

# **The Problem**

**To Inform Decisions, Public and Private Organizations Need to Work With Multiple Streams of Data.**

**Merging, Matching, Visualizing, & Analyzing Multiple Data Streams is Costly.**



— — **Automation Challenge** — —

---

— — **Analytical Challenge** — —

---

— — **Distribution Challenge** — —

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— — **Integration Challenge** — —

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**Transportation**  
(Dep of Transp.)

**Health**  
(Dep. of Health,  
Insurance Providers)

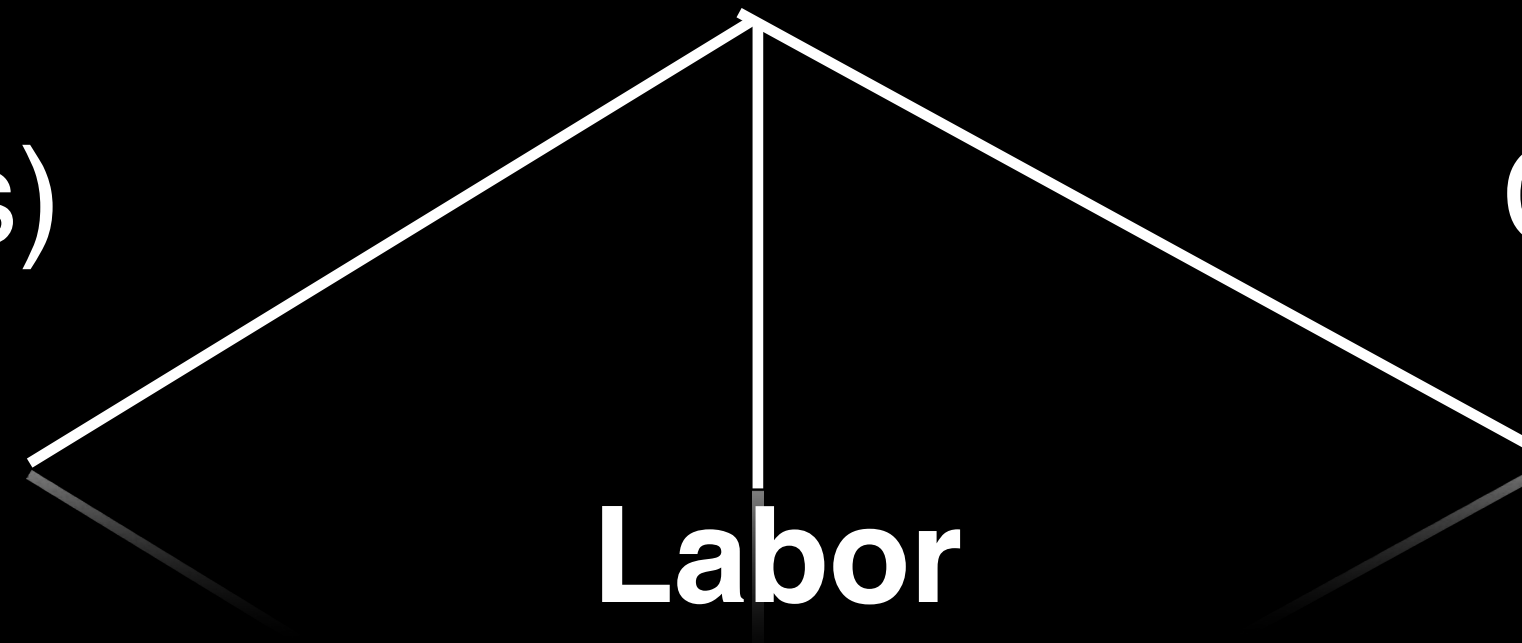
**Economy**

**Demographics**  
(Census,  
Civil Registry) ...

**Trade**  
(Customs)

**Labor**  
(Social Security)

**Income**  
(Tax Authority)



**State of the Art**









# Datos Argentina

Ponemos a tu alcance datos públicos en formatos abiertos para que puedas usarlos, modificarlos y compartirlos. Estos datos son tuyos. Podés crear visualizaciones, aplicaciones y grandes herramientas con ellos.

213  
DATASETS

015  
ORGANIZACIONES  
CON DATOS

¿Qué dataset buscás?



Agropecuaria, pesca y  
forestación



Asuntos internacionales



Ciencia y tecnología



Economía y finanzas



Educación, cultura y deportes



Energía



Gobierno y sector público



Justicia, seguridad y legales



Medio ambiente



Población y sociedad



Regiones y ciudades



Salud



Transporte



# The home of the U.S. Government's open data

Here you will find data, tools, and resources to conduct research, develop web and mobile applications, design data visualizations, and [more](#).

## GET STARTED

SEARCH OVER 197,575 DATASETS



## BROWSE TOPICS



Agriculture



Climate



Consumer



Ecosystems



Education



Energy



Finance



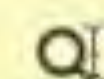


opendata.swiss is the portal for Swiss open government data (OGD). Here you can download Swiss government data free of charge. Enter a term of your choice in the search field or click on a category you are interested in.

[Learn more about opendata.swiss](#)

2,350  
Datasets

zurich



## Categories

Administration 39

Agriculture, forestry 202

Construction and housing 188

Crime, criminal justice 9

Geography 991

Health 60

Industry and services 45

Legislation 13

Prices 15

Public order and security 17

Social security 66

Statistical basis 4

**FAIL**

— — Automation Challenge — —

**FAIL**

— — Analytical Challenge — —

**FAIL**

— — Distribution Challenge — —

**FAIL**

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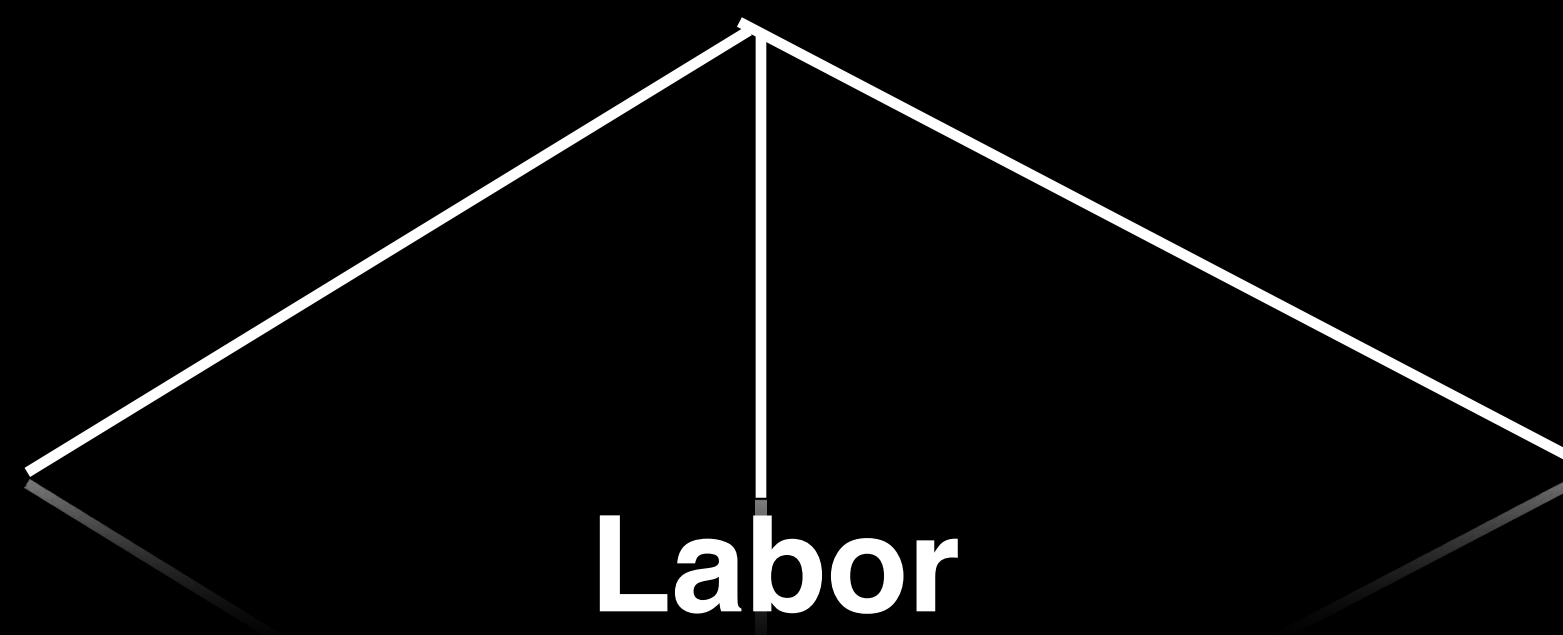
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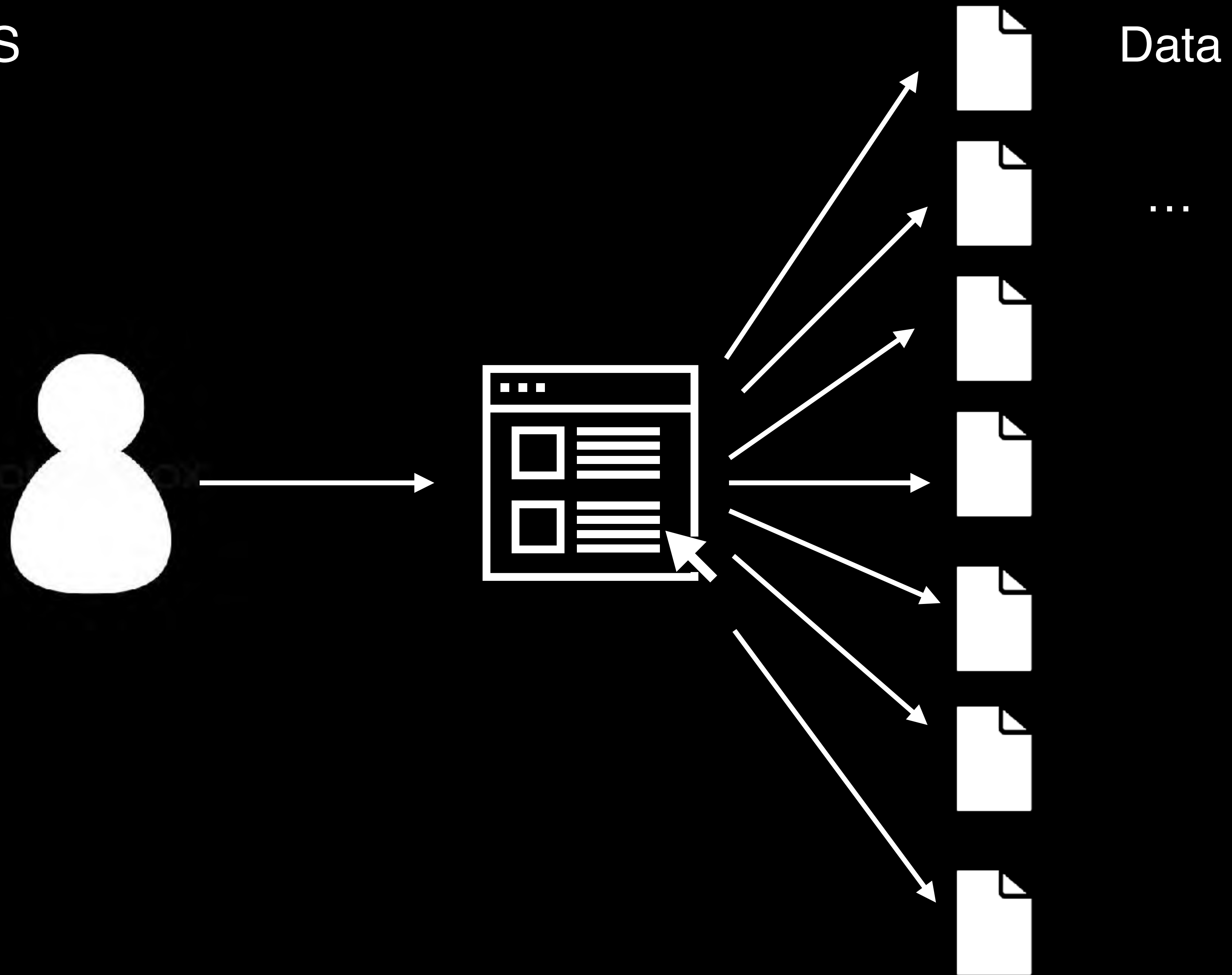
**Labor**  
(Social Security)

