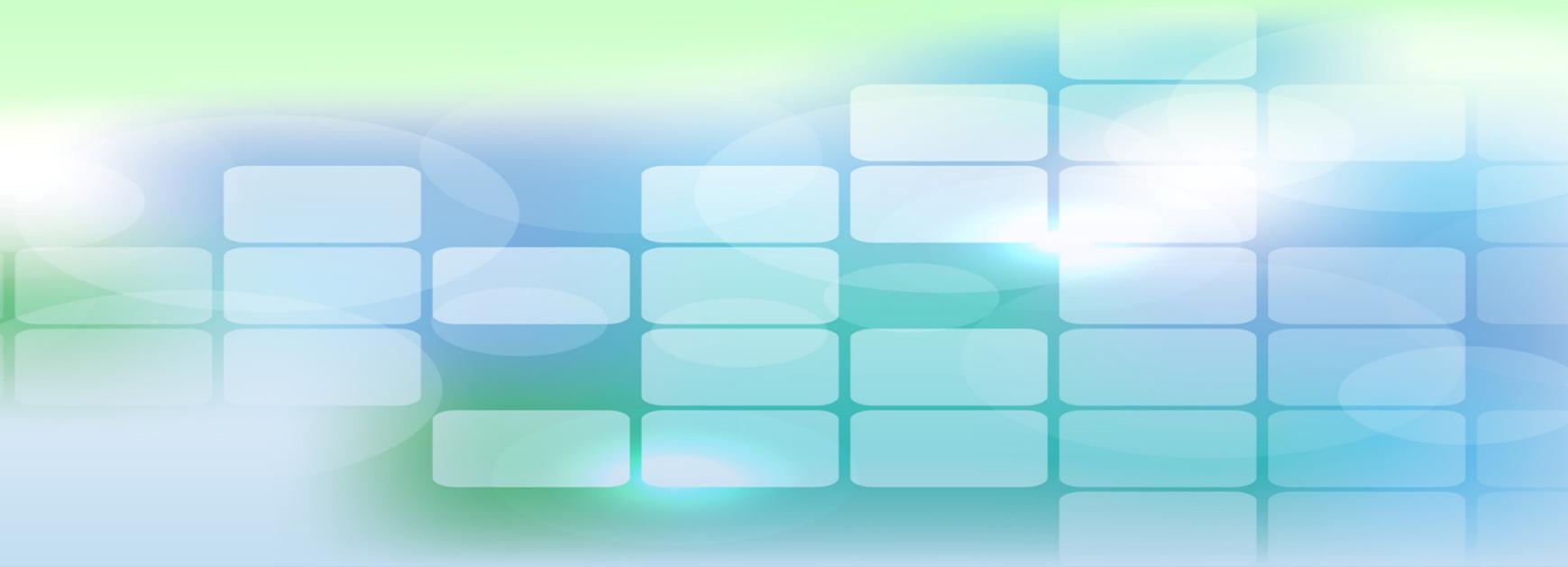
### Browse by Subject

- [water quality](#) (5)
- [travel modeling](#) (6)
- [Transportation Improvement Program \(TIP\)](#) (4)
- [transportation](#) (38)
- [transit-oriented development \(TOD\)](#) (8)
- [roads](#) (6)



Decision-Support - <http://www.denverregionalequityatlas.org/>

# **REGIONAL EQUITY ATLAS**





# Regional Equity Atlas

- **What is it?**

An online, interactive webmap that shows access to opportunity in the region (e.g. transit, education, employment, health, housing etc).

- **Why did we build it?**

To make an existing static product into a dynamic, online product.

To empower our communities with information about their area so they can work together towards positive change.

