



COMMUNITY LEARNING THROUGH DATA DRIVEN DISCOVERY

COMMUNITY CATALYST WEBINAR SERIES

WELCOME EXTENSION COLLEAGUES!

COMMUNITY CATALYST WEBINAR SERIES OVERVIEW

COMMUNITY LEARNING THROUGH DATA DRIVEN DISCOVERY

OCTOBER 7, 2020
featuring
Dr. Sallie Keller &
Dr. Mike Lambur

TEAM SCIENCE & WORKING VIRTUALLY AS A TEAM

OCTOBER 21, 2020
featuring
Rachael Voas

BUILDING A DATA- READY CULTURE

NOVEMBER 4, 2020
featuring
Dr. Shawn Dorius

THE PROCESS

THE COMMUNITY

THE TEAM

THE DISCOVERY

THE CULTURE

THE ACTION PLAN

COMMUNITY CAPITALS ECONOMIC MOBILITY FRAMEWORK

OCTOBER 14, 2020
featuring
Dr. Cassandra Dorius
Dr. Teja Pristavec

DATA DISCOVERY PROCESS

OCTOBER 28, 2020
featuring
Dr. Cassandra Dorius

FINDING INSIGHTS IN DATA

NOVEMBER 18, 2020
featuring
Dr. Vicki Lancaster

IOWA STATE
UNIVERSITY



MADE POSSIBLE BY:

BILL & MELINDA
GATES foundation



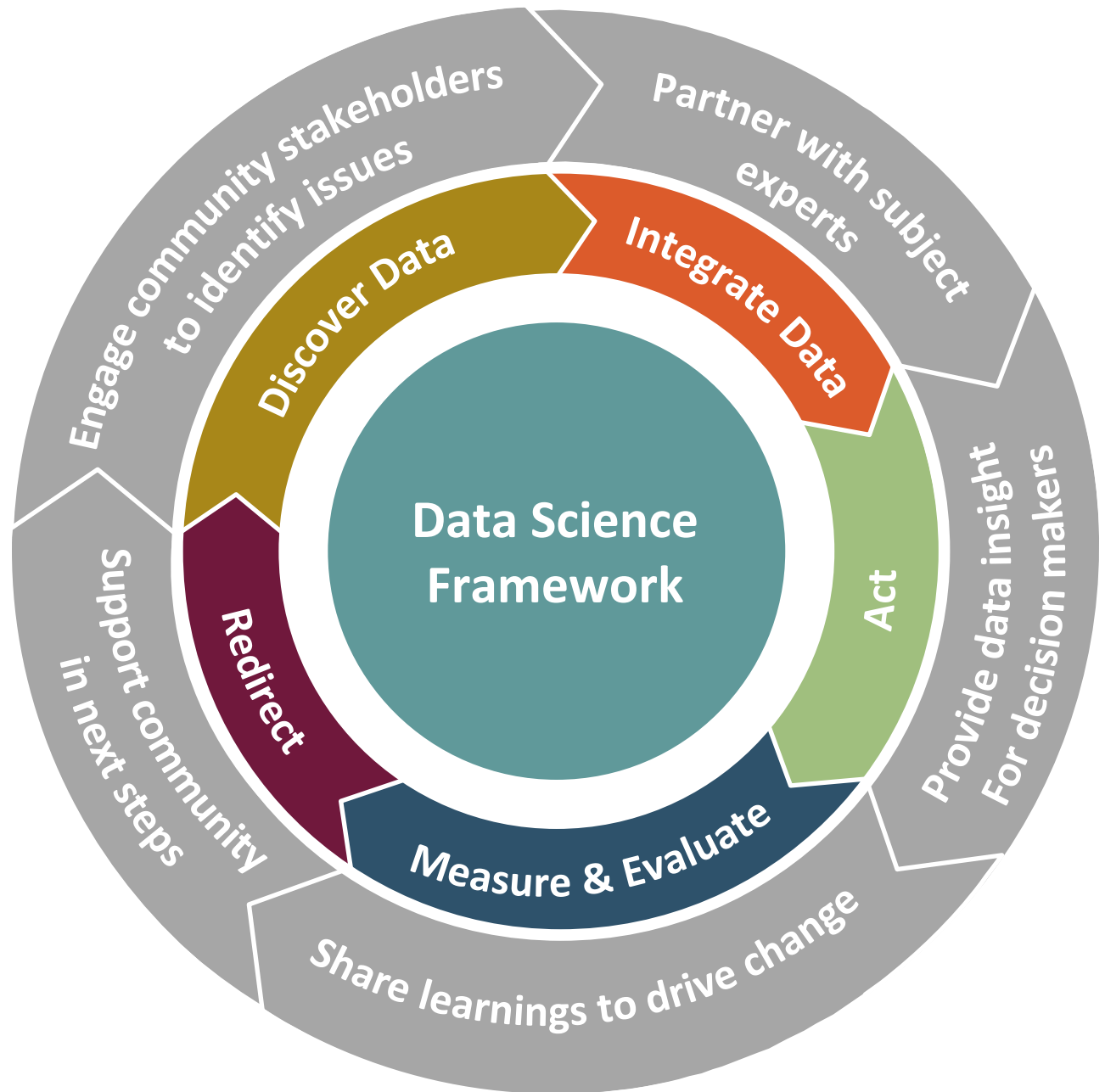
VISION

- Evolve the next-generation CES capable of partnering with local community stakeholders, to take a deeper data-driven approach to better understand and address issues
- Mobilizing the “last data mile” by getting data insights into the communities they serve

OUR GUIDING PROCESS

Community Learning through Data Driven Discovery (CLD3)

- Outer wheel: continuous interaction and communication across stakeholders
- Middle wheel: data-driven learning process
- Frontier between these two wheels: active collaboration between all partners
- Inner circle: rigorous research framework to guide the data science



DATA SCIENCE FRAMEWORK

Communication & Dissemination

Problem Identification: Questions & Working Hypotheses

Data Discovery [Inventory • Screening • Acquisition]

Data Ingestion & Governance

Data Wrangling

Profiling • Preparation • Linkage • Exploration

Fitness-for-Use

Statistical Modeling & Analyses

Ethics Review



COMMUNITY LEARNING THROUGH DATA DRIVEN DISCOVERY

EXAMPLES

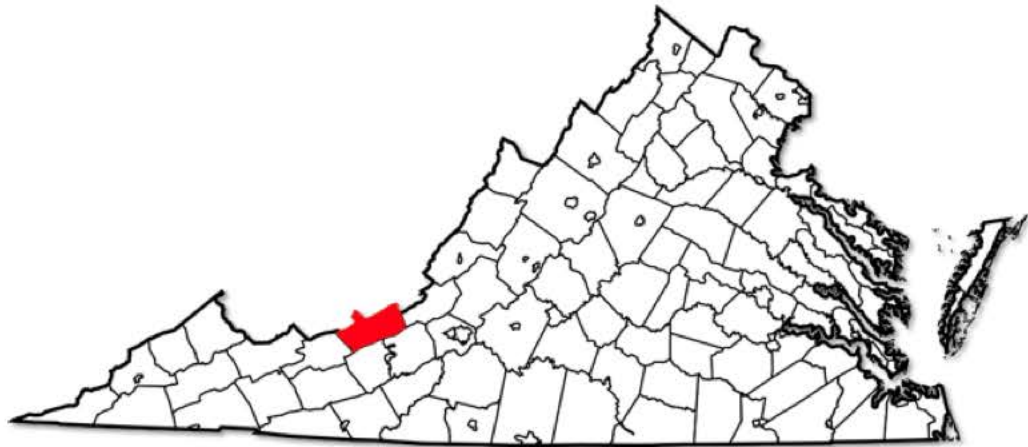


COMMUNITY LEARNING THROUGH DATA DRIVEN DISCOVERY

GILES COUNTY, VA



BACKGROUND



POPULATION: 16,837

SIZE: 360 SQ. MILES

UNEMPLOYMENT RATE: 4.7%

ANNUAL BUDGET: \$53 MILLION

RACE: 95% WHITE*

*WHITE ALONE, NOT HISPANIC OR LATINO

GILES COUNTY, VIRGINIA

ISSUE

- In 2015, Giles County officials realized reactive services make up 61% of the county's operating budget

DATA DISCOVERY: WHICH REACTIVE SERVICES ARE BEING UTILIZED?

