

Testing the Keys to Economic Recovery from COVID-19

Webinar 4: Making Data-Informed Decisions for Economic Recovery

January 27, 2021



SCHOOL OF GOVERNMENT
ncIMPACT Initiative



The Team



Mark Little,
Director, NCGrowth



Carolyn Fryberger,
NCGrowth



Anita Brown-Graham,
Director, ncIMPACT
Initiative



Emily Gangi,
ncIMPACT Initiative



Hallee Haygood,
NCGrowth



Andreina Malki,
Geography PhD Candidate



Molly Gaskin,
ncIMPACT Initiative



Jason Jones,
ncIMPACT Initiative

Project Description and Purpose

What strategies will help local economies recover more quickly from the COVID-19 pandemic?

Data Resources for Economic Recovery



Jeff Warren, PhD - Moderator
Executive Director
NC Policy Collaboratory
University of North Carolina at Chapel Hill

Community Confidence Tool



Tommy Bohrmann
Chief Scientific Officer
Digital Health Institute for
Transformation

<https://dashboard.communityconfidence.org/>

Carolina Tracker

A Resource For Recovery



Noreen McDonald
Distinguished Professor, Chair
Department of City and Regional Planning
University of North Carolina at Chapel Hill

<https://carolinatracker.unc.edu/>

CAROLINA TRACKER

A Resource for Recovery



COLLEGE OF ARTS AND SCIENCES
City and Regional Planning

Purpose

Construct an interactive dashboard that explores the economic, travel, social, and environmental impacts of COVID-19 on communities throughout North Carolina

This project is supported by the North Carolina Policy Collaboratory at the University of North Carolina at Chapel Hill, with funding from the North Carolina Coronavirus Relief Fund established and appropriated by the North Carolina General Assembly.

ABOUT THE PROJECT

Principal Investigators – City and Regional Planning



Nikhil Kaza

ASSOCIATE PROFESSOR



Noreen McDonald

DISTINGUISHED
PROFESSOR, CHAIR



Nichola Lowe

PROFESSOR, INTERIM
DIRECTOR, CURS

Post-Doctoral Fellows

Abigail Cochran
Donald Planey
Olivia Wang

Graduate Students

Kshitiz Khanal (PhD)
Xijing Li (PhD)
Ethan Sleeman (MCRP)

Consultants

Kaitlin Heatwole
Carson Sievert
Ashton Watkins
Ben White

GOALS

1

Visualize and explore
impacts of COVID-19
in North Carolina

2

Provide timely and
relevant information
for decision-making

3

Demonstrate the
variation of impacts
on different groups

GOAL 1:

Visualize and explore impacts of COVID-19

Employment

- Unemployment insurance claims
- Mass layoffs/closures
- Labor force participation
- Online job listings

Spending

- Sales and use tax revenue
- Small businesses open
- Small business revenue
- Office vacancy rates
- Paycheck Protection Program loans

Travel

- Percent of people staying at home
- Vehicle miles traveled
- Median distance of longest daily trip
- Traffic crashes
- Gas prices

Destinations

- Business offices
- Grocery stores
- Healthcare
- Parks
- Restaurants and bars
- Recreational facilities

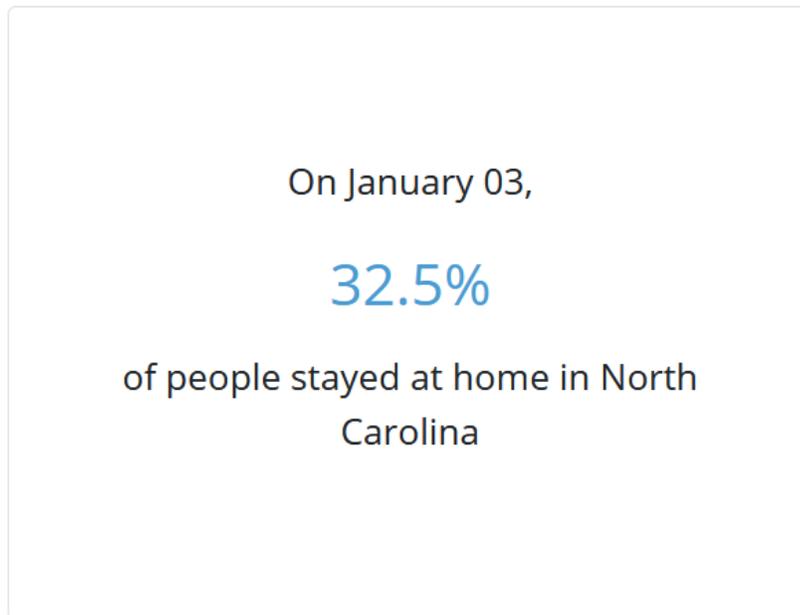
Housing

- Eviction filings
- Foreclosure filings
- House sales
- Rental listings
- New building permits
- Vacant residences

Environment & Society

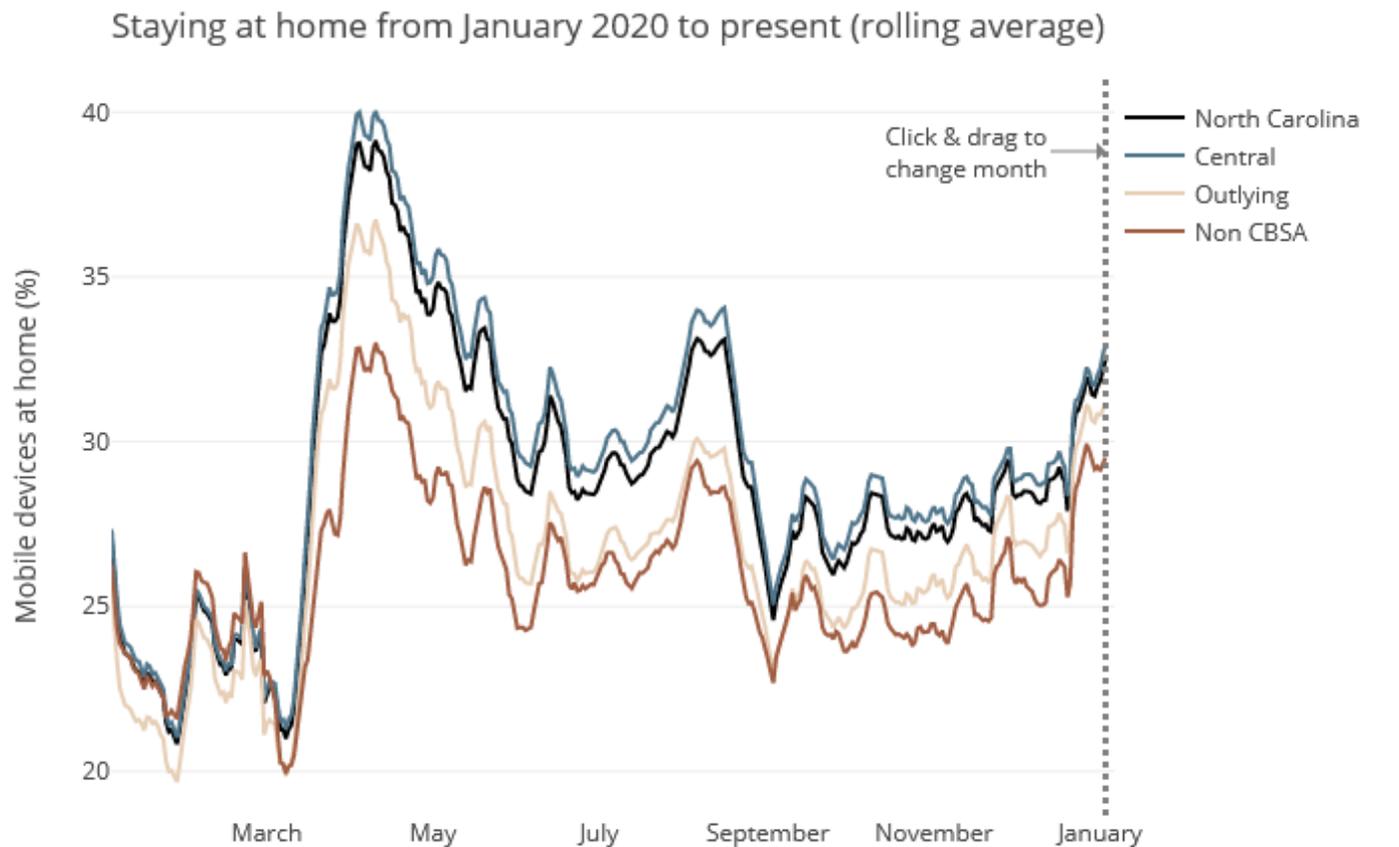
- Childcare enrollment
- Air Quality Index (PM 2.5)
- Police stops
- Prison admissions