**Income**  
(Tax Authority)





# DATA AS FILES



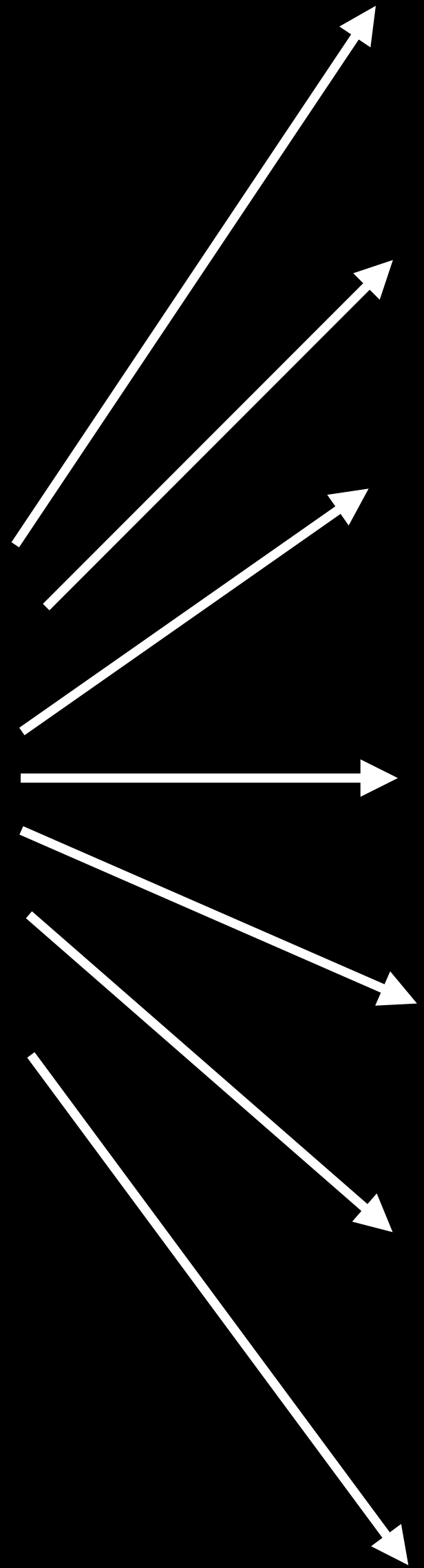
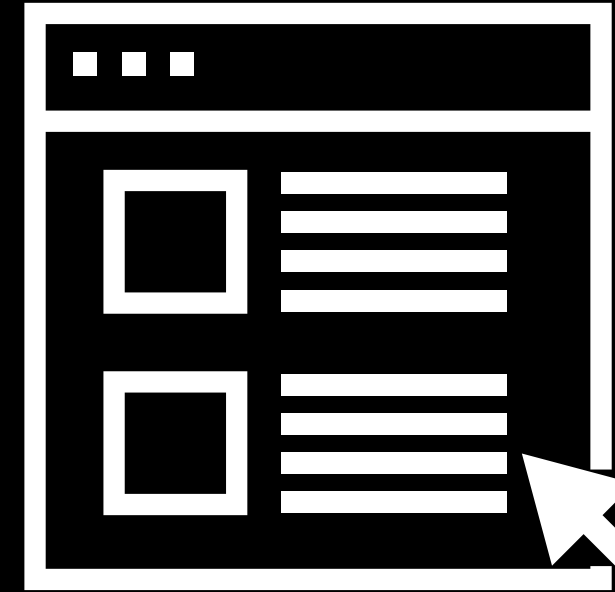
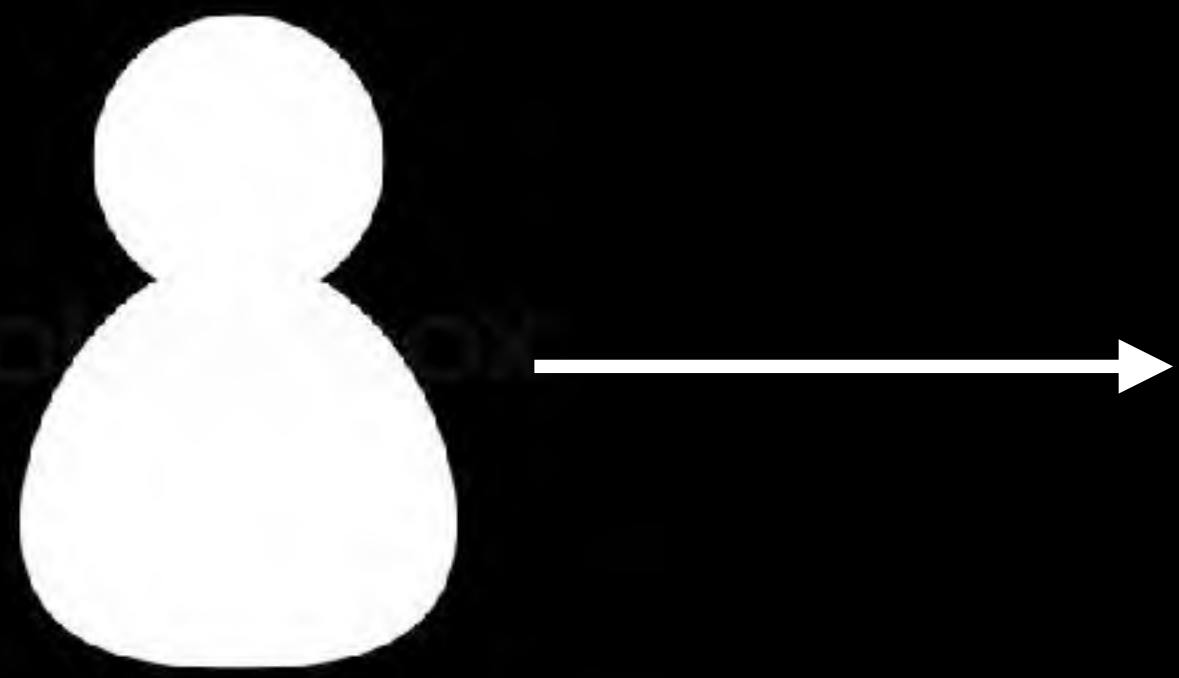