- General District Court, Circuit Court, Jail
- Community Service, Day Report
- 911 Calls – Animal Control, Assaults, B&E, Civil Disturbance, Domestic Problem, Drunk in Public, EMS, Fire, Fight, Larceny, Mental Subject
- Department of Social Services – Child Protection, Emergency Removals, Foster Care Placements, Investigations, Relative Placements, Service Cases

TEAM

- Local government, Cooperative Extension professionals, community stakeholders

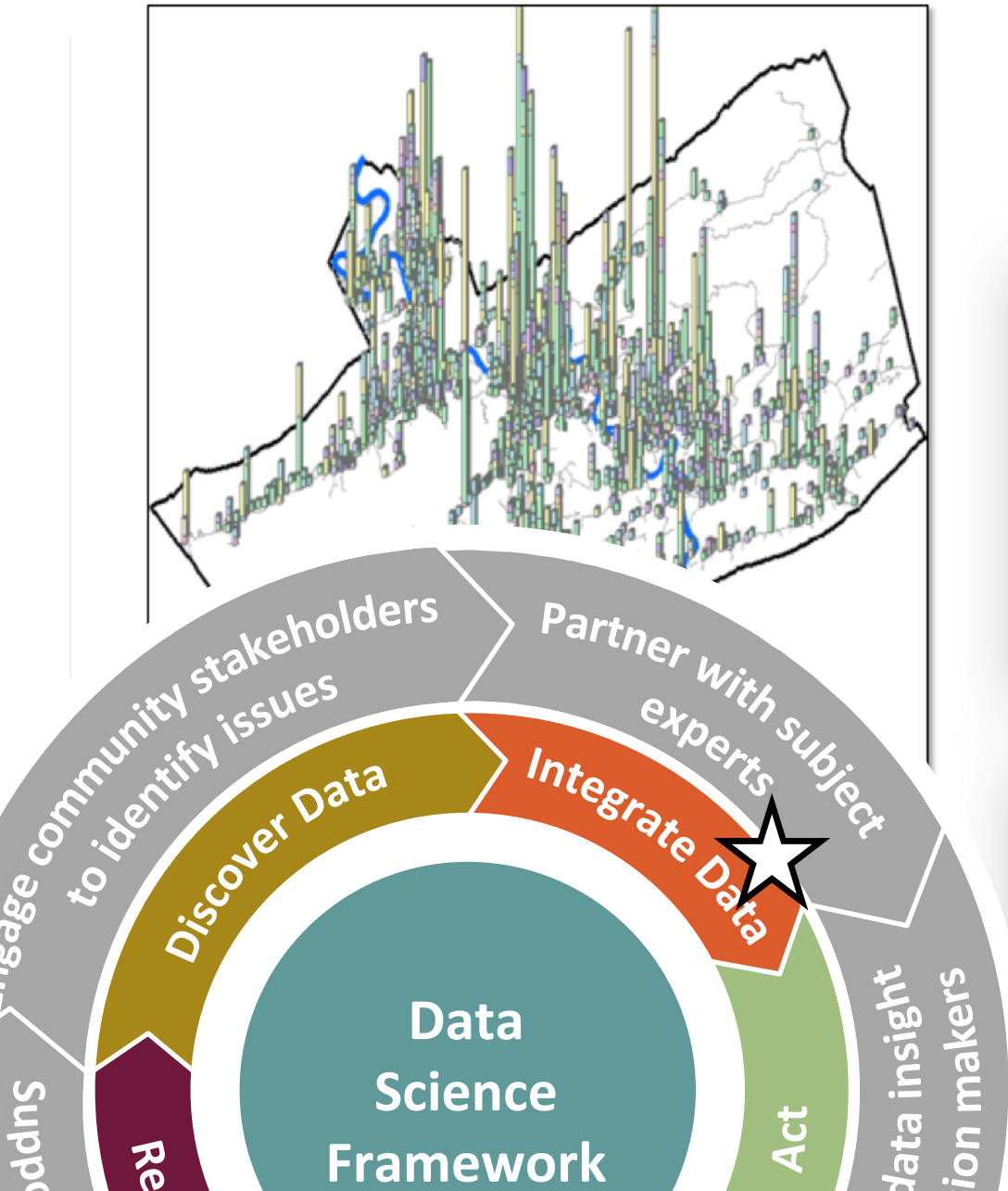


LINKING SERVICE REQUESTS TO LOCATION

FINDINGS

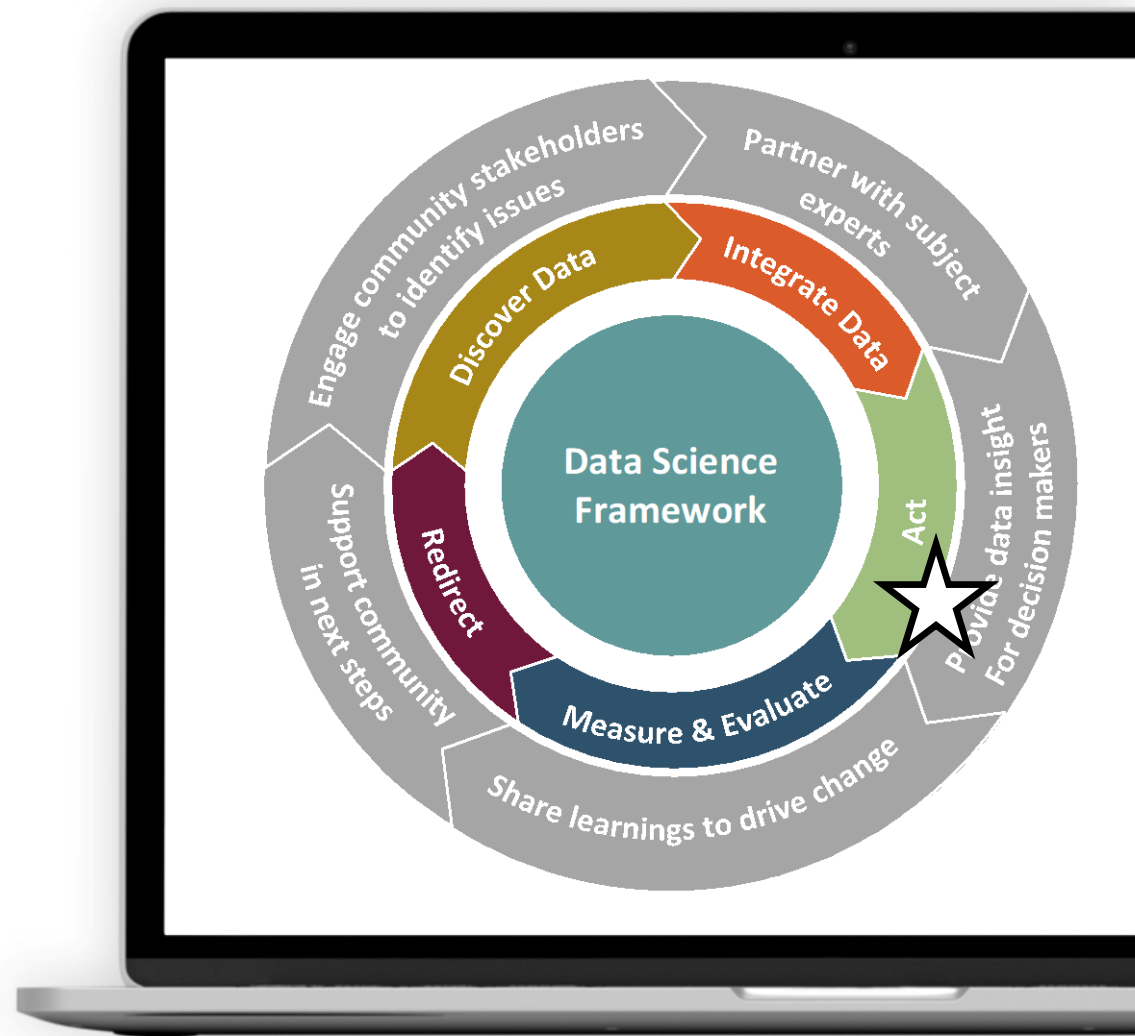
- 1% of the locations utilized 25% of the services
- 5% of the locations utilized 55% of the funding
- 10% of the locations utilized 71% of funding

GIS locations of the 5,279 reactive service requests in 2014 across the county. Color indicates the service and bar height indicates number of services at that location.