GOAL 2: Provide timely and relevant information



- Influence day-to-day operational decisions and long-term strategies
- Provide data as it is available in daily, weekly, and monthly updates
- Create automated code (mostly in R) to facilitate this process

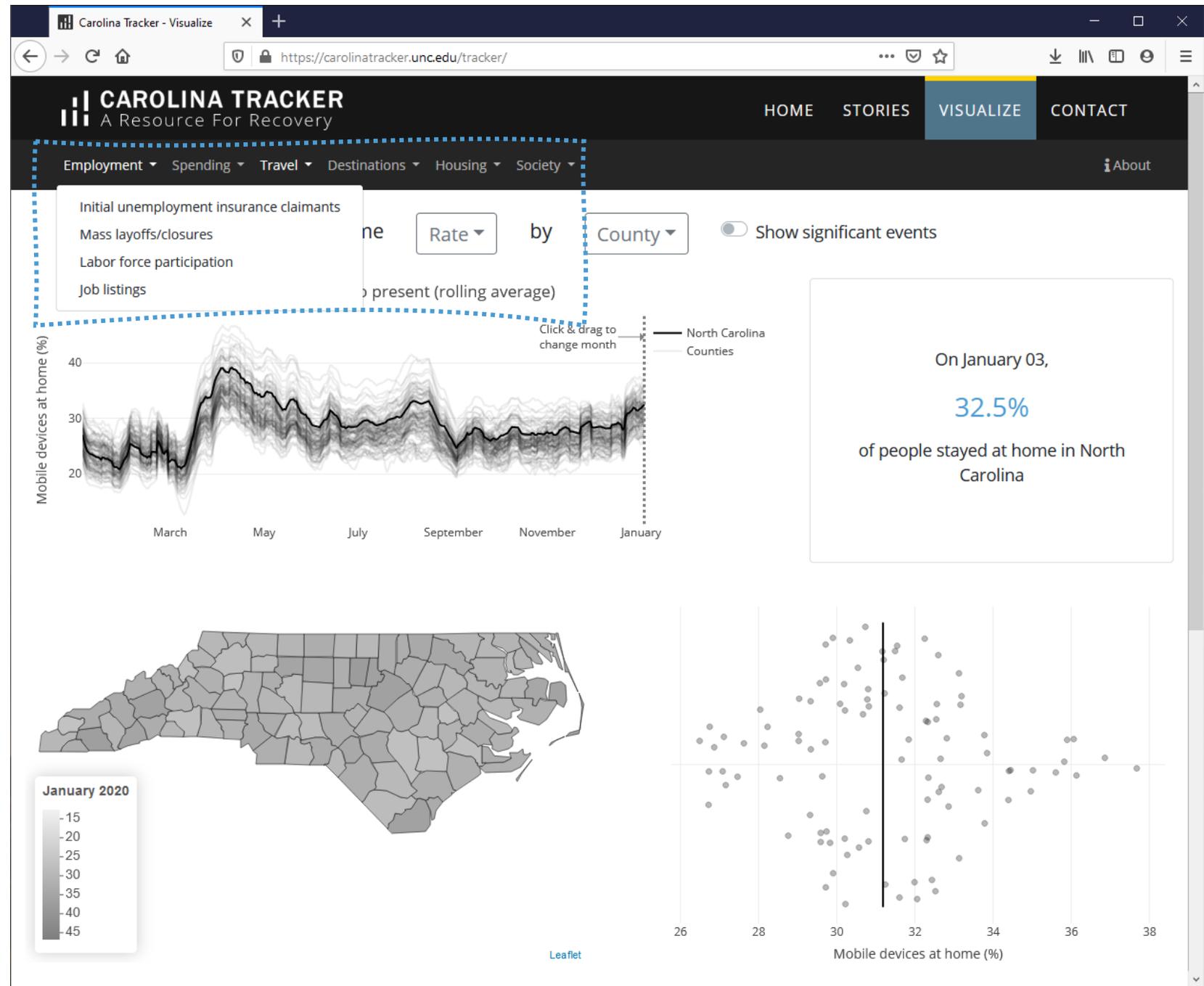
GOAL 3: Demonstrate the variation of impacts



- Provide data-driven storytelling and analysis
- Analyze disaggregated breakdowns of datasets
- Use summarizing categories to explore broad spatial and socio-economic trends