# DATA AS STORIES





# CHANGING PARADIGM

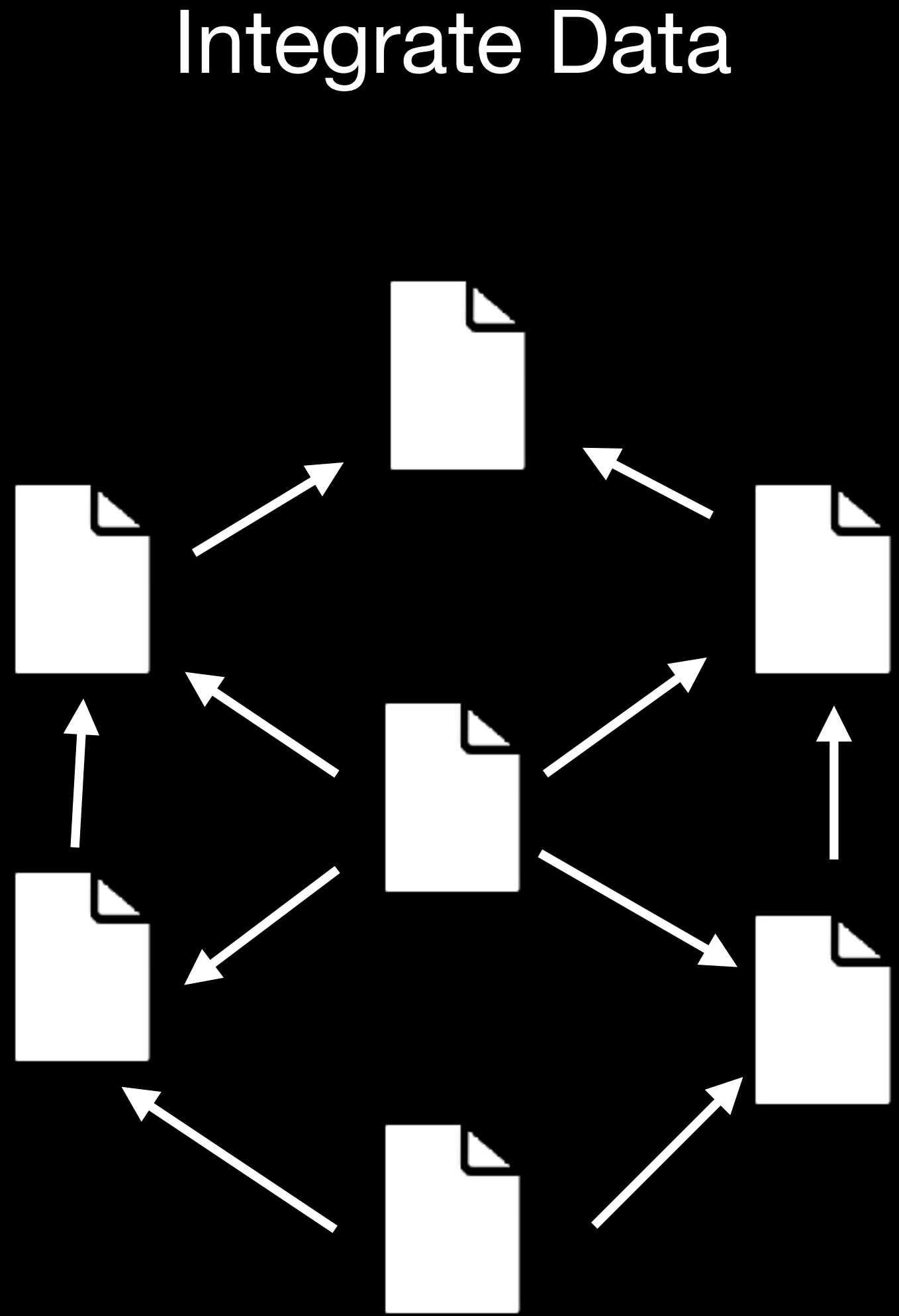


Data

...



# DATA STORIES PARADIGM

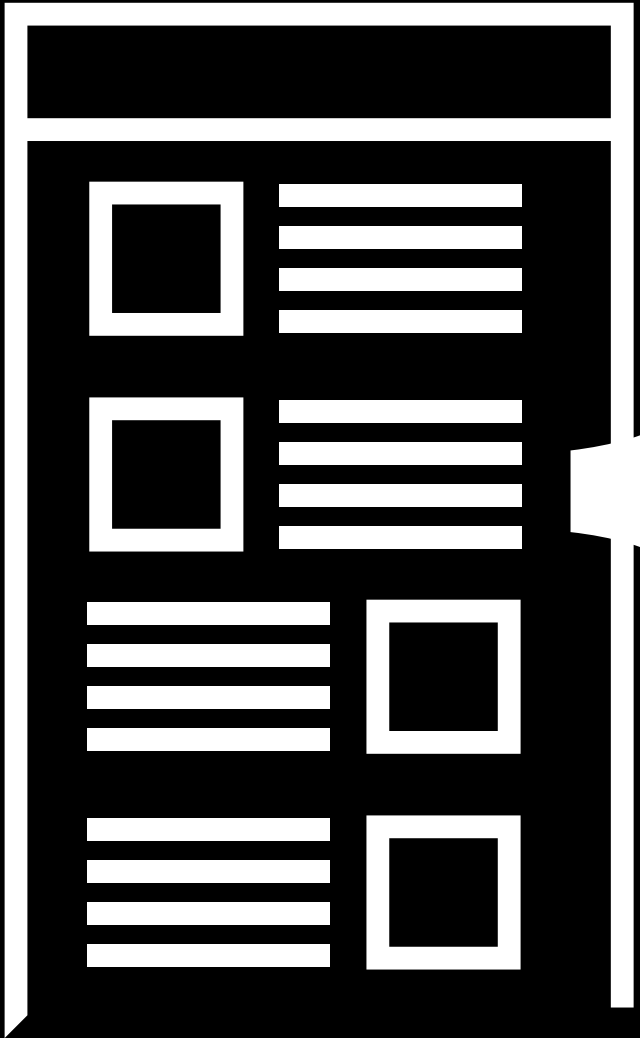


### Extract and Match Entities and Indicators

**Entities**  
(Los Angeles, Valparaiso, Engineer, Coal Mining, etc)

**Variables**  
(Exports, Income, Employment, University Admission Scores, Health Insurance Cost & Coverage)

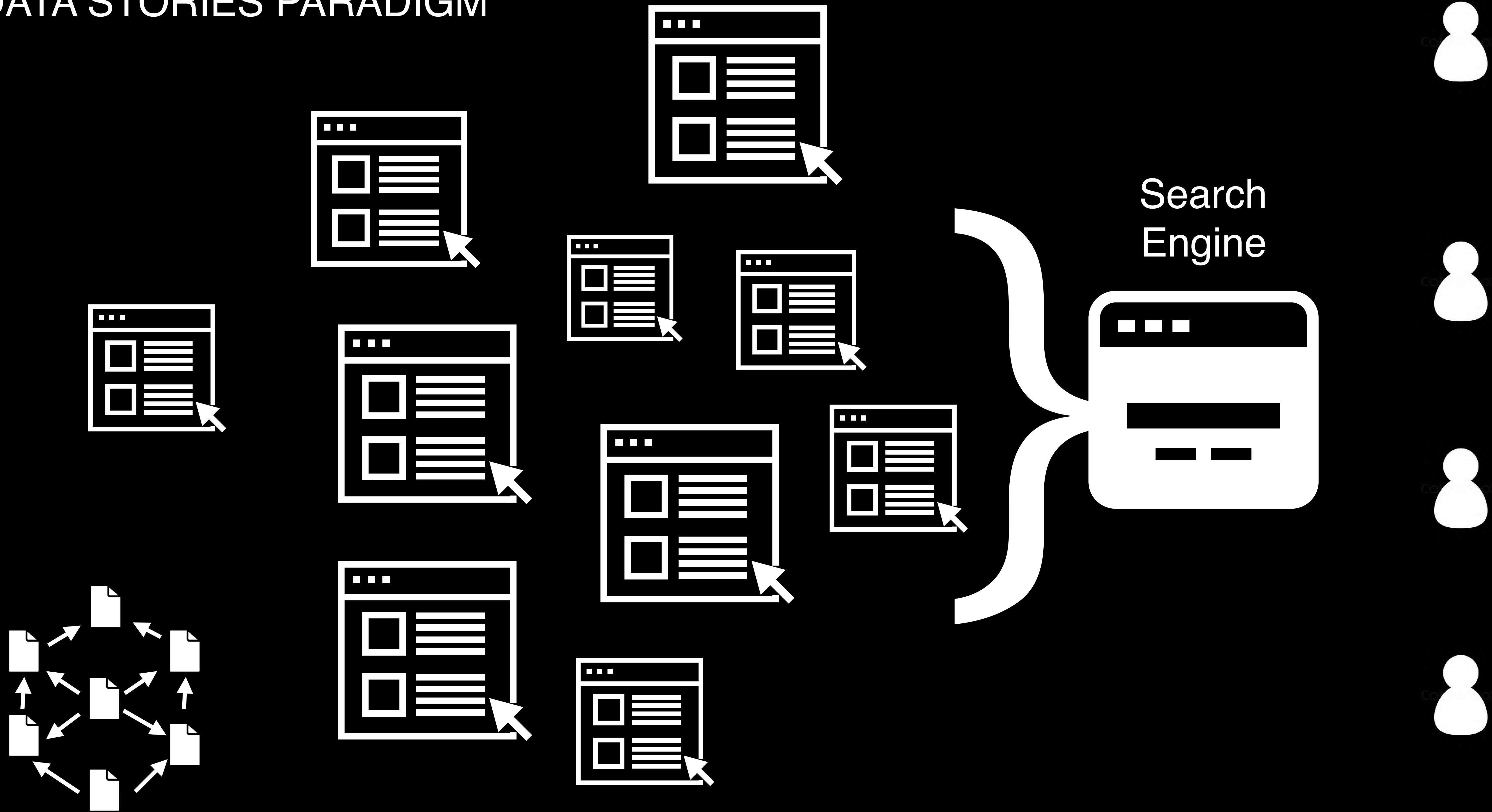
### Build Integrated Stories



- Economy
  - Trade
  - Income
  - Employment
  - Industries
  - Opportunities
- Education
  - Quality
  - Enrollment
- Health
  - Disability
  - Insurance
  - Conditions
  - Causes of Death
- Housing
  - Size
  - Materials
  - Distance to Amer
- Demographics
  - Diversity
  - Immigration
  - Languages
  - ...