CONSIDERING OPPORTUNITIES: TAKING ACTION

- The map identified clusters where positive change could occur through more efficient delivery of reactive services
- Cooperative Extension is helping replicate approach in another county in SW Virginia



GILES COUNTY F.O.C.U.S. PROGRAM

“FOCUS ON FAMILIES UTILIZING SERVICES”

GEOGRAPHIC DATA-DRIVEN SERVICE INTERVENTIONS

COUNTY DAY REPORTER CENTER AS AN ALTERNATIVE TO INCARCERATION

- 31% reduction of recidivism rate

INMATE WORK PROGRAM

- Annual increase of 15,000 hours of community service

TANF WORK PROGRAM

- 44% reduction in families on TANF

SUMMER YOUTH WORK PROGRAM

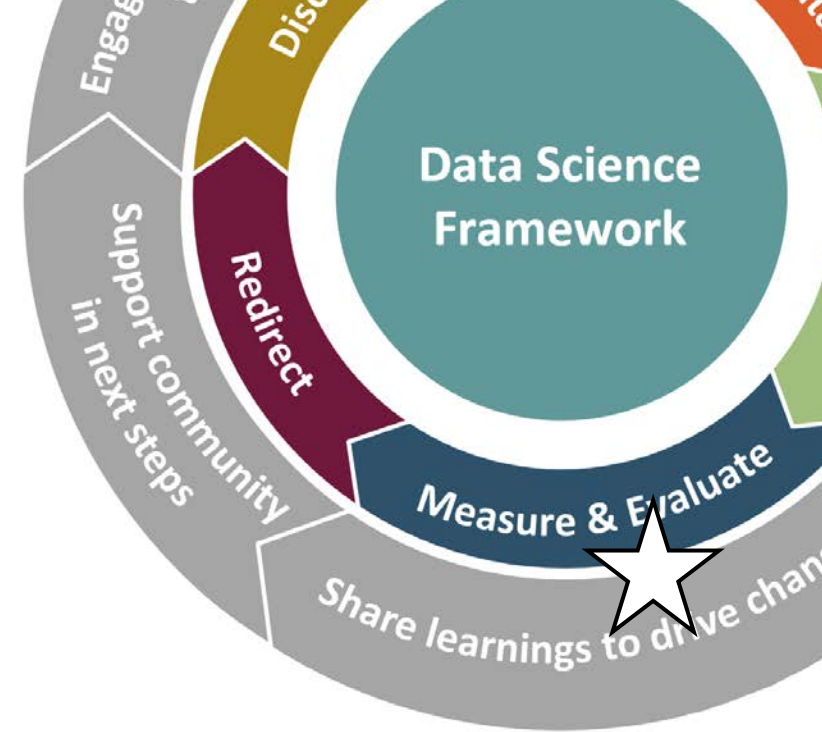
- 50 students and over 90 local businesses are involved

ENHANCED PRE-KINDERGARTEN EDUCATION

- County continues to add new slots to accommodate more children

ACCESS TO COMMUNITY COLLEGE EDUCATION

- 81 new students enrolled



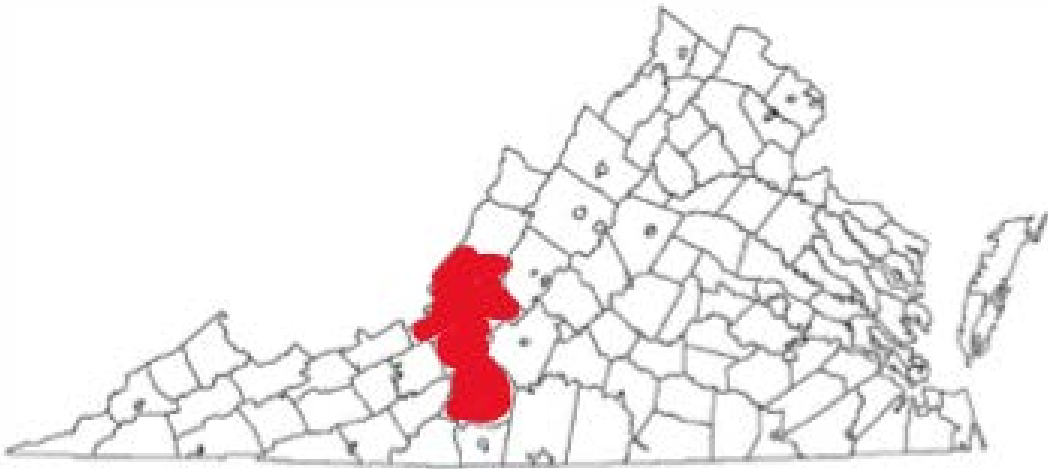
TWO YEARS LATER: THE RESULTS

A person stands with their back to the camera on a large, dark, mossy rock. They are looking out over a vast, green valley with rolling hills and mountains in the distance. The sky is filled with soft, white clouds. The overall mood is contemplative and expansive. The text is overlaid on a semi-transparent dark band across the middle of the image.

COMMUNITY LEARNING THROUGH DATA DRIVEN DISCOVERY

ROANOKE VALLEY ALLEGHANY REGION (RV-AR)

BACKGROUND



- **POPULATION:** 334,233
- **SIZE:** 2319 SQ MILES
- **UNEMPLOYMENT RATE:** 2.5%
- **RACE:** 82% WHITE*

*WHITE ALONE, NOT HISPANIC OR LATINO

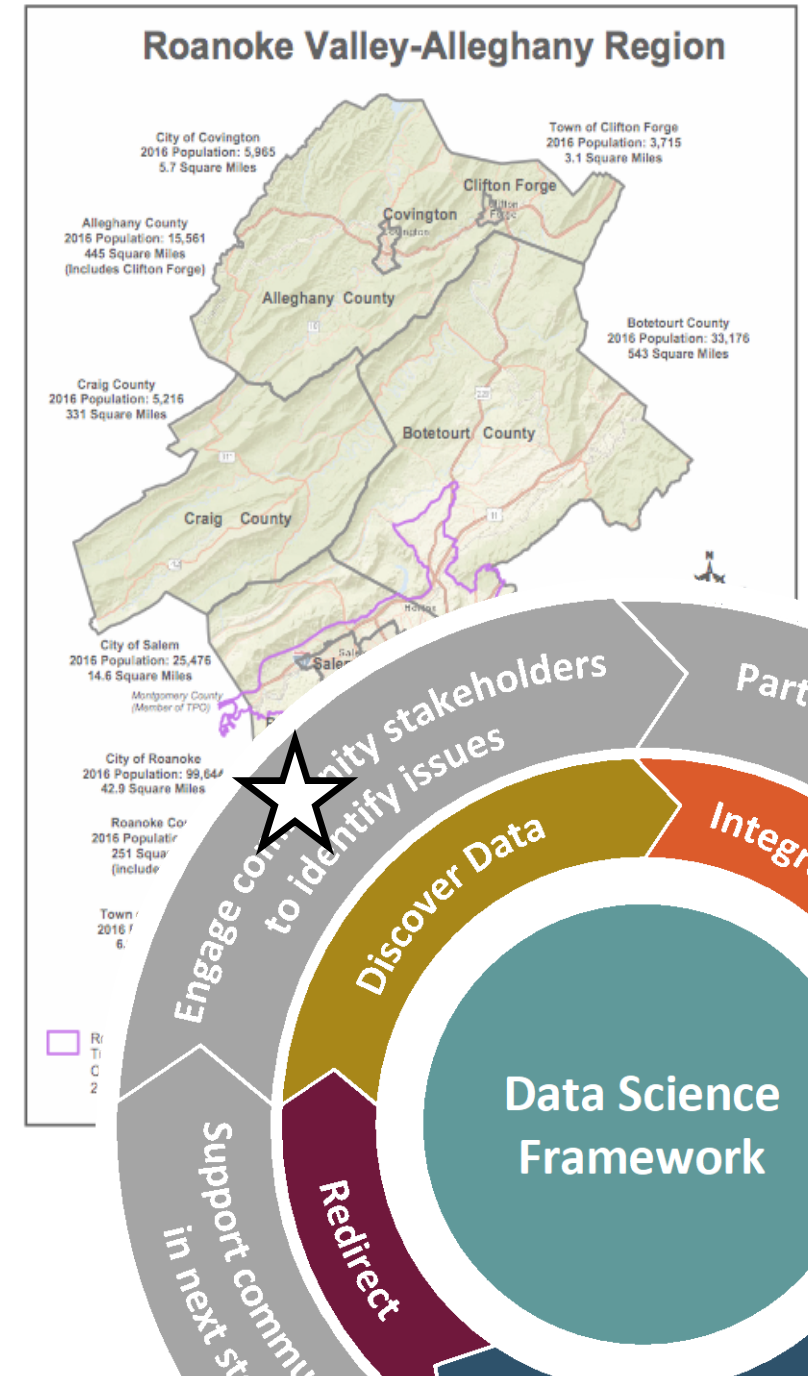
ROANOKE VALLEY-ALLEGHANY (RV-AR) REGION COMMISSION