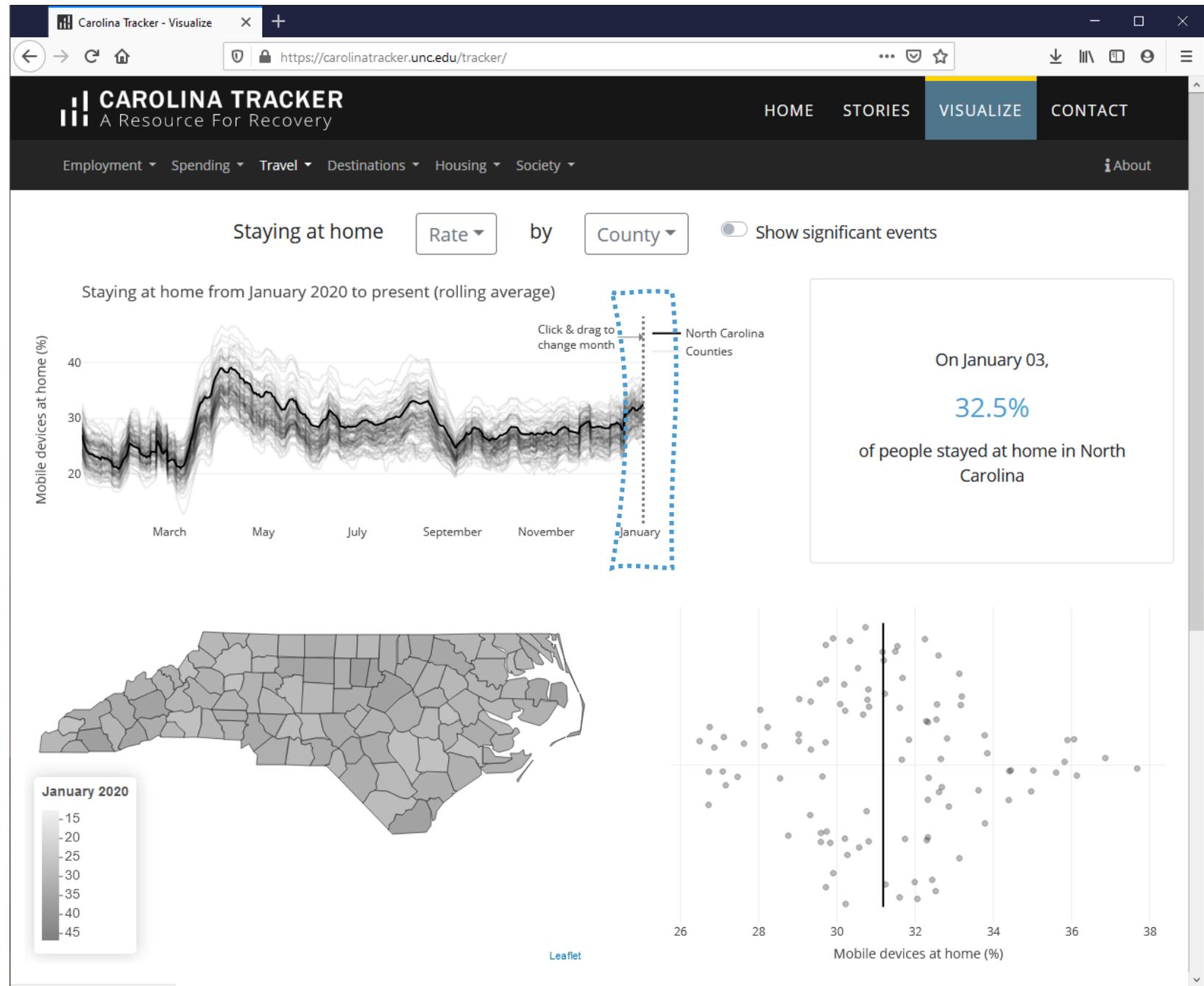
FEATURES

- 30 topics to explore in 6 categorical dropdown menus



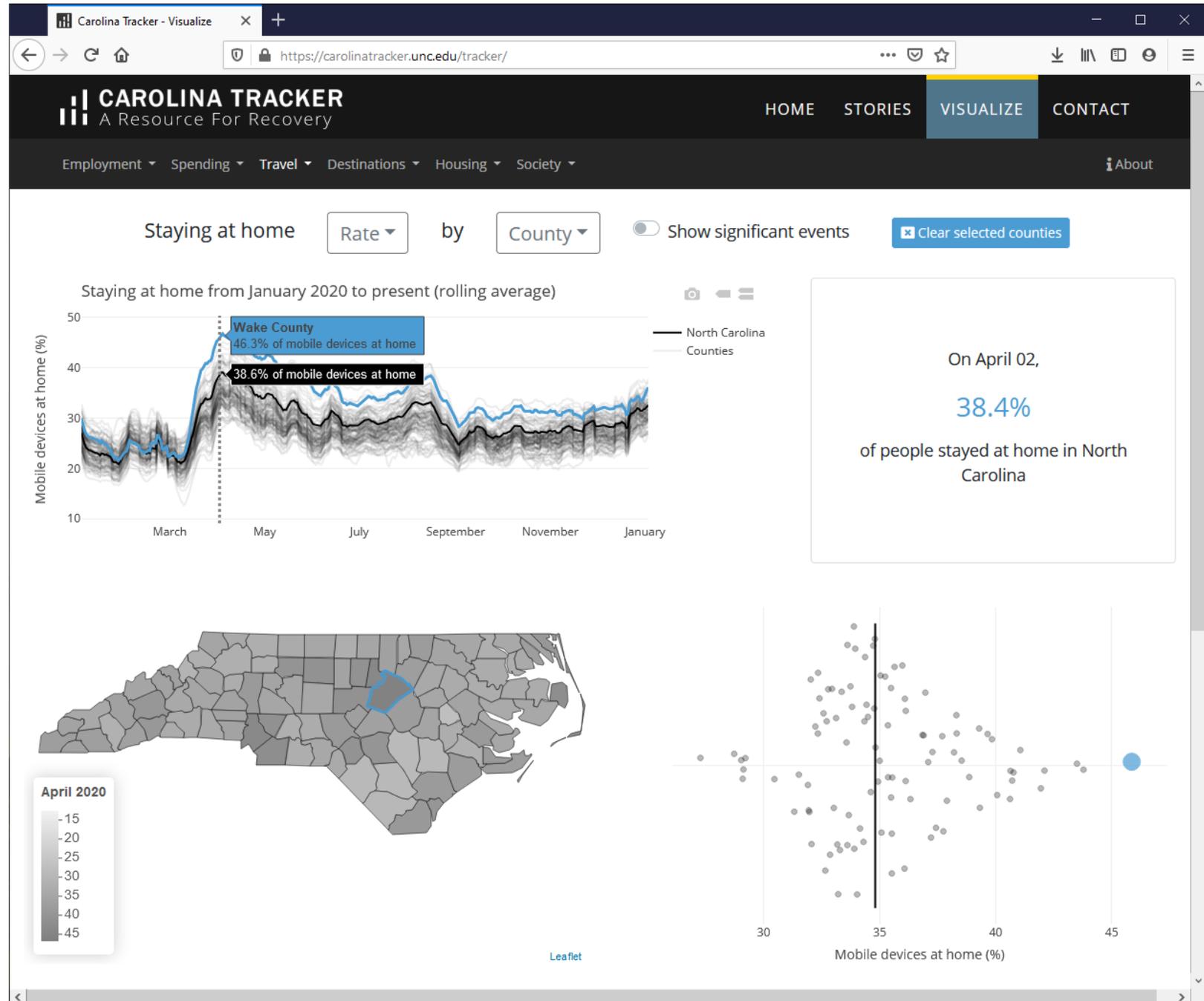
FEATURES

- Slider bar on time series changes the date of data display
 - *Automatically updates the map, dot plot, and overview text*