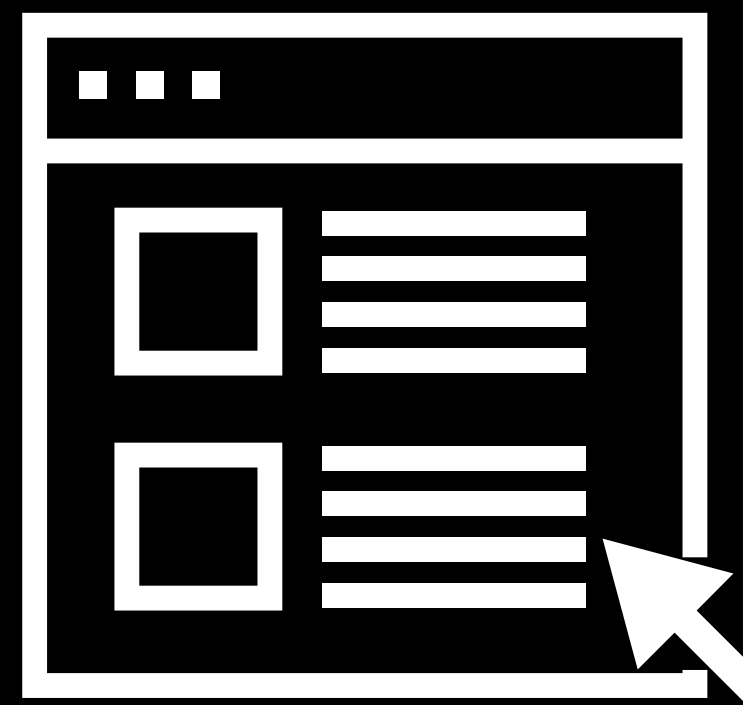
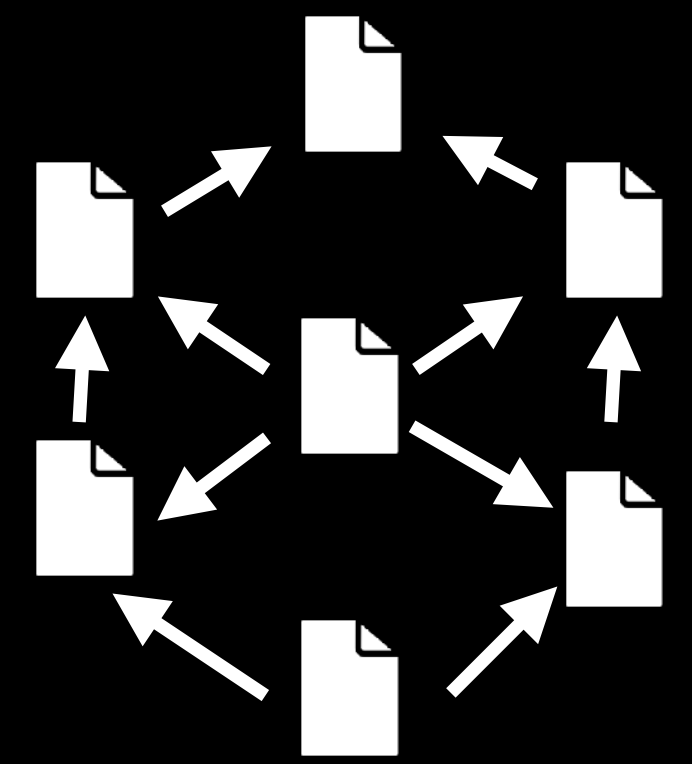
# DATA STORIES PARADIGM



# AUTONOMOUS GOVERNMENTS

- Customs
- Education
- Income
- ...
- Housing

## DATA STORIES PARADIGM



Automated Reporting

AI Decision Making

Data Driven Management



# Today's Data. Tomorrow's Jobs.

with the Most Jobs

All Genders All Ages All N

Jeddah Dammam Khob

with Highest Average Salary

All Genders All Ages All N

## CAMBRIDGE, MA

POPULATION 106,844

MEDIAN HOUSEHOLD INCOME \$75,909

MEDIAN AGE 30.5

ABOUT ECONOMIC GEOGRAPHICS EDUCATION HOUSING & LIVINGS HEALTH & SAFETY

## OEC Ireland

1.27 ECON COMPLEXITY (16TH OF 186)

\$134B EXPORTS (35TH OF 238)

\$69.2B IMPORTS (47TH OF 236)

\$45.7K GDP PER CAPITA (17TH OF 186)

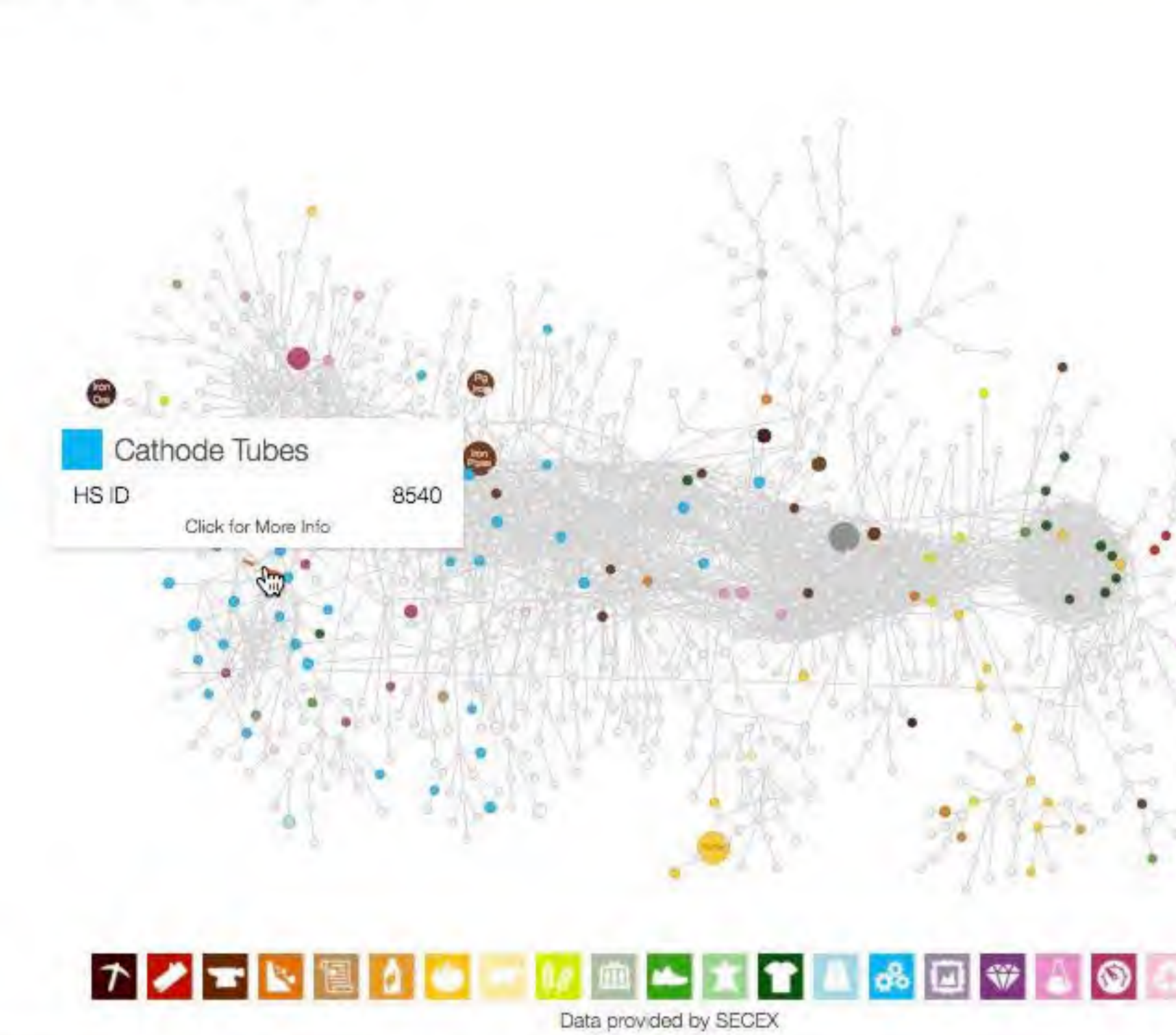
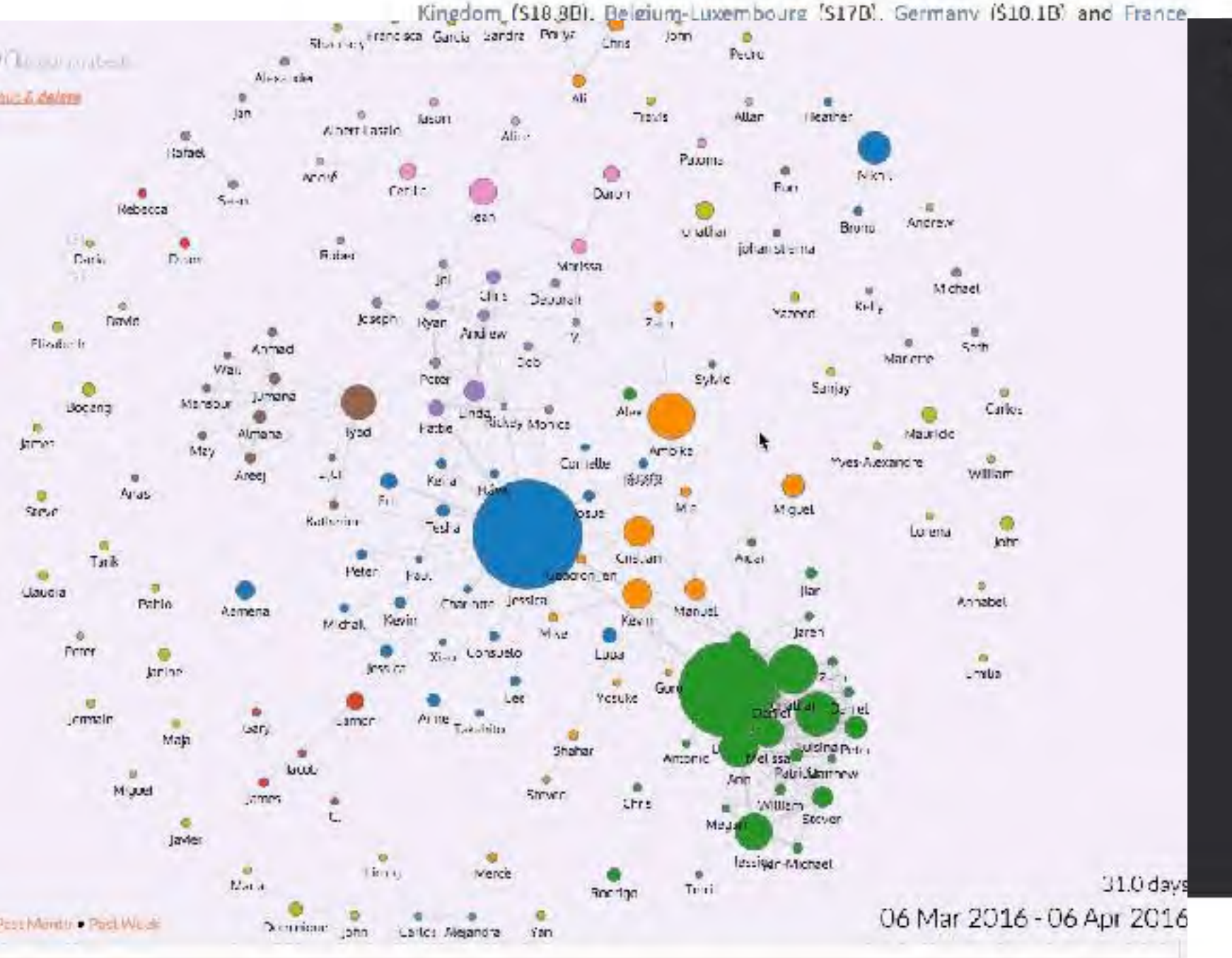
### Visualizations