ISSUE

- Despite being located near many universities, few graduates remain in the region
- RV-AR Commission would also like to attract experienced workers from other areas and retain graduating students and current workers by improving their economic mobility

QUESTION

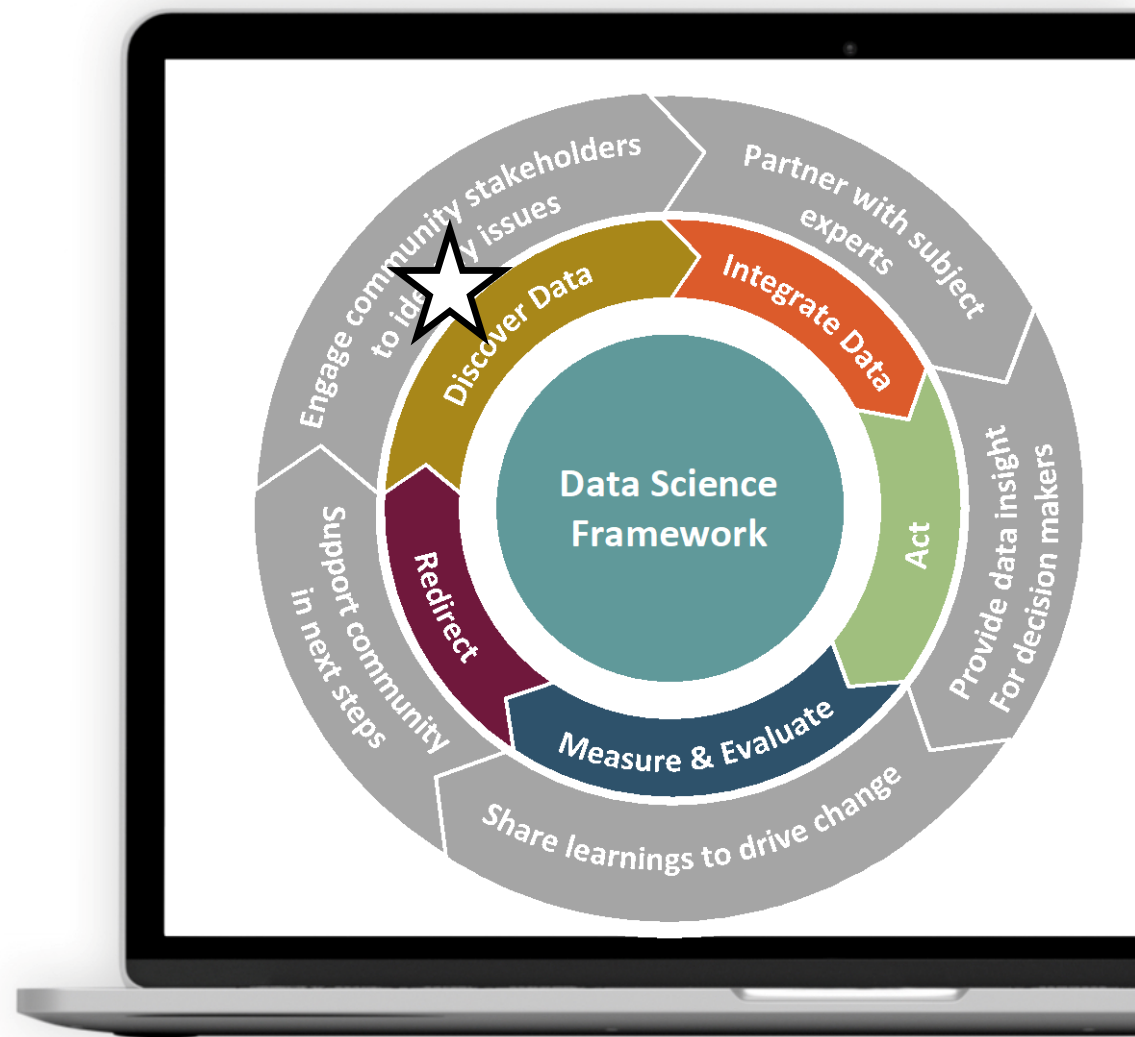
- What are the factors that make an area attractive to workers and families?



RV-AR REGION FRAMING QUESTION

COMMUNITY LEARNING THROUGH DATA DRIVEN DISCOVERY (CLD3)

- **Identify** insights from other communities
- **Explore** with Commission placing question in a data context



WHAT DATA SOURCES MIGHT INFORM THE QUESTION?

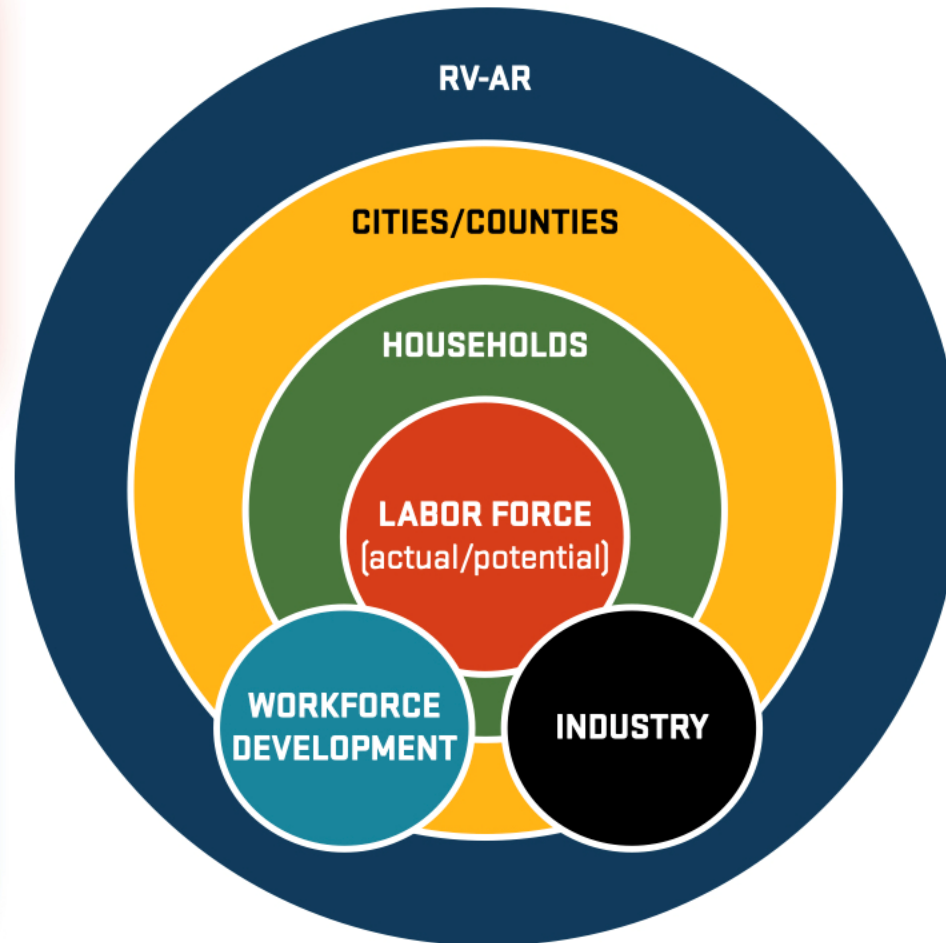
INTERNAL LABOR FORCE → REGIONAL ATTRACTIVENESS ← EXTERNAL LABOR FORCE

WORKFORCE CHALLENGES

- Drug use
- Prisoner re-entry
- Childcare costs
- Commute times
- Job & skill match

WORKFORCE TRAINING

- Certifications
- High school workers
- Company engagement with schools
- Job quotient