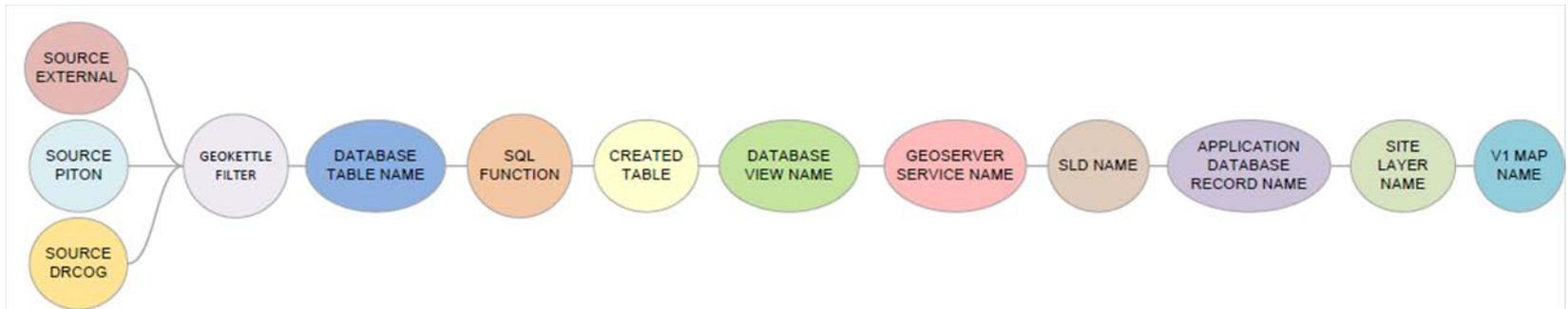


# The Regional Equity Atlas

- Key Features
  - Interactive webmap
  - Custom data mashups
  - Ability to save, share custom maps
  - Dynamic legend
  - Dynamic graphs and charts