- Exports
- Imports
- Trade Balance
- Destinations
- Origins
- Product Space
- Economic Complexity Ranking
- DataViva
- Pantheon

Ireland is the 35th largest export economy in the world and the 16th most complex economy according to the Economic Complexity Index (ECI). In 2013, Ireland exported \$134B and imported \$69.2B, resulting in a positive trade balance of \$65.3B. In 2013 the GDP of Ireland was \$232B and its GDP per capita was \$45.7k.

The top exports of Ireland are Nitrogen Heterocyclic Compounds (\$19.4B), Packaged Medicaments (\$19.1B), Scented Mixtures (\$7.03B), Human or Animal Blood (\$6.51B) and Computers (\$5.36B), using the 1992 revision of the HS (Harmonized System) classification. Its top imports are Refined Petroleum (\$4.41B), Packaged Medicaments (\$3.65B), Planes, Helicopters, and/or Spacecraft (\$2.4B), Computers (\$2.29B) and Crude Petroleum (\$2.25B).

The top export destinations of Ireland are the United States (\$22.2B), the United Kingdom (\$18.9B), Belgium-Luxembourg (\$17B), Germany (\$10.1B) and France



## DIVE

### EASY AND POWERFUL DATA EXPLORATION

DIVE lets you turn data into stories within minutes, without writing a single line of code

UPLOAD DATA



# Google

[Google Search](#)

[I'm Feeling Lucky](#)

[Where's Waldo? Find out on Google Maps](#)

Google offered in: [Español \(Latinoamérica\)](#)



# Which countries export Cars? (2013)

**TREE MAP** **STACKED**

**COUNTRY**  
Exports  
Imports  
Export Destinations  
Import Origins

**PRODUCT**  
Exporters  
Importers

**BILATERAL**  
Exports to Destination  
Imports from Origin  
Exports by Product  
Imports by Product

**NETWORK** **RINGS**  
**GEO MAP** **SCATTER**

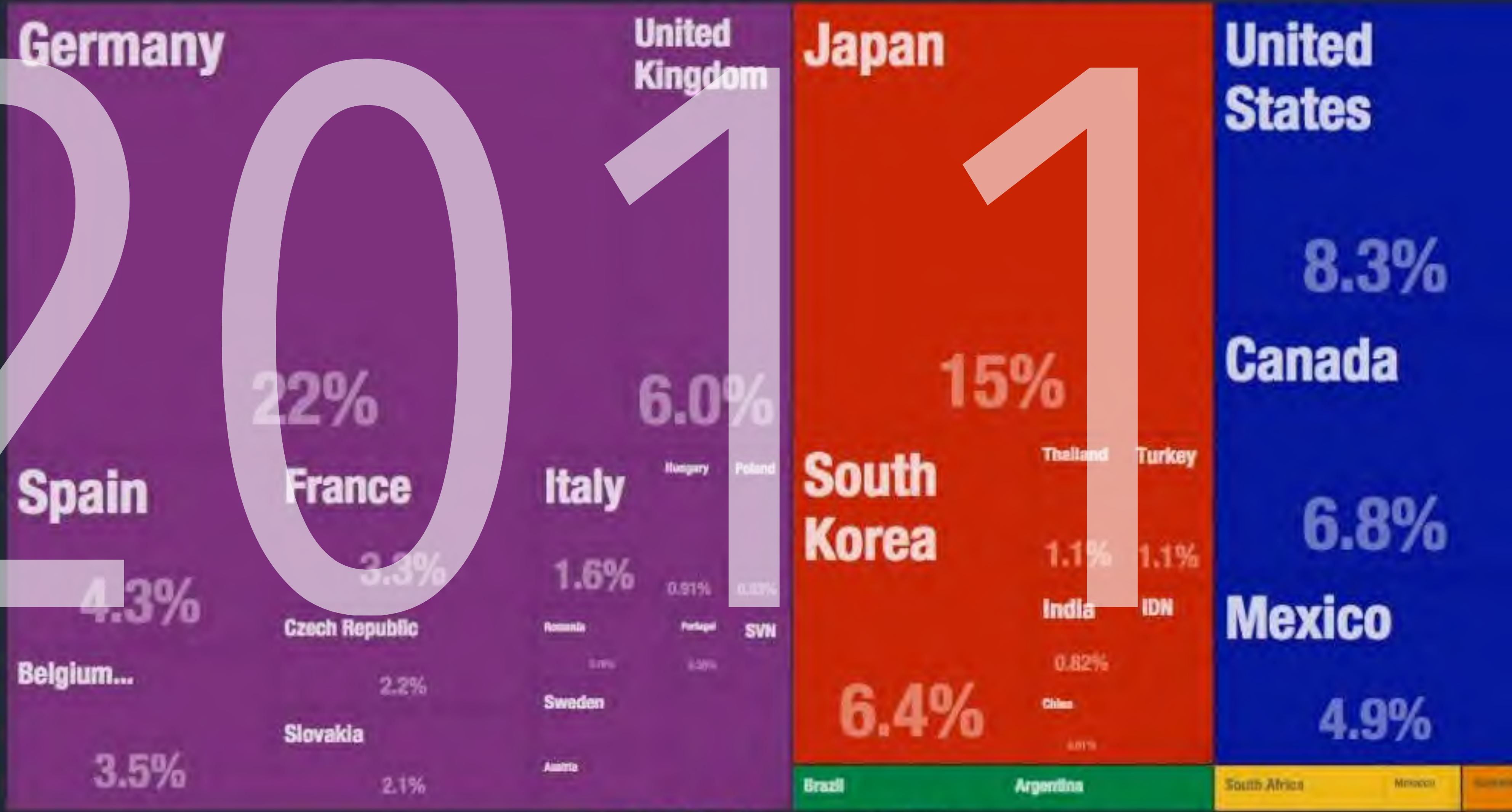
**PARTNER**  
All

**PRODUCT**  
Cars

**TRADE FLOW** **DATASET**  
Export **HS92**

**YEAR**  
2013

**BUILD VISUALIZATION**



Depth **Continent** **Country** Show All Years Color Category ^ Share Download



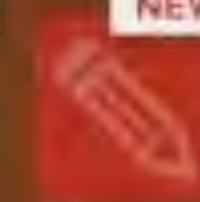
# Which occupations make Fruit Juice?

Examine the common industries for a product.



Minas Gerais, Iron Ore, Leather Tanning, etc.

Quick  
Links



## Top Exporting Municipalities



1. Parauapebas  
USD 7.62B



2. Rio de Janeiro  
USD 7.49B



3. São Paulo  
USD 7.32B



4. Angra Dos Reis  
USD 5.84B



5. São José Dos  
Campos  
USD 4.6B



6. Santos  
USD 4.36B



7. Paranaguá  
USD 4.3B



8. Itajaí  
USD 3.92B



9. São Bernardo do  
Campo  
USD 3.59B



- PROFILES
- LOCATIONS
- INDUSTRIES
- OCCUPATIONS
- EDUCATION
- STORIES
- MAPS
- DATA
- ABOUT

# DATAUSA<sup>★</sup>

THE MOST COMPREHENSIVE  
VISUALIZATION OF U.S. PUBLIC DATA

2016

Chicago, IL

All Search

- Chicago, IL  
PLACE
- Chicago-Ioliet-Naperville, IL-IN-WI Metro Area  
METRO AREA
- Chicago Heights, IL  
PLACE
- Chical, NM  
PLACE
- Chicann Ridge, IL

SHOW ALL RESULTS (5 MORE)


PROFILE ECONOMY STATE



PROFILE ECONOMY PLACE



PROFILE EMPLOYMENT DETAILED OCCUPATION

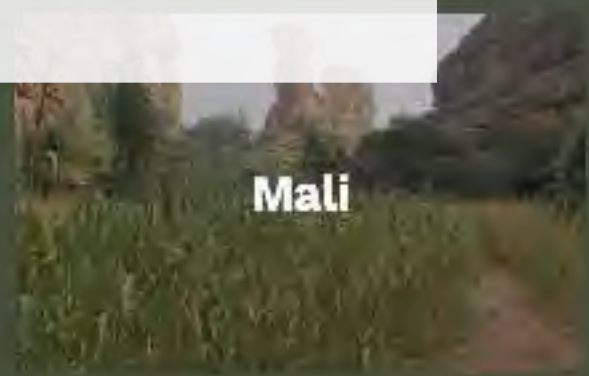




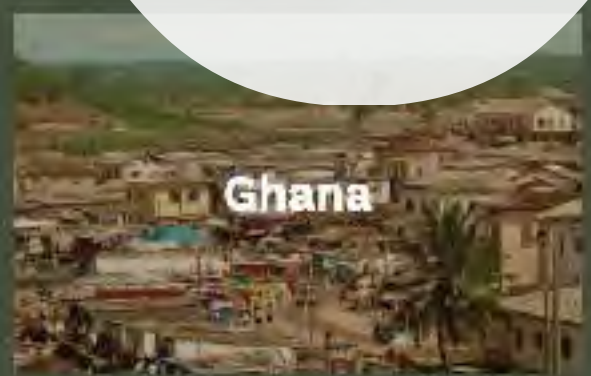
Data Africa is an open source agriculture, climate, poverty, and health visualization engine.