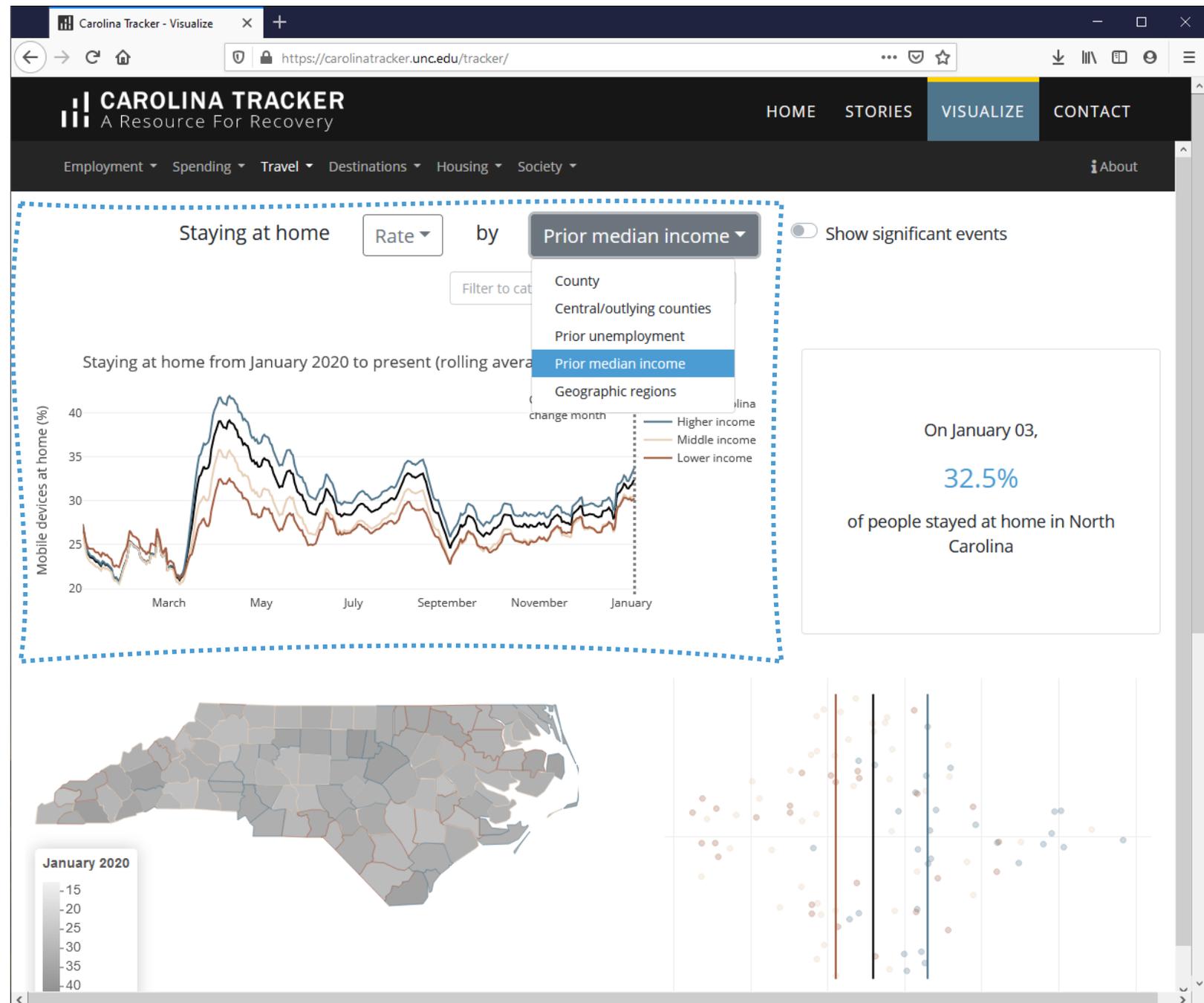
FEATURES

- Default display shows each county and the state average
 - *Hover to see details*
 - *Click to highlight county (or counties) on all graphics*
 - *Easily clear selection in top right*



FEATURES

- Group counties by socioeconomic and geographic categories to see trends
 - *Each county's category group is color-coded on the map and dot plot*



FEATURES

- About page provides more information about each topic
 - *Original data sources*
 - *Links to download our clean and ready-to-use data*
 - *Methodology and calculations*

Carolina Tracker - Visualize

https://carolinatracker.unc.edu/tracker/

CAROLINA TRACKER
A Resource For Recovery

HOME STORIES VISUALIZE CONTACT

Employment Spending Travel Destinations Housing Society

About

ABOUT THE DATA

STAYING AT HOME SUMMARIZING CATEGORIES

Data Source

Active data source:
[People Staying at Home All Day](#), Safegraph Social Distancing Metrics

Download our data:
[County-level daily mobile devices staying at home, January 2020 to present \(csv\)](#)

Citation format:
Department of City & Regional Planning (2020). Carolina Tracker: A Resource for Recovery, <https://carolinatracker.unc.edu/>, accessed on [date here], University of North Carolina at Chapel Hill, USA.
We encourage you to use our data and visualizations. Please do not repost text without permission.

Representativeness

This data records the total number of devices and the number of devices staying at home all day for all counties in North Carolina since January 1, 2020. The data is obtained from Safegraph. The correlation between the Census population of each county and number of devices residing in the same county is about 0.97, suggesting the data is well-sampled at the county level. However, the representativeness of populations within each county is unknown.

Temporal and spatial resolution

The data is updated daily and contains daily information since January 1, 2020 for all counties in North Carolina.

Data dictionary

Devices staying at home all day

Column names	Description	Type	Missingness	Example
stcofips	5-digit FIPS code	numeric	0	37067

ncIMPACT COVID Composite



Jason Jones

Research Associate, ncIMPACT Initiative
School of Government
University of North Carolina at Chapel Hill

<https://ncimpact.shinyapps.io/covid-composite/>

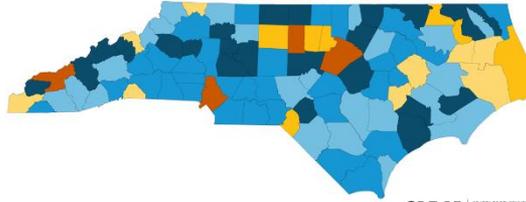
ncIMPACT COVID Composite

Keys to Economic Recovery from COVID-19

Emergency Financial Support Composite

Total z-score by county for all 7 financial support composite metrics. The z-score is a measure of distance from the average for all counties. Metric z-scores have all been standardized so that a high z-score is not preferred. This composite includes public data capturing the NC CDF, FHS Uninsured Relief Fund, FHS FHC Training Fund, FHS Provider Relief Fund, FHS COVID-19 Awards, and SBA PPP Loans.

Legend: -4.87 to -3.04, -3.04 to -1.5, -1.5 to 0.81, 0.81 to 2.85, 2.85 to 6.28, 6.28 to 10.3



Source: UNC School of Government, ncIMPACT Initiative

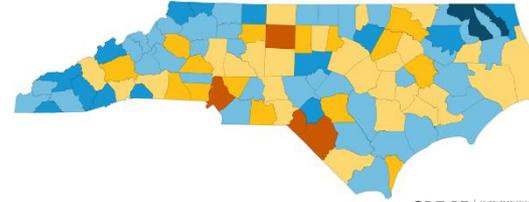
UNC SCHOOL OF GOVERNMENT
ncIMPACT Initiative

Keys to Economic Recovery from COVID-19

Real-Time Fluctuations Composite

Total z-score by county for all 6 real-time fluctuation composite metrics. The z-score is a measure of distance from the average for all counties. Metric z-scores have all been standardized so that a high z-score is not preferred. This composite includes public data capturing unemployment, taxable sales, sales tax distributions, COVID-19 cases, home values, and unemployment claims.