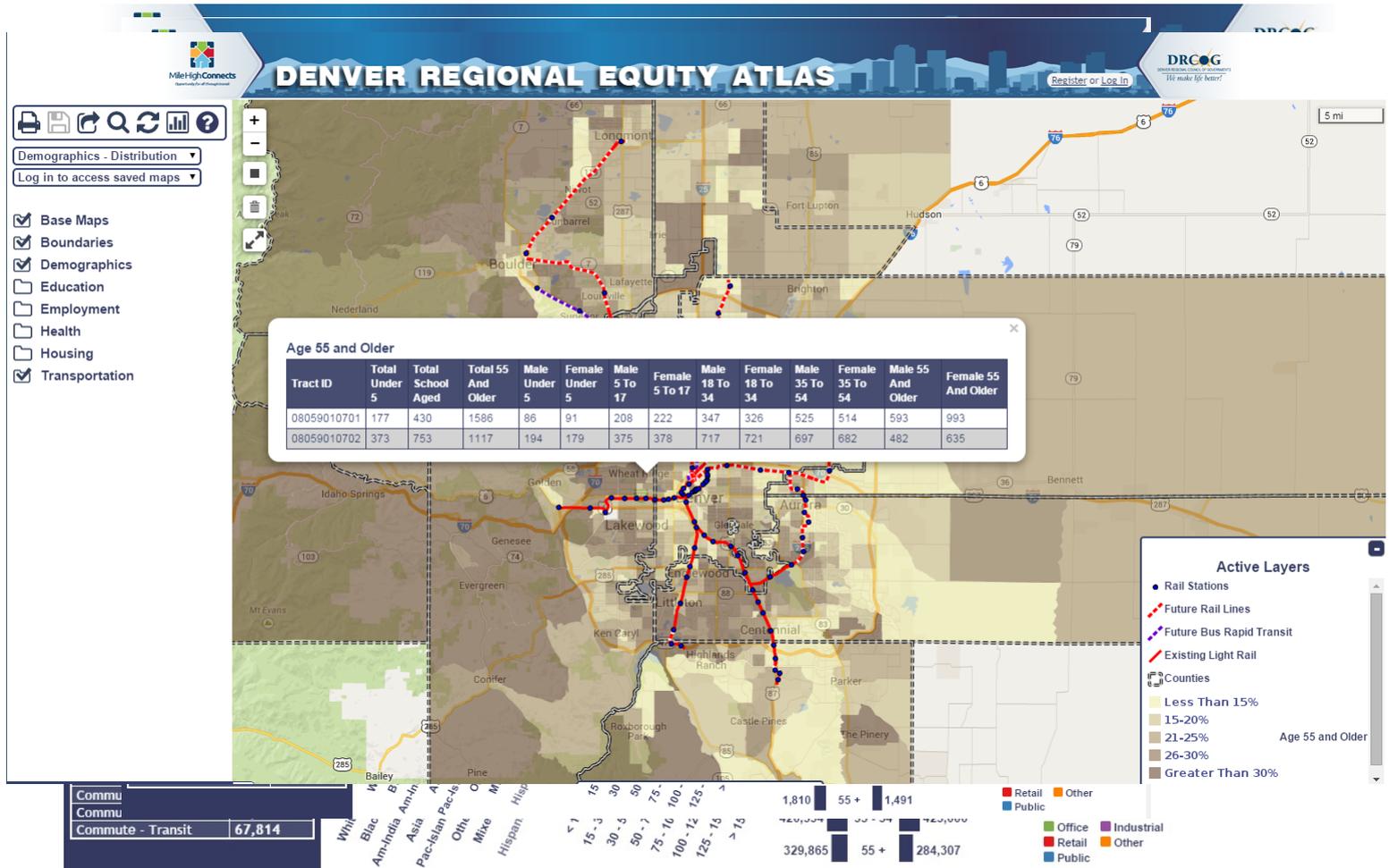
# The Regional Equity Atlas

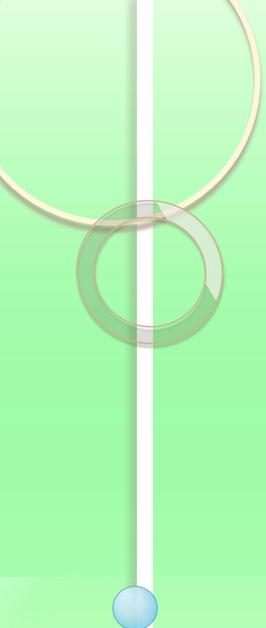
- What's under the hood?
  - SQL Server for frontend
  - PostgreSQL for backend
  - Data processing intensive



# The Regional Equity Atlas

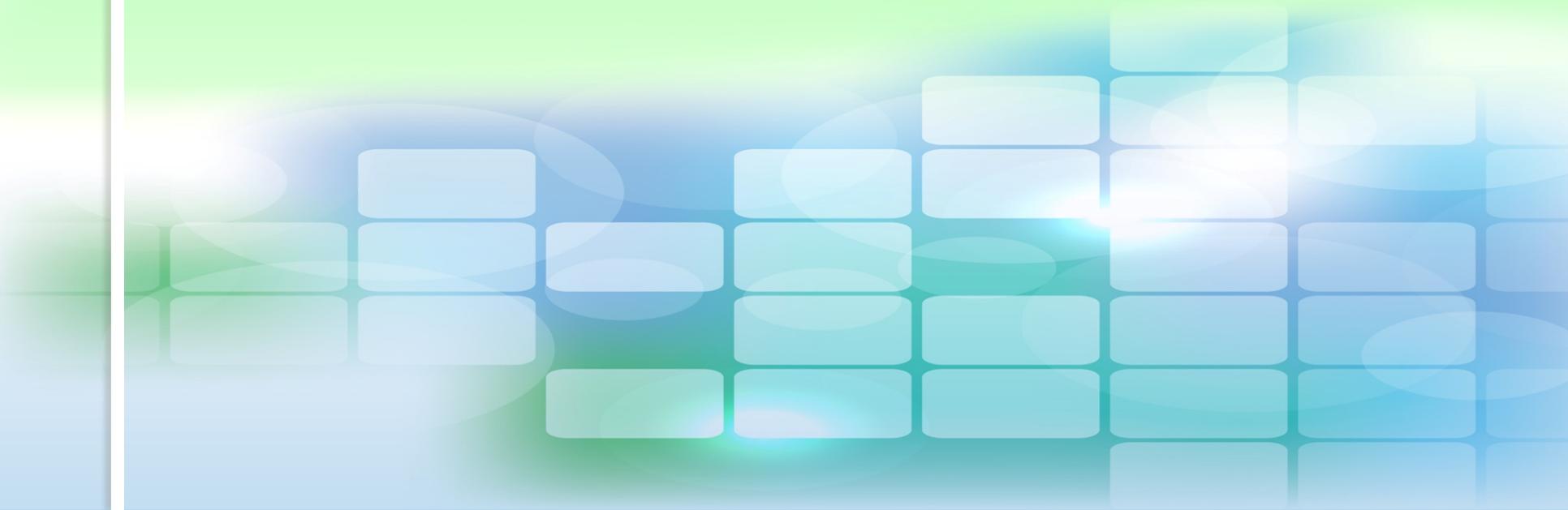
- Look and feel





Story-telling with Data

# **DATA, INFORMATION, VISUALIZATIONS, AND ANALYSIS (DIVA)**





# DIVA – *In Development*

- **What is it?**

An online repository of data-driven stories and infographics that explain our region.

- **Why are we building it?**

To turn our data into information for the benefit of the public, our communities, our elected officials etc.