# 2017

Enter a location



Mali



Ghana



Uganda



Mozambique



Senegal



Burkina Faso



Malawi



Zambia



Tanzania



Ethiopia



# Today's Data. Tomorrow's Jobs.

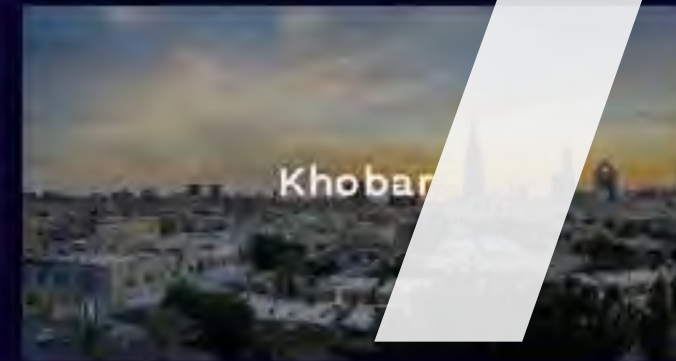
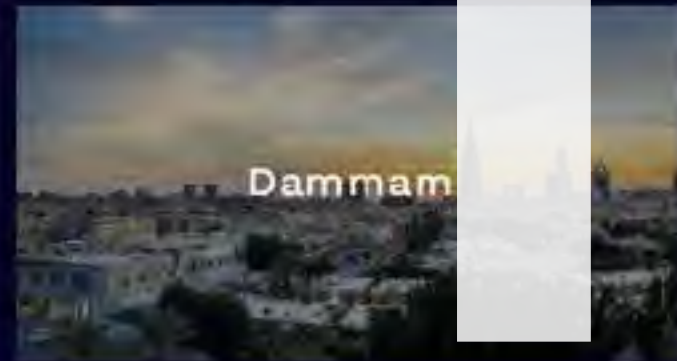
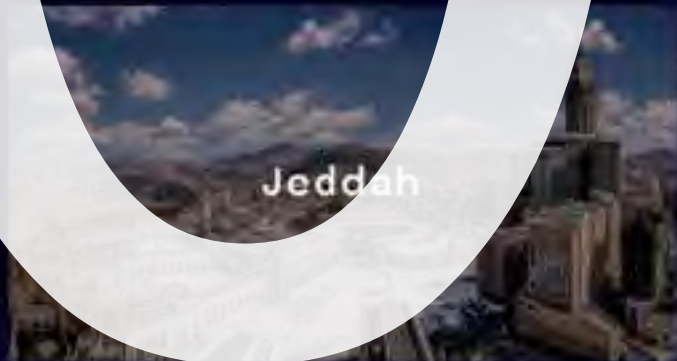
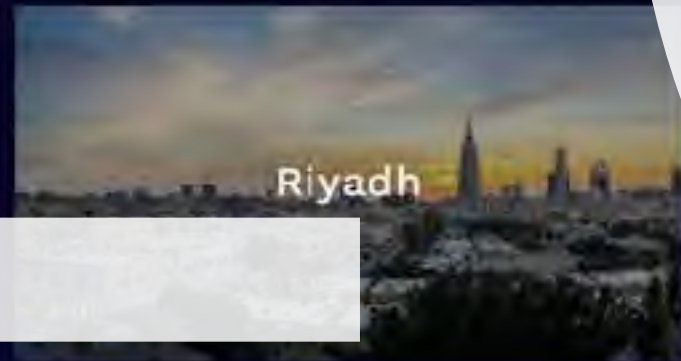
# 2017

## Locations with the Most Jobs

All Genders

All Ages

All Nationalities

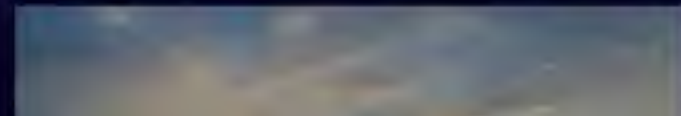


## Industries with Highest Average Salary

All Genders

All Ages

All Nationalities





# DataChile

beta

El esfuerzo más completo para integrar y visualizar los datos públicos de Chile

Busque ligeros, industria, productos

EXPLORAR PERFILES

# 2018

GEOGRÁFICO

PAÍSES

PRODUCTOS

INDUSTRIAS

CARRERAS

INSTITUCIONES



● Users

500,000

250,000

2012

2013

2014

2015

2016

2017

2018

the  
**OBSERVATORY  
of ECONOMIC  
COMPLEXITY**

🔍 Search

We are the world's  
leading visualization engine  
for international trade data.

[LEARN MORE](#)

**macro  
connections**

ελληνικά français English Nederlands português Русский Түркçe Deutsch 한국어 italiano العربية 简体中文 ភាសាខ្មែរ  
日本語 español עברית

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# DATA USA

SEARCH, MAP, COMPARE, AND DOWNLOAD U.S. DATA

● Users

400,000

200,000

April 2016

July 2016

October 2016

January 2017

April 2017

July 2017

October 2017


January 2018


 ec California Hospitals Graphic Design


Search


Deloitte


LLS

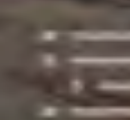
 Datawheel

 Maps

 Cities & Places

 Jobs

 Download

 Latest

NEW

OPIOID OVERDOSE DEATH RATE (AGE-ADJUSTED) BY STATE

NEW YORK, NY

ELEMENTARY & MIDDLE SCHOOL TEACHERS

NEW

DIABETIC LIPID TESTS BY COUNTY

HOW FAR D FROM OPIOI EXT BY WESTO



# US Census Site (2017)

**AMERICAN FactFinder**

Community Facts - Find popular facts (population, income, etc.) and frequently requested data about your community.

Enter a state, county, city, town, or zip code:

**Cambridge town, Lamoille County, Vermont**  
We found more results for your geography search >>

Population  
Census 2010 Total Population  
**3,659** Source: 2010 Demographic Profile

Popular tables for this geography:

- 2010 Census
  - General Population and Housing Characteristics (Population, Age, Sex, Race, Households and Housing, ...)
  - Race and Hispanic or Latino Origin
  - Hispanic or Latino by Type (Mexican, Puerto Rican, ...)
  - Households and Families (Relationships, Children, Household Size, ...)
- 2015 American Community Survey
  - Demographic and Housing Estimates (Age, Sex, Race, Households and Housing, ...)
- 2016 Population Estimates Program
  - Annual Population Estimates
- Census 2000
  - General Demographic Characteristics (Population, Age, Sex, Race, Households and Housing, ...)

Want more? Need help? Use Guided Search or visit Census.gov's Data Tools.

# DataUSA (2016)

**VIRGINIA**

5,042,000

37.0

**ABOUT**

- Population
- Income
- Education
- Health
- Uninsured
- Wages
- Wages by Gender

**ECONOMY**

**WAGES**

Median Annualized Income

Wages by Gender (in Constant 2009 Dollars)

# Planned US Census Site (20XX)

**United States Census Bureau**

Virginia

**Virginia**  
State in United States

**Virginia at a Glance**

Virginia is the 12th largest state in the United States by population. Virginia has a total area of 42,774 square miles, including 3,180.13 square miles of water, making it the 15th-largest state by area. Virginia is bordered by Maryland, Washington, D.C., North Carolina, Tennessee, Kentucky, and West Virginia.

STATE CAPITAL: Richmond  
MAYOR/CAPITAL COURTESY: Fairfax, Prince William, Loudoun

**8,382,993** POPULATION  
**\$65,015** MEDIAN HOUSEHOLD INCOME  
**11.2%** POVERTY RATE  
**90.9%** EMPLOYMENT RATE  
**88.9%** EDUCATIONAL ATTAINMENT

**People** Housing Economy

**9.1%** Uninsured, under age 65  
+/- 2.0%  
**6.9%** Uninsured, under age 65 in the United States  
Source: 2008-2014 American Community Survey 1-Year

**88.9%** High school graduate or higher  
+/- 0.3%  
**82.1%** High school graduate or higher in the United States  
Source: Table DP02, 2009PE, 2015 American Community Survey 1-Year