COMMUNITY METRICS

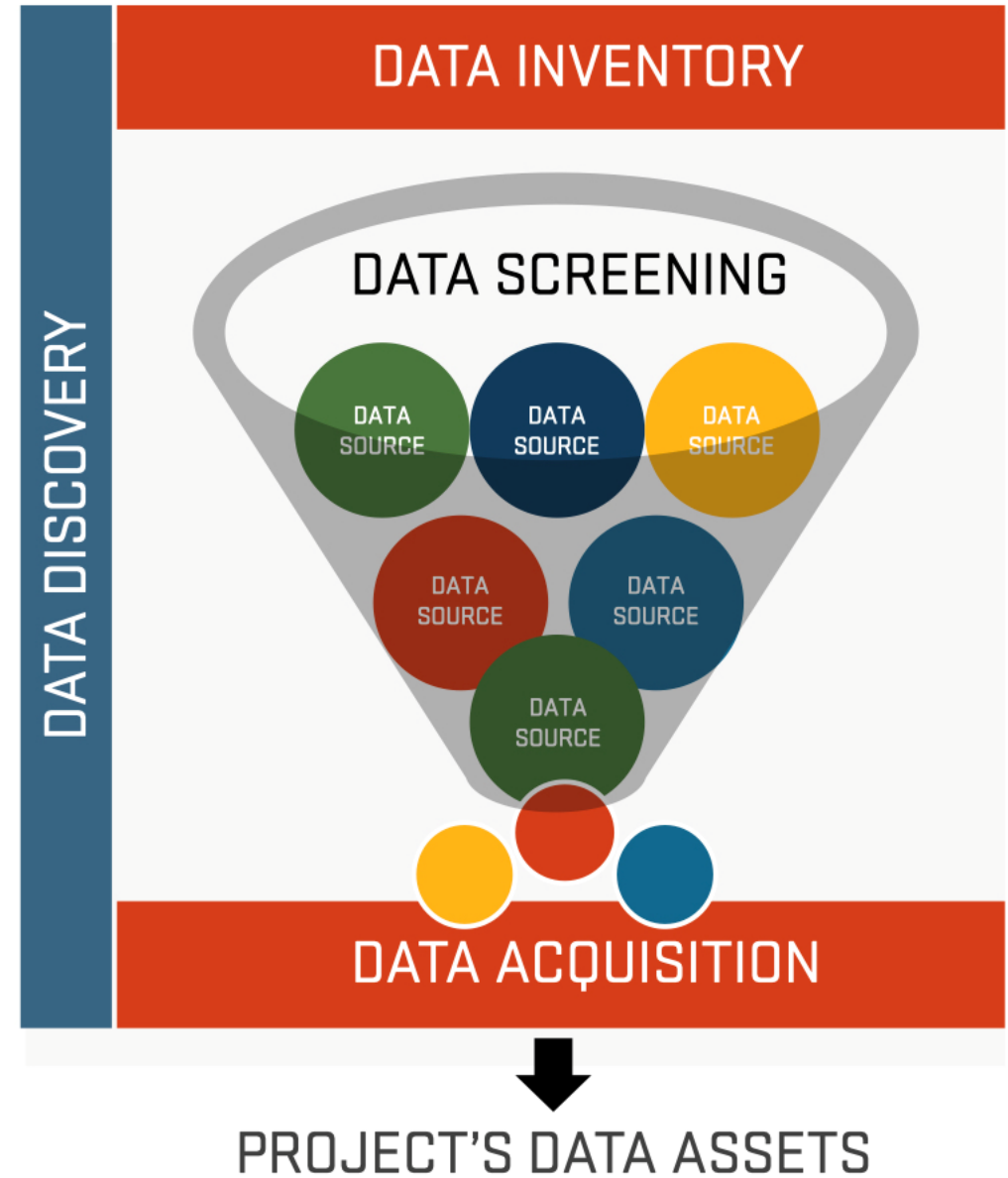
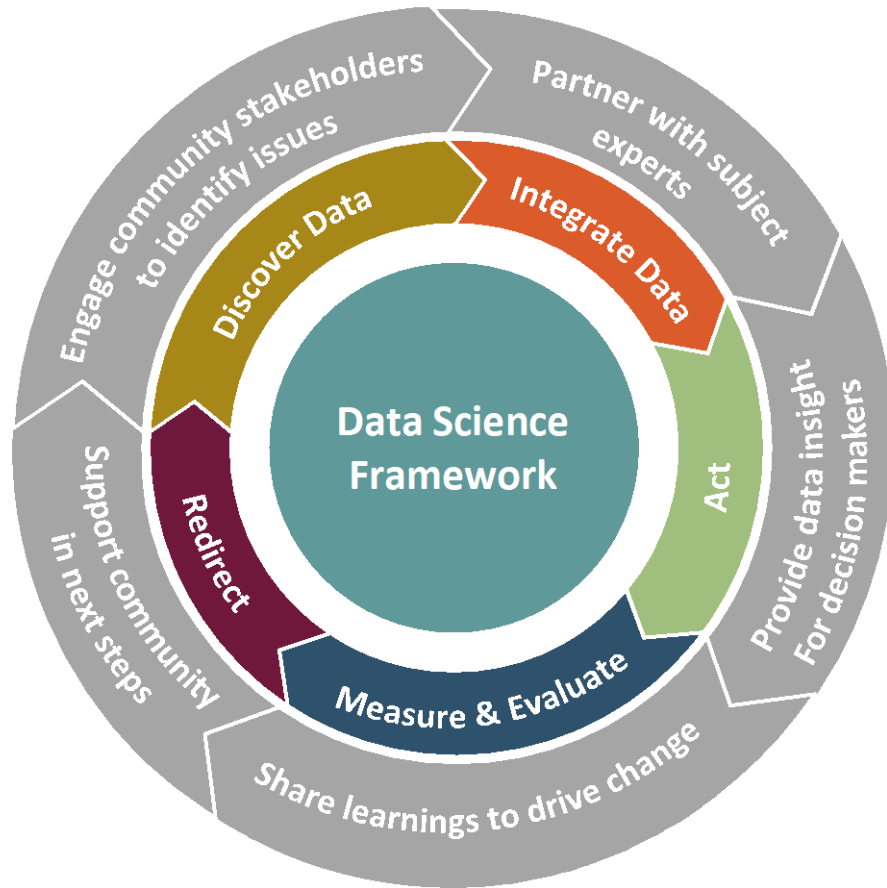
- Park access
- Walkability score
- Housing age & affordability (owned & rented)
- Cultural base
- Primary education ratings

TRANSPORTATION

- Commute times
- % Car ownership
- % Walking, biking, public transit

*sample data map

MOVING FORWARD



RV-AR REGION DATA DISCOVERY

HS GRADUATION RATE ⁽²⁾

2012: 91%

2017: 92.1%

CHANGE: +1%

PERCENT DESIGNATED AS FOOD INSECURE ⁽¹⁾

2010: 10.8%

2016: 11.0%

CHANGE: +1.8%

POPULATION ⁽¹⁾

2010: 330,749

2017: 334,781

CHANGE: +1.2%

TOP 5 EMPLOYERS ⁽⁴⁾

1. Roanoke Memorial Hospital
2. Roanoke County School Board
3. U.S. Dept. of Veteran Affairs
4. Kroger
5. HCA Virginia Health System