Legend: -11.2 to -4.7, -4.7 to -3.1, -3.1 to -0.11, -0.11 to 3.1, 3.1 to 6.35, 6.35 to 9.37



Source: UNC School of Government, ncIMPACT Initiative

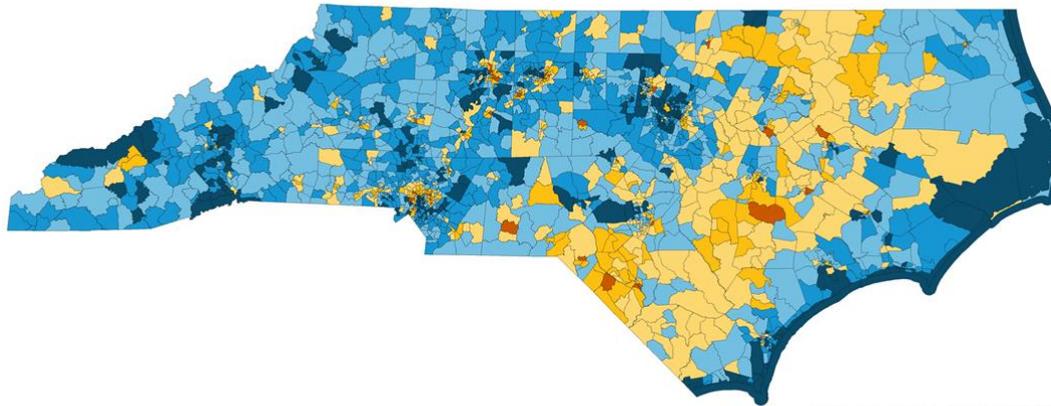
UNC SCHOOL OF GOVERNMENT
ncIMPACT Initiative

Keys to Economic Recovery from COVID-19

Community Resilience Composite

Total z-score by Census Tract for 7 community resilience composite metrics. The z-score is a measure of distance from the average for all census tracts. Metric z-scores have all been standardized so that a high z-score is not preferred. This composite includes Census data capturing unemployment, poverty, school age children, broadband access, health insurance coverage, and racial diversity.

Legend: -13.9 to -4.08, -4.08 to -1.29, -1.29 to 1.58, 1.58 to 5.07, 5.07 to 9.5, 9.5 to 19.6



Source: UNC School of Government, ncIMPACT Initiative

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ncIMPACT Initiative

Built In Three Layers

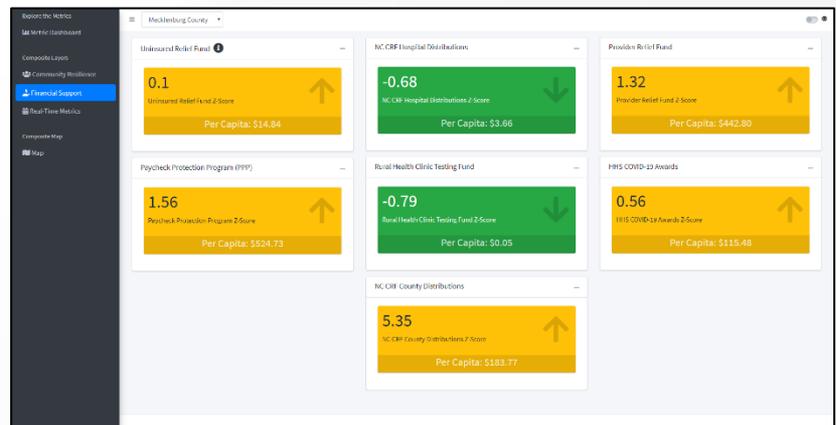
The [three layers of our tool](#) are rooted in real conversations and webinar engagements with local elected officials and practitioners to reflect their concerns and approaches to mitigating pandemic impacts. These three layers help us to:

1. Develop an understanding of a **community's resilience*** and disposition towards widening inequity using publicly available Census data at the Census Tract level.
2. Develop an understanding, where data is available, of the **emergency financial support** resources received which may be masking short-term consequences and delaying second-order impacts of the pandemic at the county level.
3. Develop an understanding of **real-time fluctuations** in a selection of publicly available data points at the county level as the pandemic unfolds.

**Community Resilience in this context is specific to potential community impact due to the pandemic and not community resilience more broadly.*

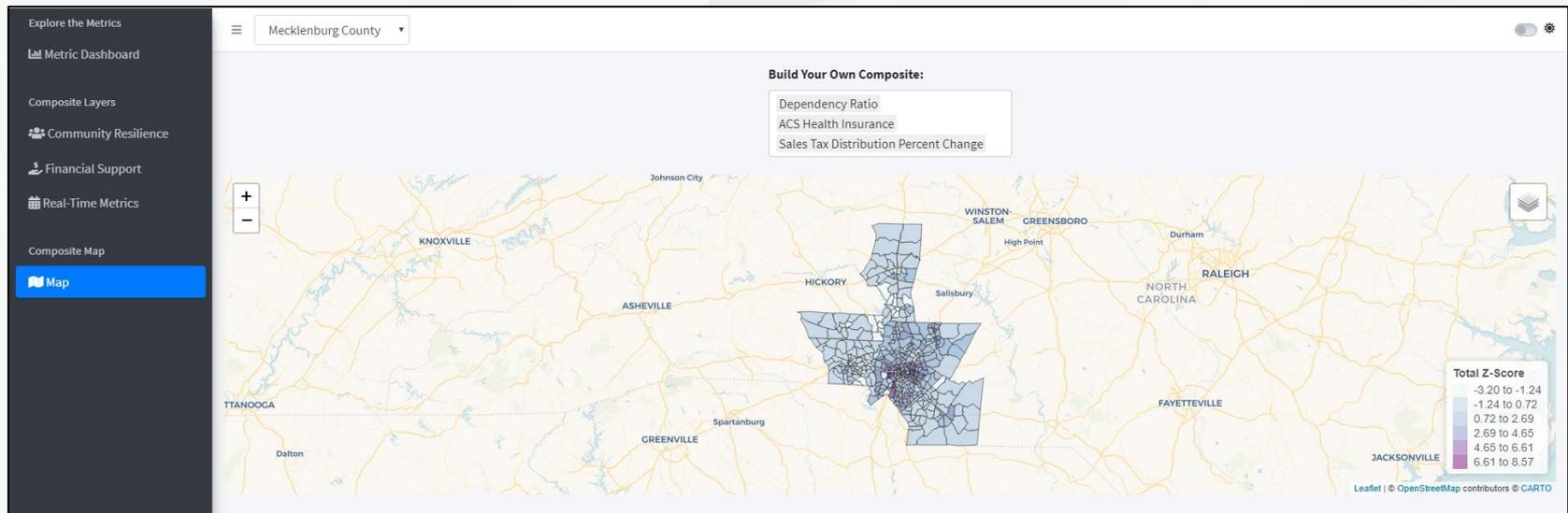
Features

- You can get a quick look at a selection of data points related to COVID economic impact and recovery.
- You have access to a variety of visualization formats depending on your preferences including data cards, charts, and maps.
- All data points are already standardized to allow for comparisons.