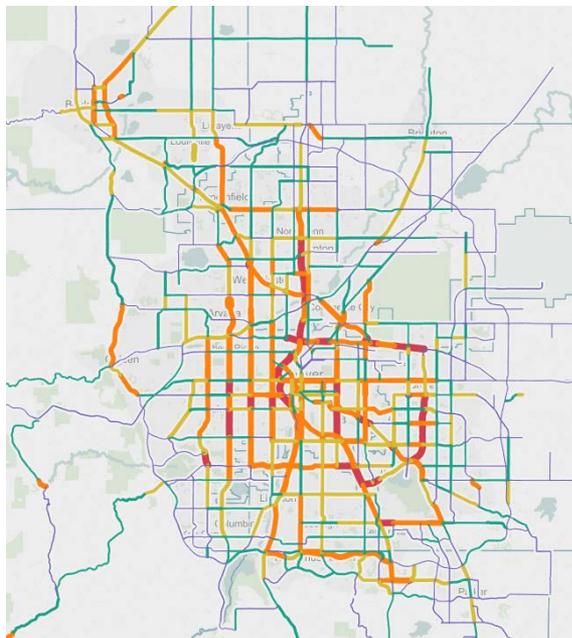


# DIVA

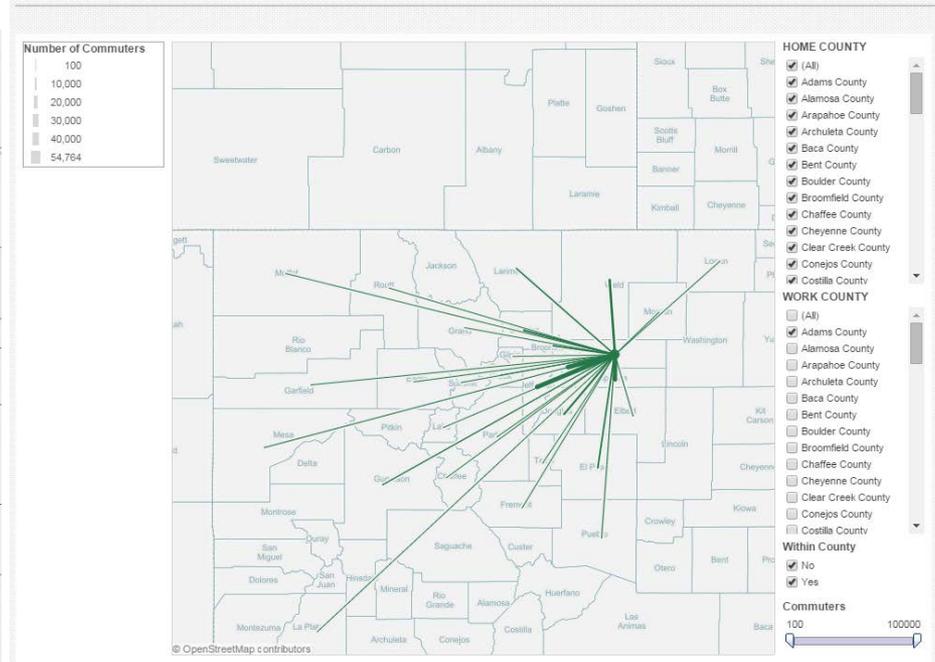
- Key Features –
  - Interactive maps, graphs, and charts
  - Rich infographics
  - Regional analysis with “drill-down” capability
  - Data provided with context/narratives