ACCESS TO PARKS ⁽⁵⁾

2010: 24.8%

2015: 51.3%

CHANGE: +107.2%

PERCENT UNEMPLOYMENT ⁽⁴⁾

2010: 8.01%

2017: 4.3%

CHANGE: -46.0%

OBESITY RATE ⁽⁶⁾

2010: 28.9%

2014: 28.7%

CHANGE: -0.5%

MEDIAN INCOME ⁽¹⁾

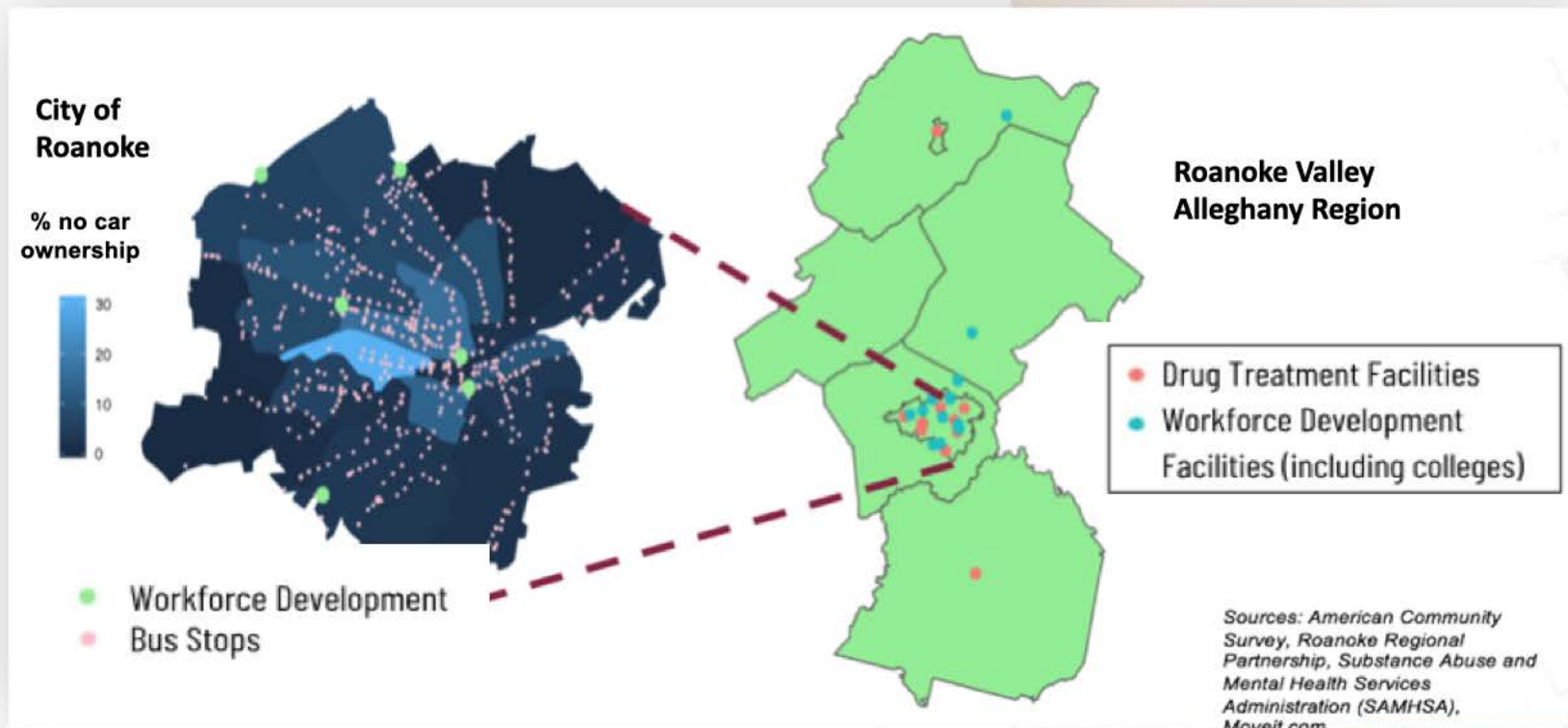
2010: \$48,087

2016: \$47,855

CHANGE: -0.5%

Sources: [1] American Community Survey 2006-2010; 2010-2015; [2] Virginia Department of Education; [3] Feeding America; [4] Virginia Labor Information; [5] CDC National Environmental Public Health Tracking Network (% people living within half mile of park); and, [6] RWJF County Health Rankings

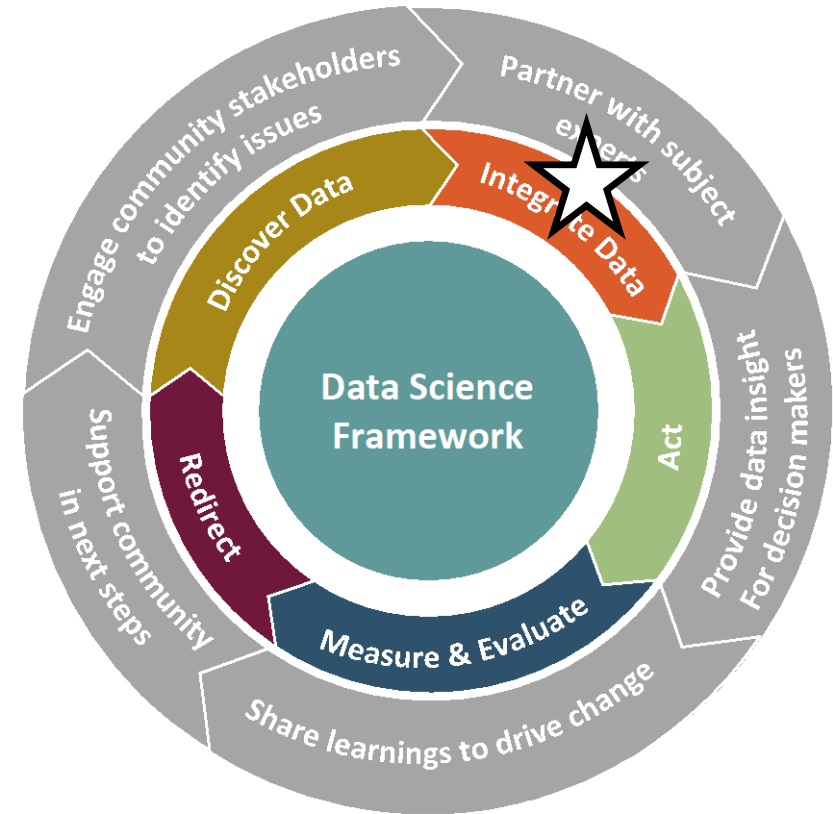
DATA DISCOVERY: MAPPING ACCESS



FORMULATING DATA INSIGHTS

COMMUNITY LEARNING THROUGH DATA DRIVEN DISCOVERY (CLD3)

- **Explore** with commission useful metrics
- **Integrate** important data/information



ATTRACTIVENESS COMPOSITE INDICATOR

TRANSPORTATION

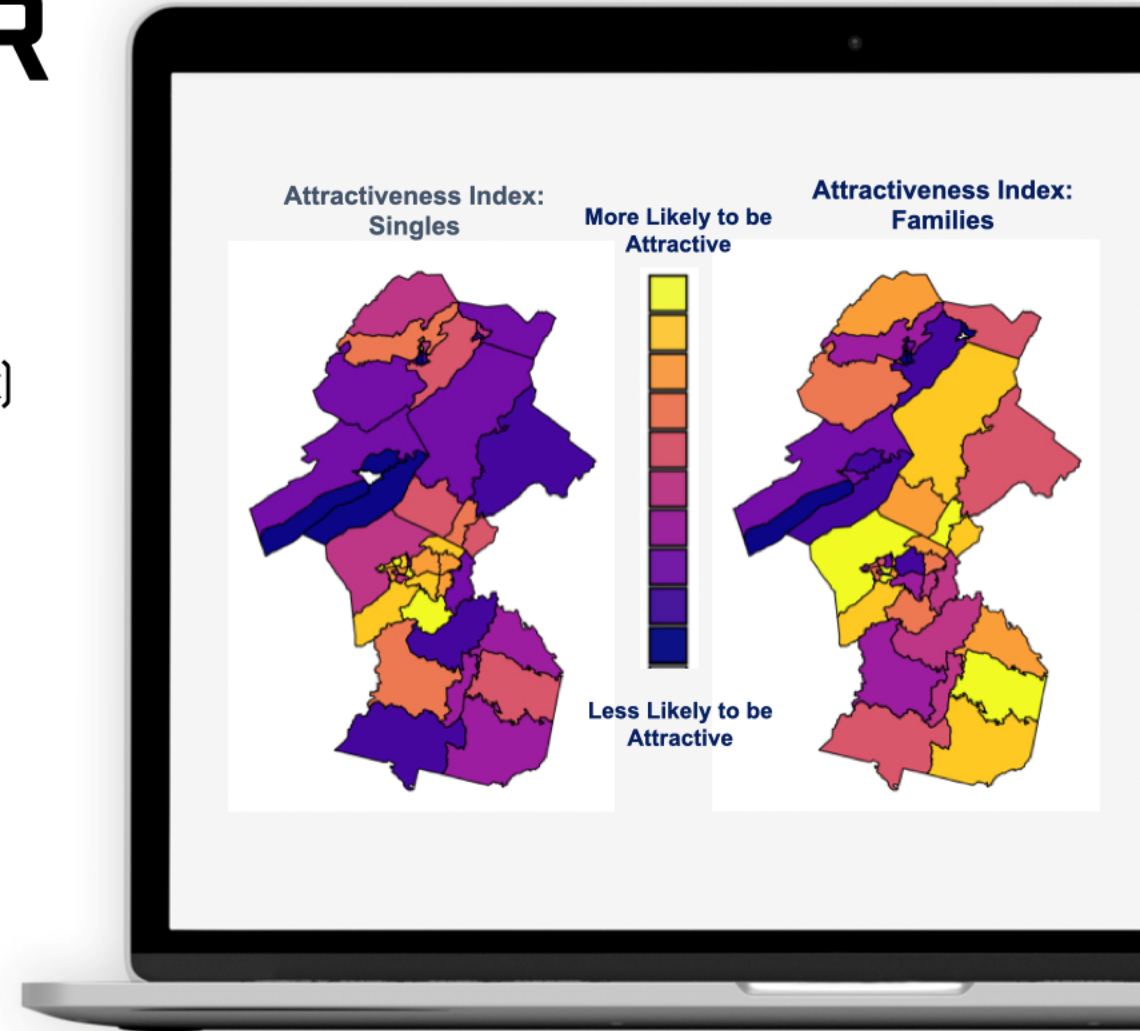
- Commute Times (% < 1 hour)
- Vehicle Ownership (% own a vehicle)
- Public Transportation (% public transit is primary means to work)