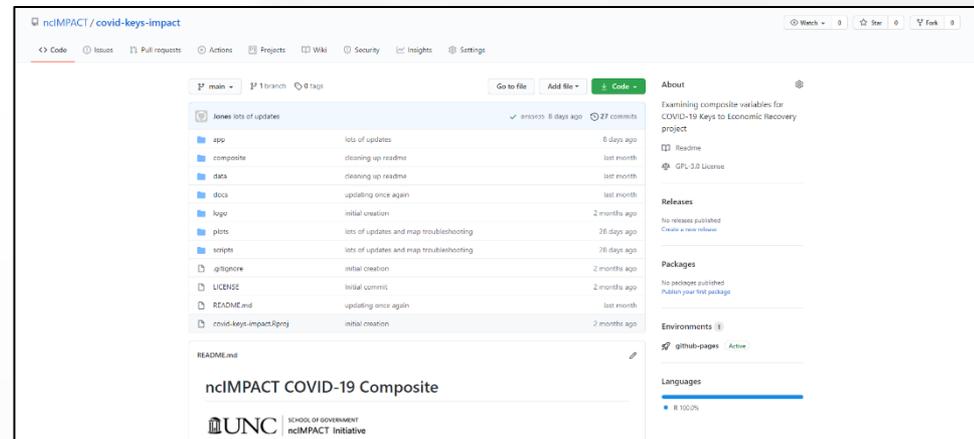
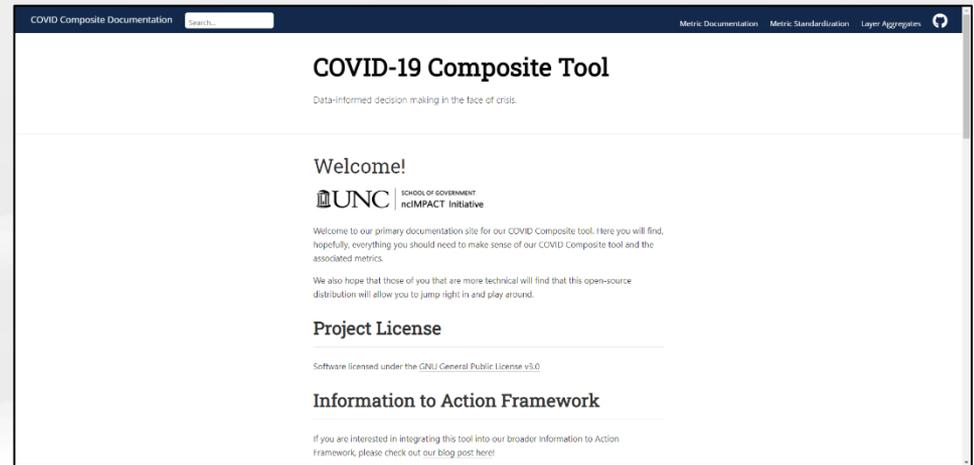
Features

- Most significantly, you may choose your county and select your own data points to construct your own composite.
- Data standardization goes a step further with the use of a z-score that makes comparisons simple and helps you visualize how far a data point is away from the average for all data points.



Guidance

- Our z-scores are all [documented and standardized](#) to ease interpretation. A higher z-score is interpreted as less desirable and a lower z-score is interpreted as more desirable, regardless of the underlying data point.
- All source code, data, and documentation are freely available in a [GitHub repository](#) with more detailed documentation provided in a [stand-alone documentation site](#).



Information to Action

[Information to Action Framework](#) provides an easy-to-understand way of moving toward meaningful community and organizational action.

COVID Composite is a great way to plug in and get started with some quantitative insights.

The screenshot shows the top navigation bar with the UNC logo, 'SCHOOL OF GOVERNMENT nclIMPACT Initiative', and 'Public Policy Solutions for North Carolina'. A search bar is present. Below the navigation, the article title 'Unwrapping the Information to Action Framework' is displayed, written by Jason Jones. The article text discusses the nclIMPACT Initiative's collaboration with community leaders. At the bottom, a diagram shows 'INFORMATION' (Community Resilience, Emergency Financial Support, Real-Time Fluctuations) leading to 'ACTION'.

Our Gift to You: The Information to Action Framework

There are four primary components for moving from information to action.

- ✓ **CULTURE**
- ✓ **EXPERTISE & EXPERIENCE**
- ✓ **QUANTITATIVE INSIGHT**
- ✓ **QUALITATIVE INSIGHT**

Component 1: Culture

The first key component of the **Information to Action Framework** is your own organizational and community culture. Important decisions, particularly in moments of crisis, need to reflect the established vision and values that operationalize culture for your organization and community. It is critical that you remain firm in the values you have established as decision-making guardrails, while remaining focused on the strategic vision for your organization and community. Strategy may rapidly change, but culture should remain a supportive constant.

If not already well-operationalized, culture may be neglected or forgotten when making decisions, or ignored in moments of crisis. Seeking community and organizational input on values and vision in the face of crisis will help ensure greater understanding of, and investment in, your responses.

Enhancements

The screenshot displays a web application interface for Mecklenburg County. On the left is a dark sidebar with navigation options: 'Explore the Metrics' (selected), 'Metric Dashboard', 'Composite Layers', 'Community Resilience', 'Financial Support', 'Real-Time Metrics', 'Composite Map', and 'Map'. The main content area features a dropdown menu for 'Mecklenburg County'. Below this is the heading 'Explore the Metrics' followed by a paragraph of placeholder text. A link for 'About this dashboard' is present. Under the heading 'Primary Data Layer', a dropdown menu is set to 'ACS Poverty'. To the right is a map of the region with Mecklenburg County highlighted in pink. The map includes various city labels such as Marlon, Newton, Salisbury, Mooresville, Kannapolis, Concord, Badin, Troy, Albemarle, Pinehurst, Rock Hill, Van Wyck, Wingate, Wadesboro, Rockingham, Hoffman, York, Clover, Steeple, Kings Mountain, Gastonia, Mount, Shelby, Forest City, Rutherfordton, and Forest City. Map controls like zoom in (+) and zoom out (-) are visible on the left, and a settings gear icon is on the right. The bottom right corner of the map area contains the text 'Leaflet | © OpenStreetMap contributors © CARTO'.

Stay tuned for more accessibility and usability enhancements!