# DIVA

- What's under the hood?
  - Tableau visualizations

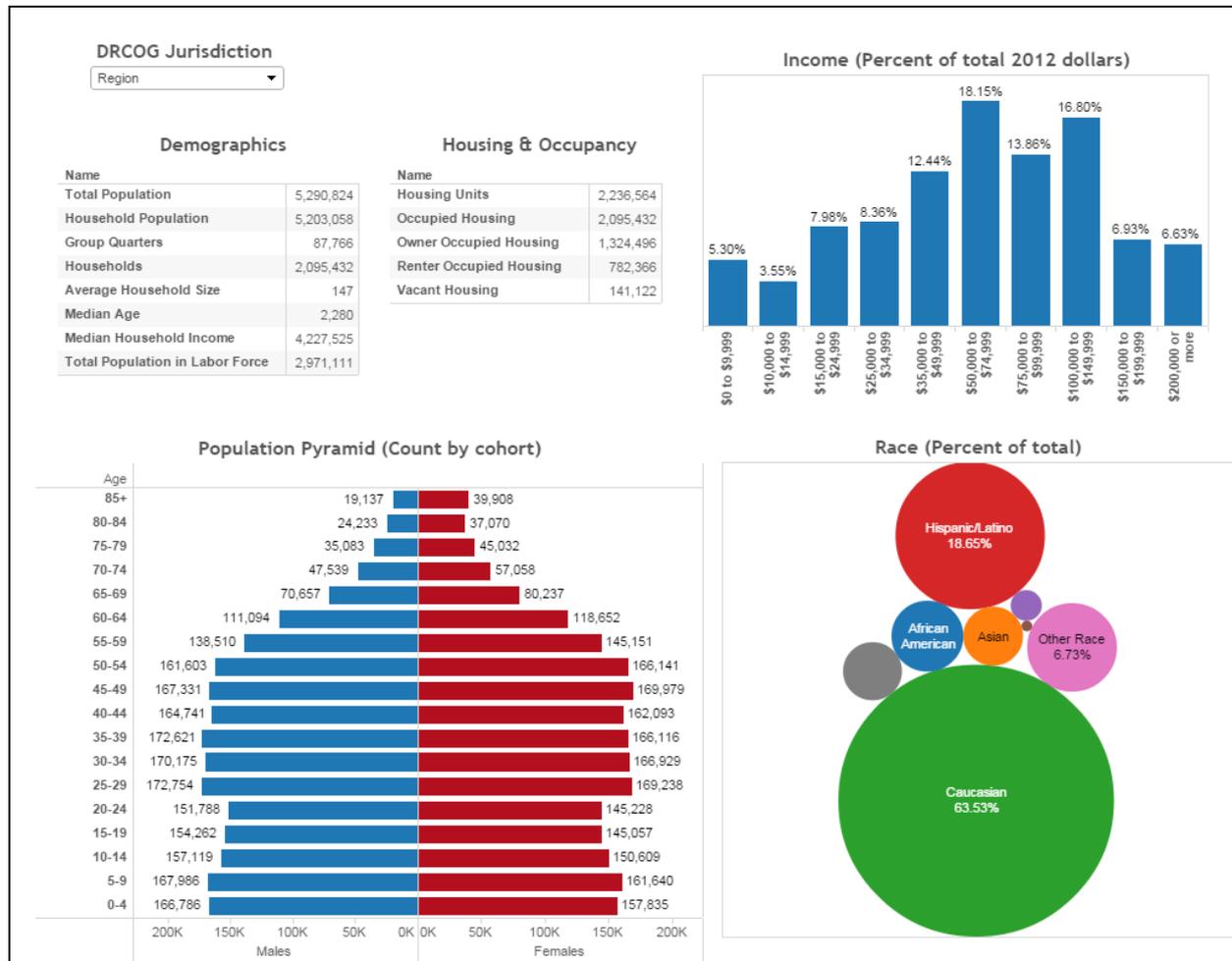


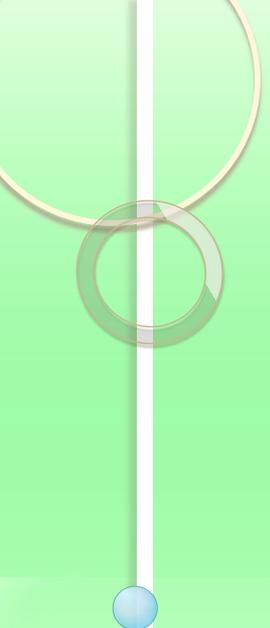
Commuting Patterns



# DIVA

- Look and feel





# OUR SOFTWARE STACK

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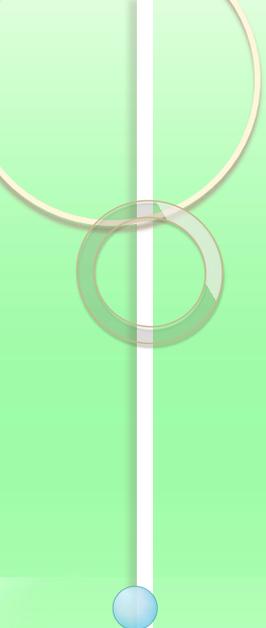
# Proprietary Software

- Windows OS
- SQL Server 2008 R2
- ArcGIS 10.1
  - Network Analyst
  - Geostatistical Analyst
  - 3D Analyst
  - Spatial Analyst
  - ArcGIS Online
- Tableau



# Open Source

- Linux OS
- PostgreSQL/PostGIS
- GeoServer
- GeoKettle
- GitHub
- Drupal
- CKAN
- QGIS
- Apache



# QUESTIONS?

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