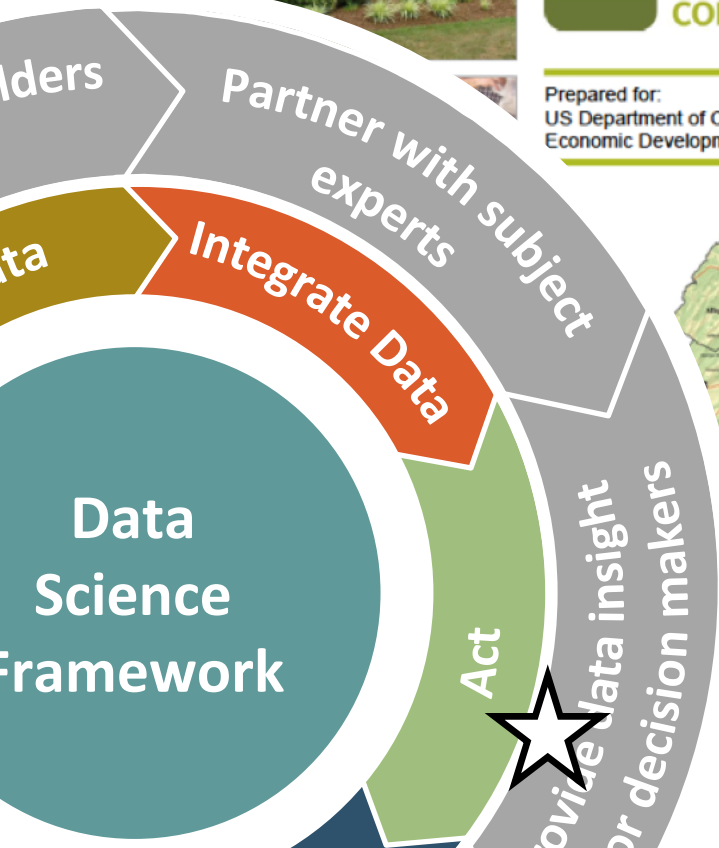
HOUSING

- Size of Home (% 3+ bedrooms)
- Type of Home (% apartments/single family homes)
- Age of Home (% built after 1990)

COMMUNITY

- Resident Type (% renters / owners)
- Family Presence (% singles / families)
- Diversity (% non-white)
- Employment (% employed)
- Active Post-Secondary (% enrolled in college)





Roanoke Valley-Alleghany Regional Comprehensive Economic Development Strategy

Base Year 2015

2018 Annual Update

Prepared By:
Roanoke Valley-Alleghany Regional
Commission



Roanoke Valley-Alleghany
REGIONAL
commission

Prepared for:
US Department of Commerce -
Economic Development Administration



POLICY ACTIONS

TRANSPORTATION

- Development of a Regional Transit Vision and Demand Management Plan

HOUSING

- Develop plan to rehabilitate housing

COMMUNITY

- Involvement in planning
- Increasing workforce credential opportunities at community colleges
- Recruit businesses to the area and encourage entrepreneurship
- Continue expansion of outdoor greenways



COMMUNITY LEARNING THROUGH DATA DRIVEN DISCOVERY

MARSHALLTOWN, IA

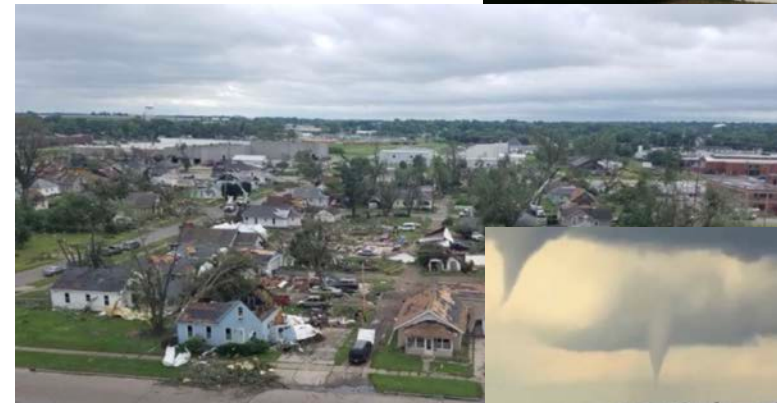
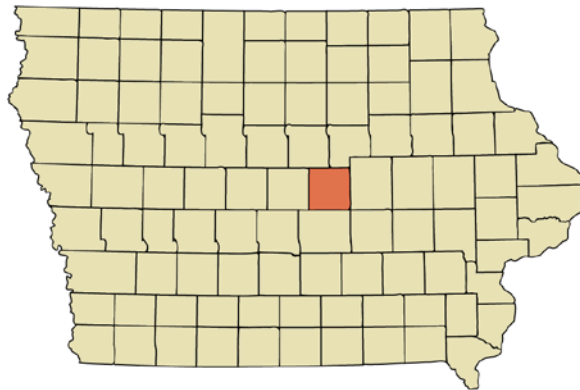
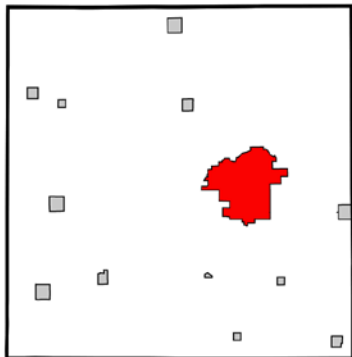
BACKGROUND

POPULATION: 27,275

SIZE: 19.28 SQ MILES

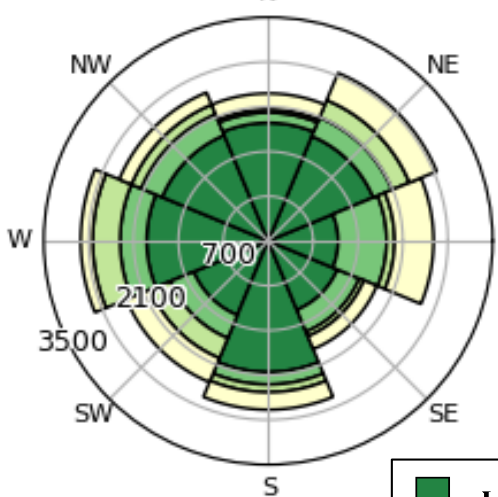
RACE: 60.9% WHITE*

* WHITE ALONE, NOT HISPANIC OR LATINO

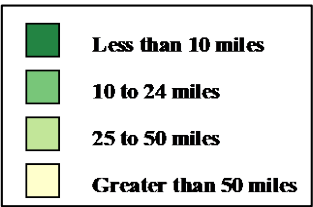
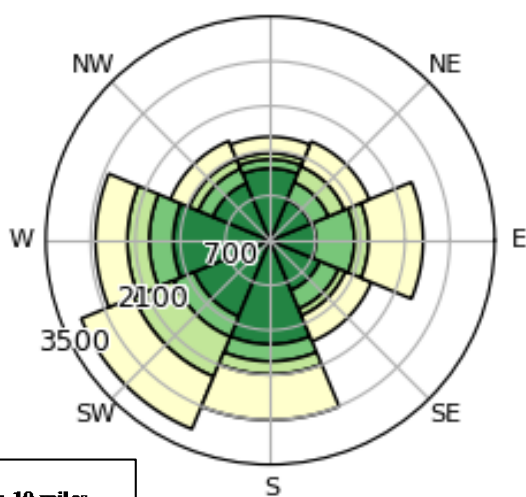