**19.7%** Black or African American alone  
Population Breakdown in Virginia by Race

**8,382,993** +/- 5.0%



**FAIL**

— — Automation Challenge — —

**FAIL**

— — Analytical Challenge — —

**+ / -**

— — Distribution Challenge — —

**WIN**

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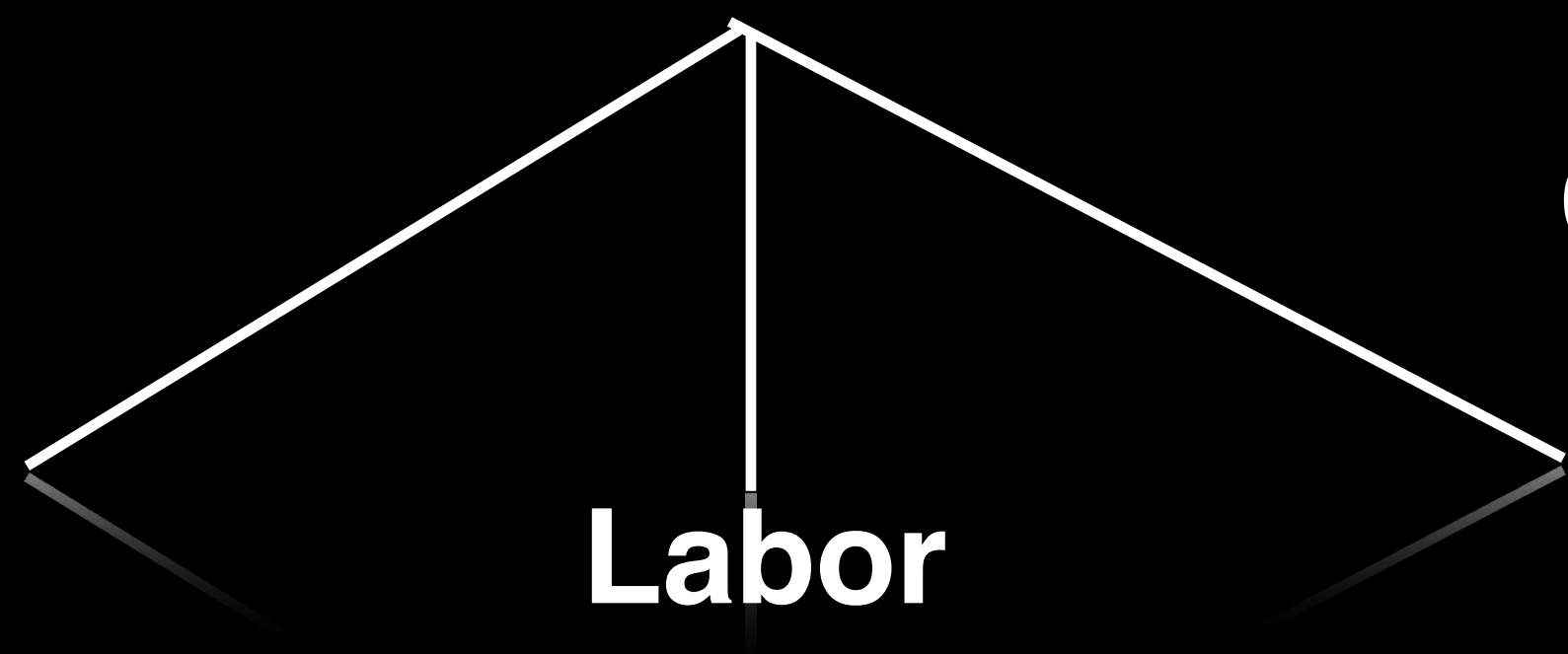
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# DATA USA <sup>★</sup><sub>★</sub><sub>★</sub>

SEARCH, MAP, COMPARE, AND DOWNLOAD U.S. DATA

[Search](#)

Deloitte



Datawheel

[Maps](#)

[Cities & Places](#)

[Jobs](#)

[Download](#)

[Latest Stories](#)

**NEW**

MEDICARE REIMBURSEMENTS BY COUNTY

NEW YORK, NY

ELEMENTARY & MIDDLE SCHOOL TEACHERS

**NEW**

DIABETIC LIPID TESTS BY COUNTY

**NEW**

HOW FAR DOES DAMAGE FROM OPIOID ADDICTION EXTEND?

BY WESTON COWARD



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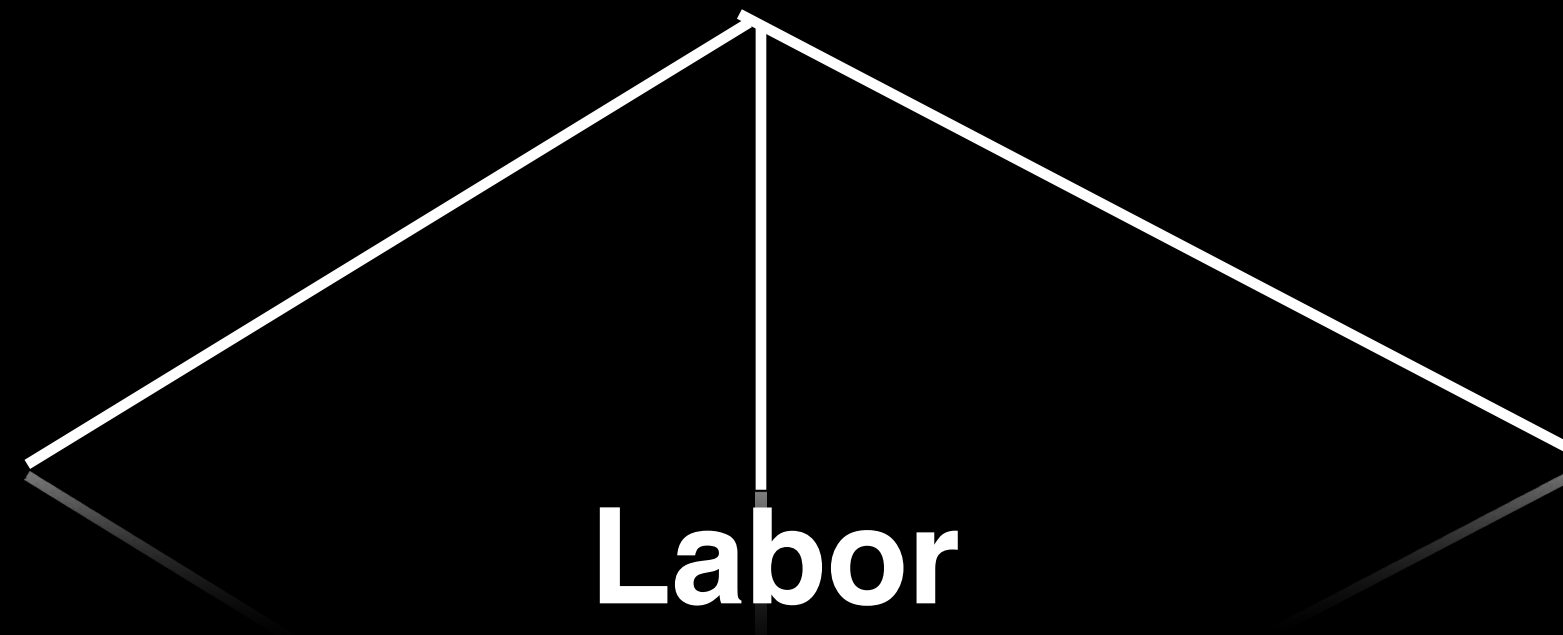
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# Randomized Experiment with 70 subjects

(professional data scientists, 92.5% with advanced degree)

Dataset with salaries, experience, and accomplishments of 1000 professors in a hypothetical university

Do you expect a gender wage difference favoring men or women?

**90% said Men**

Did the data confirm or reject your hypothesis? (reject was right answer)

**57% Excel users were correct\***

**80% DIVE users were correct**

\*the average subject has used excel for +11 years and +5 hours a week. Nobody was familiar with DIVE before the experiment.





**Analytics + Integration:**

**Does commuting alone  
correlate with higher obesity?**

**Obesity Data:** Department of Health.

**Commute Time Data:** Department of Transportation.

**Income Data:** Ministry of Economy or Finance.

**Demographic Data:** Census or Survey.



TOPICS:

Health Status

RISK INDICATORS:

Obesity Prevalence

STATE | COUNTY

The percentage of adults that report a BMI greater than or equal to 30

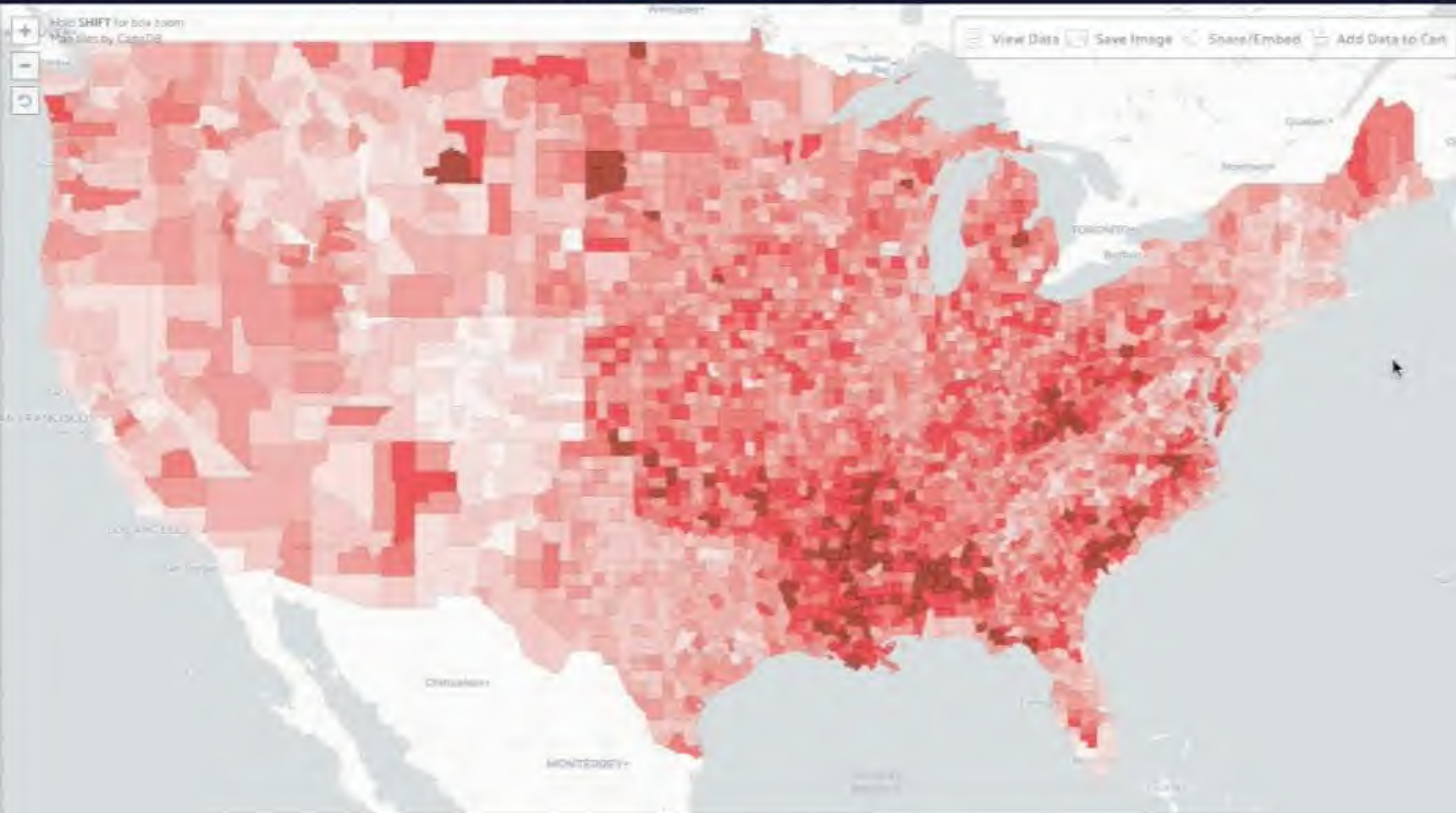
Top 10 Locations

1. Claiborne County, MS	47.6%
2. Greene County, AL	45.3%
3. Holmes County, MS	46.1%
4. Phillips County, AR	45.5%
5. Lowndes County, AL	45.1%
6. Wilcox County, AL	44.9%
7. Macon County, AL	44.7%
8. Jefferson County, MS	44.5%
9. Barbour County, AL	44.4%
10. Lee County, SC	44.3%

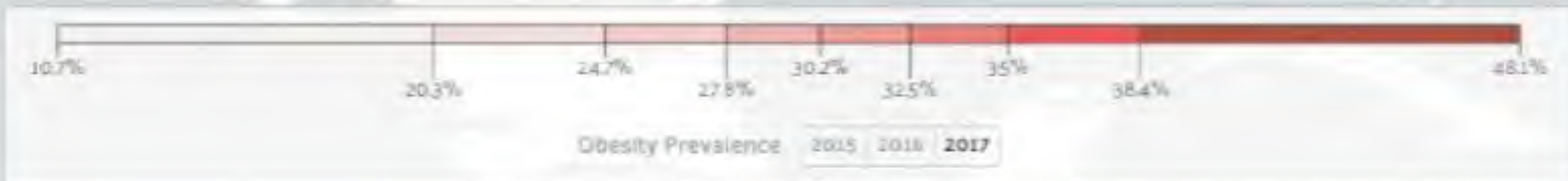
Bottom 10 Locations

3127. Pitkin County, CO	14.9%
3128. Gunnison County, CO	14.8%
3129. New York County, NY	14.7%
3130. Summit County, UT	14.4%
3131. Routt County, CO	14.3%
3132. Santa Fe County, NM	13.7%
3133. Boulder County, CO	13.4%
3134. Summit County, CO	13.1%
3135. Teton County, WY	12.7%
3136. Eagle County, CO	11.8%

County Health Rankings  
Data © University of Wisconsin



View Data Save Image Share/Embed Add Data to Cart





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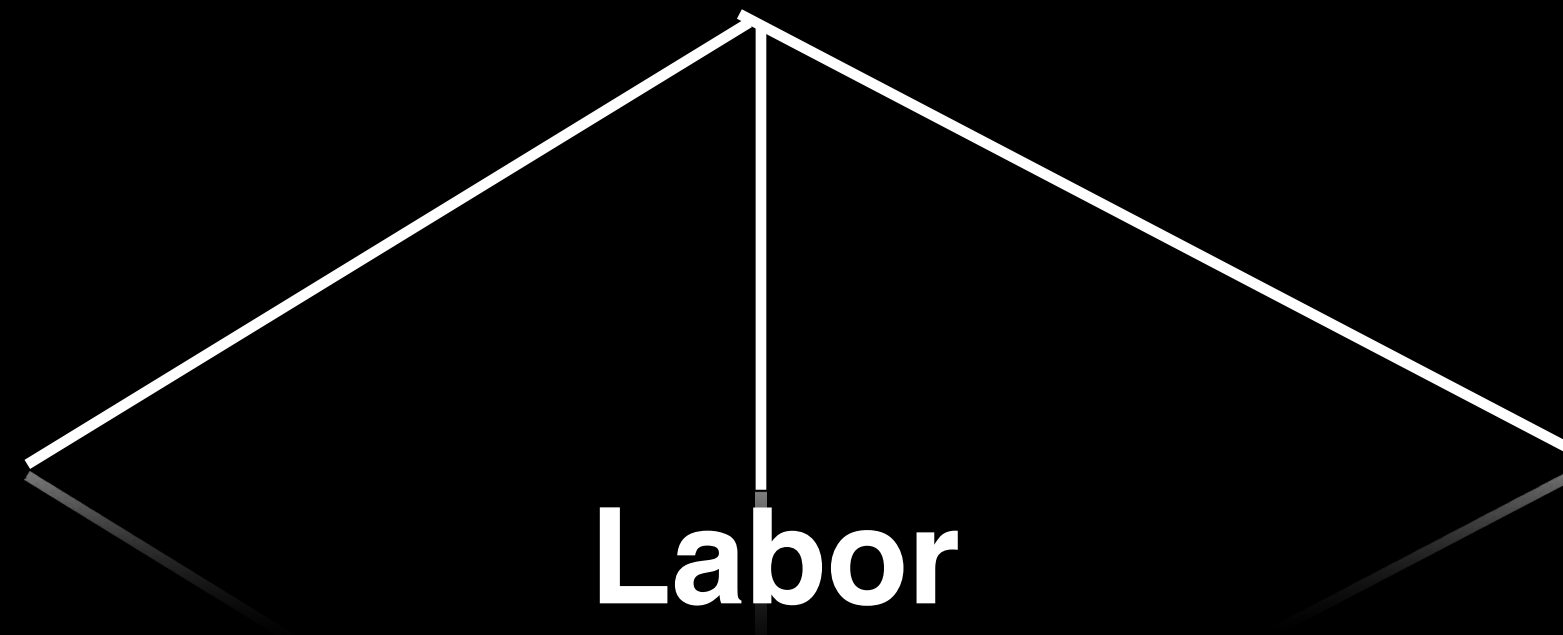
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6015

TOSHIBA







From an A.I. of units, to an A.I. of systems



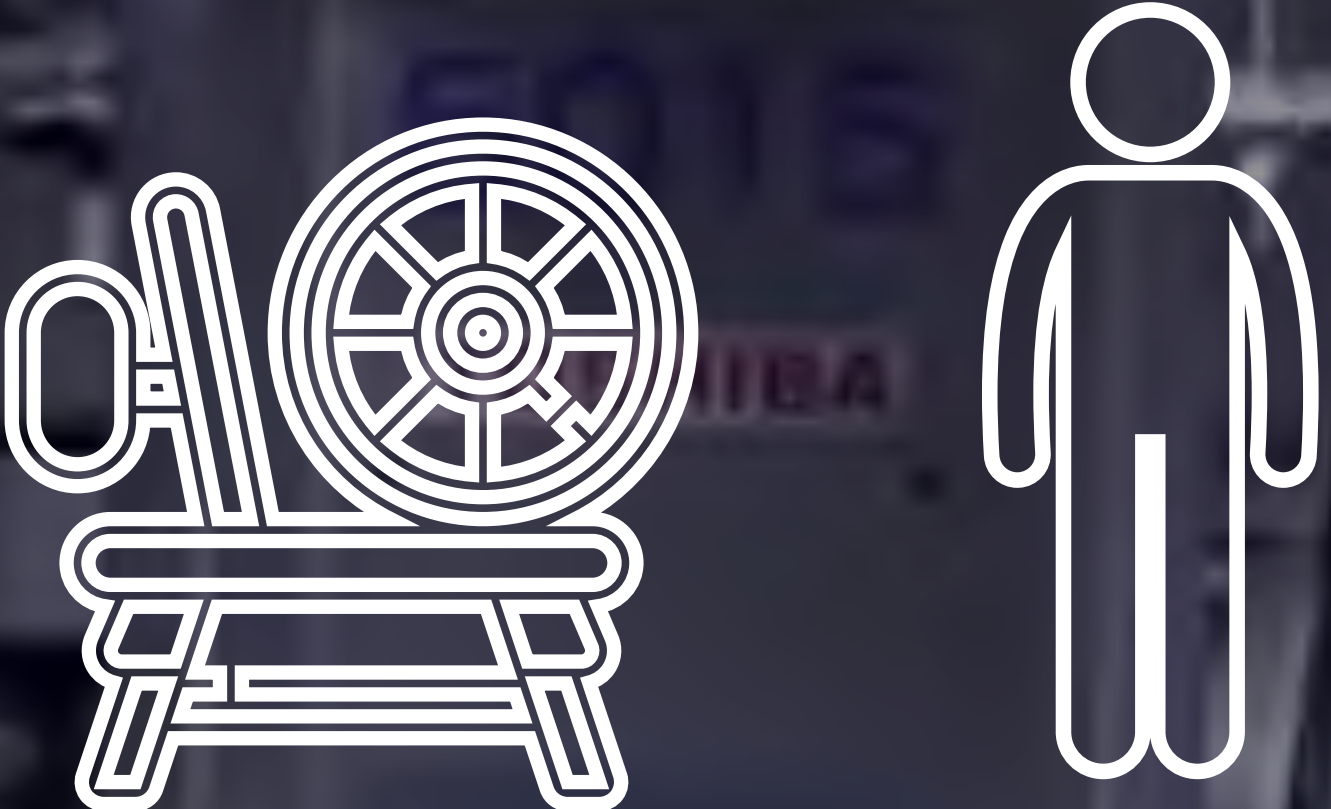


# CLASSIC PATH TO AUTOMATION

Identify  
Problem



Create  
Tool



Automate  
User