Making Data-Informed Decisions For Economic Recovery

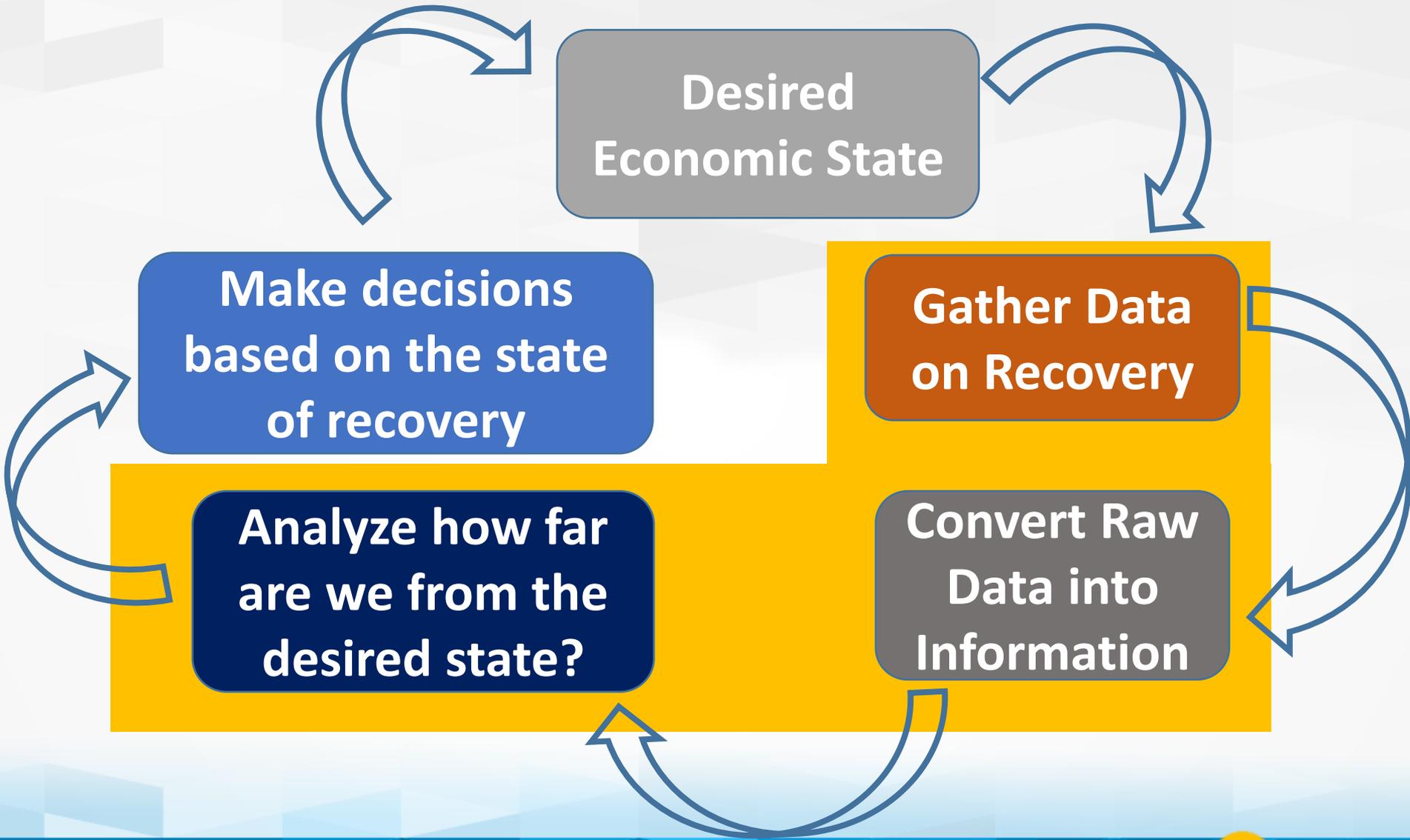


Obed Pasha, PhD
Assistant Professor
School of Government
University of North Carolina at Chapel Hill

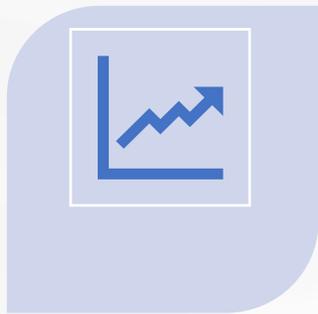
pasha@unc.edu

Research Focus: Organizational behavior, Strategic Planning,
Performance Management, Program Evaluation

Decision-making cycle



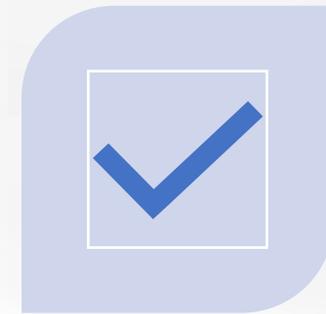
Analysis



PAST
PERFORMANCE



TARGETS



BENCHMARKING

Analysis: Past Performance

Compare performance measures with past performance

- Trends
- How have we been doing over the past few years/months/weeks etc.?
- Example: Percent stay at home
- Example: Rate of eviction filings

Example: Percent Stay At Home

Staying at home

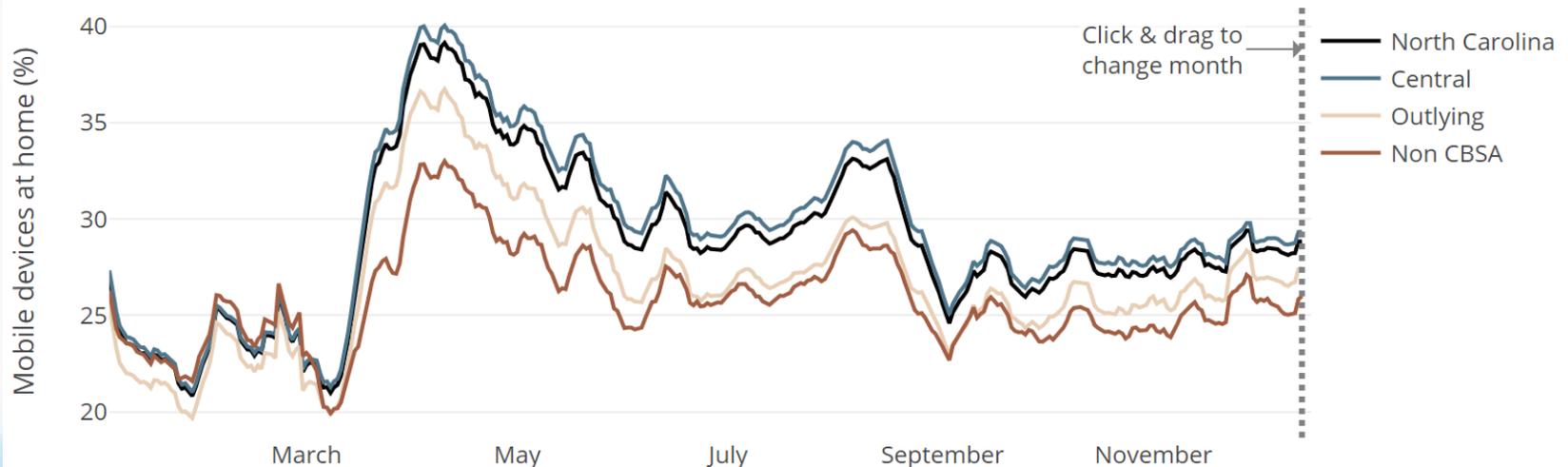
Rate ▾

by

Central/outlying counties ▾

Filter to categories

Staying at home from January 2020 to present (rolling average)