MARSHALLTOWN OVERARCHING GOAL

Job Counts by Distance/Direction in 2002
All Workers



Job Counts by Distance/Direction in 2017
All Workers



Data Source	2000 Census	2010 Census	2014-2018 ACS
Total Population	26,023	27,552	27,275
Percentage Hispanic	12.6	24.1	29.9

Of the 29.85% Hispanic residents (ACS 2014/18):
43.44% were 18 years of age or younger

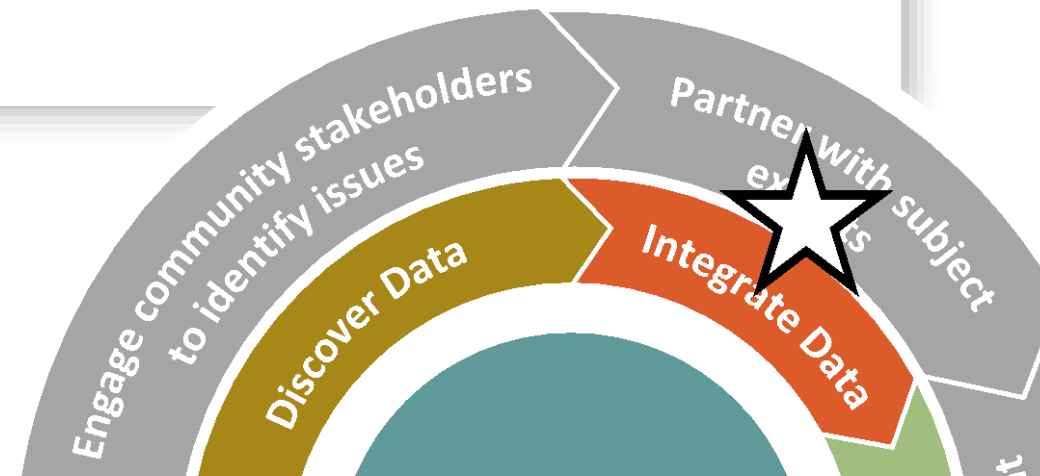
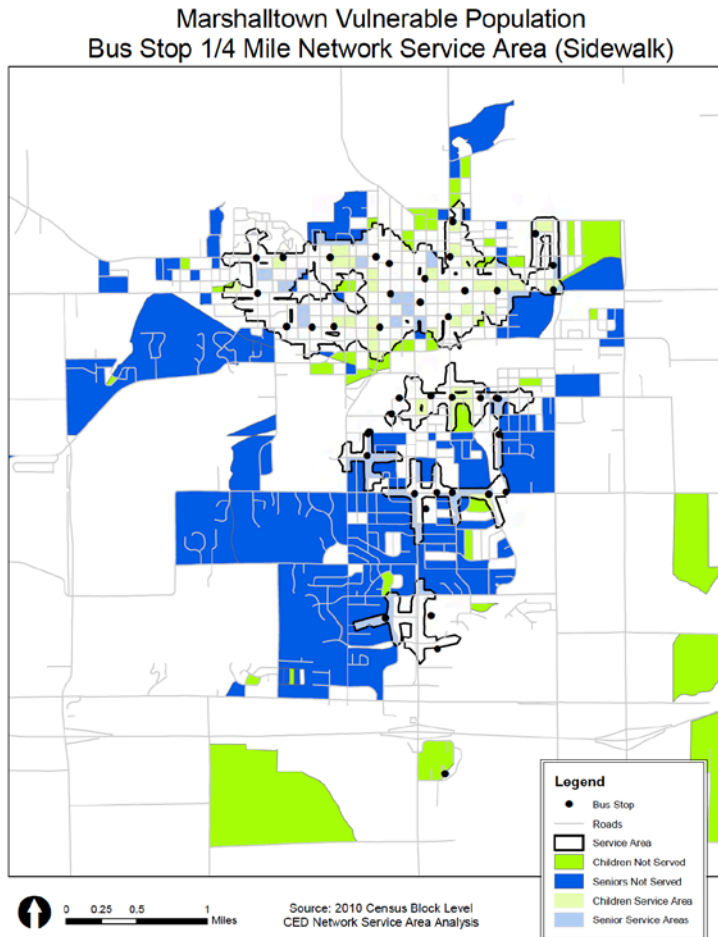
Better understand community demographics and bus use so city leadership could identify ways to increase ridership of public bussing.



LINKING TRANSPORTATION ROUTES TO INFORMATION ON VULNERABLE POPULATIONS

FINDINGS

Local transportation systems are crucial to mobility, commerce, public safety, quality of life, community vitality, and economic development. Using mapping techniques, neighborhoods were identified that were in greater need of bus routes. **In particular, elderly and minority citizens were being underserved.**





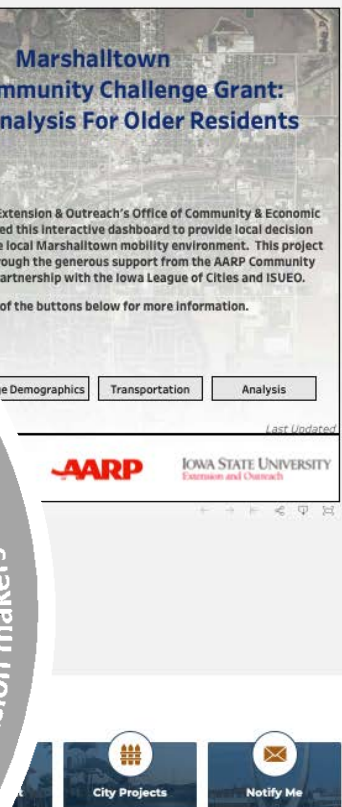
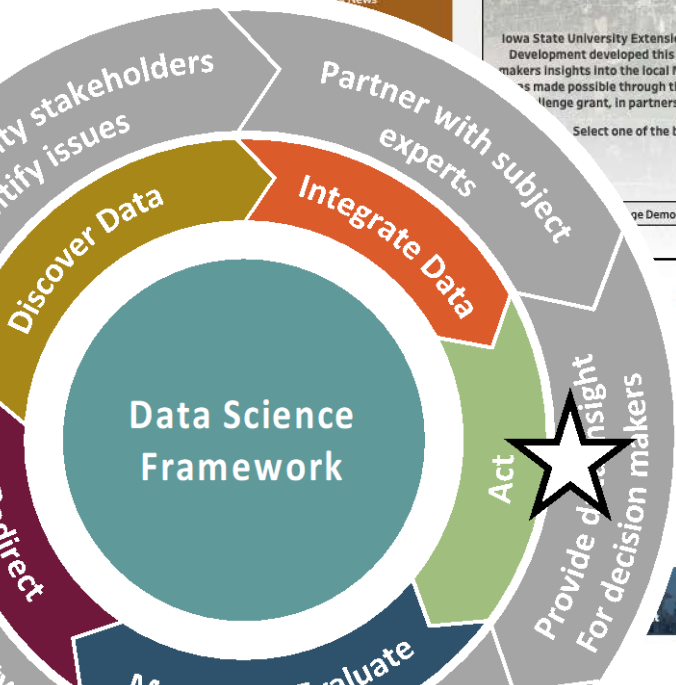
ACTIONS TAKEN

AARP Community Challenge Grant with Iowa League of Cities. CED took action!

Additional Funds to Support Public Access to Data Resources

A new DSPG Data-Driven Dashboard provided Marshalltown citizens up-to-date information about their town.

Supports the work of the city council and other local government.



AWARD WINNING PROJECT

The map identified locations where new bus routes could provide improve transportation access to vulnerable groups. Marshalltown took action!



At the conclusion of the CLD3 project, Kevin Pigors, Marshalltown Municipal Transit Administrator and his team (right) received the **Federal Transit Authority Award of Excellence** and the **Iowa Transit Authority Award of Excellence** for highest percentage increase in ridership among rural transit providers (11% or 9,825 riders).



COMMUNITY LEARNING THROUGH DATA DRIVEN DISCOVERY

QUESTIONS?

DON'T FORGET TO JOIN US NEXT TIME!

**COMMUNITY CAPITALS
ECONOMIC MOBILITY
FRAMEWORK**

OCTOBER 14, 2020

featuring

Dr. Cassandra Dorius

Dr. Teja Pristavec

+ ENCOURAGE COLLEAGUES
TO ATTEND:

Register online:

workspace.oregonstate.edu/catalyst