Example: Eviction Filings

Eviction filings

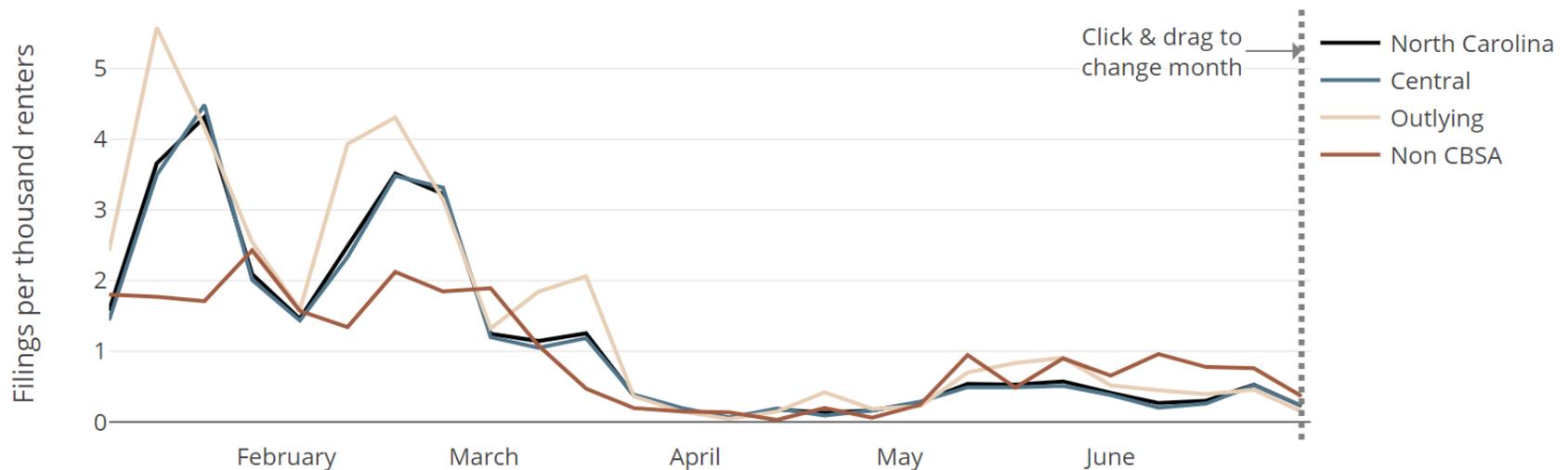
Rate ▼

by

Central/outlying counties ▼

Filter to categories

Rate of eviction filings from January to June 2020



Example: Infection Rates

Daily change

New cases ▾



United States ▾

North Carolina ▾

30 days ▾



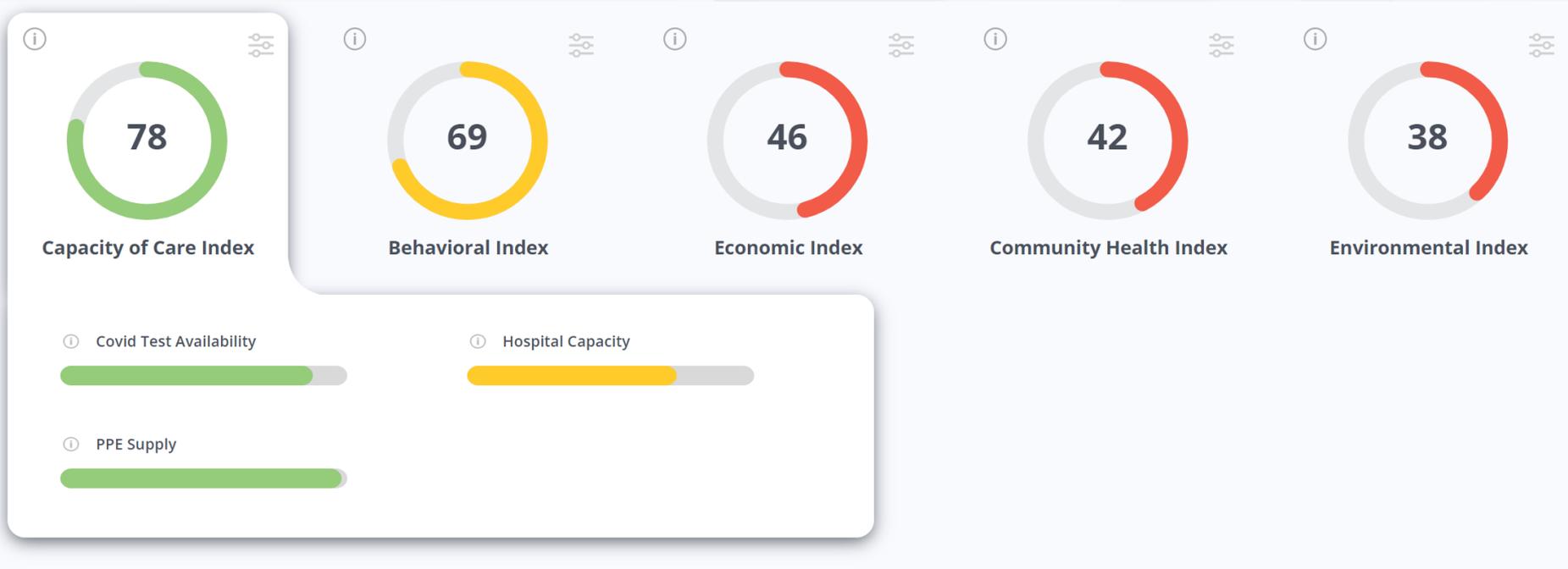
Each day shows new cases reported since the previous day · Updated less than 12 hours ago ·
Source: [The New York Times](#) · [About this data](#)

Analysis: Goals And Targets

Compare recovery with set goals

- Mandated by legislature, budgeting guidelines, industry standards, internal process
- Did we meet the mandated expectations?
- Example: Confidence score
- Example: Capacity, behavior, economic indices

Example: Confidence Indices



Example: Confidence Score



Search [Redacted] County

Sign In



NC



Scorecard



Simulator



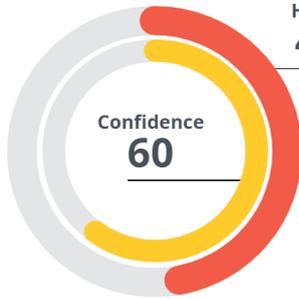
Contact Us

Scorecard :: [Redacted] County

Last Updated: December 9, 2020

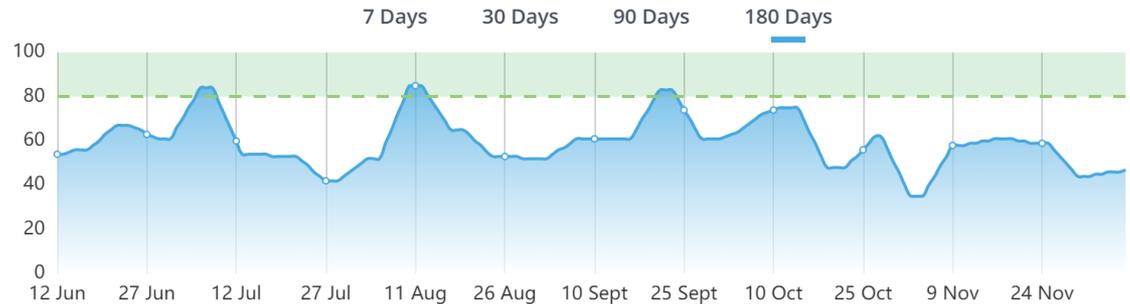
Help

Overall County Score



Health
47

Confidence Score ▾



Analysis: Benchmarking

Compare economic recovery with other comparable entities

- Understand our place in the region
- How well are we doing compared to our peers?
- Example: Compare COVID-19 trends in Pender with Onslow County
- Example: Compare Crime per 100k in Asheville with
 - Hendersonville (because of geographic proximity)
 - Gastonia (because of similar size and crime rate)
 - Apex (because of low crime rates)

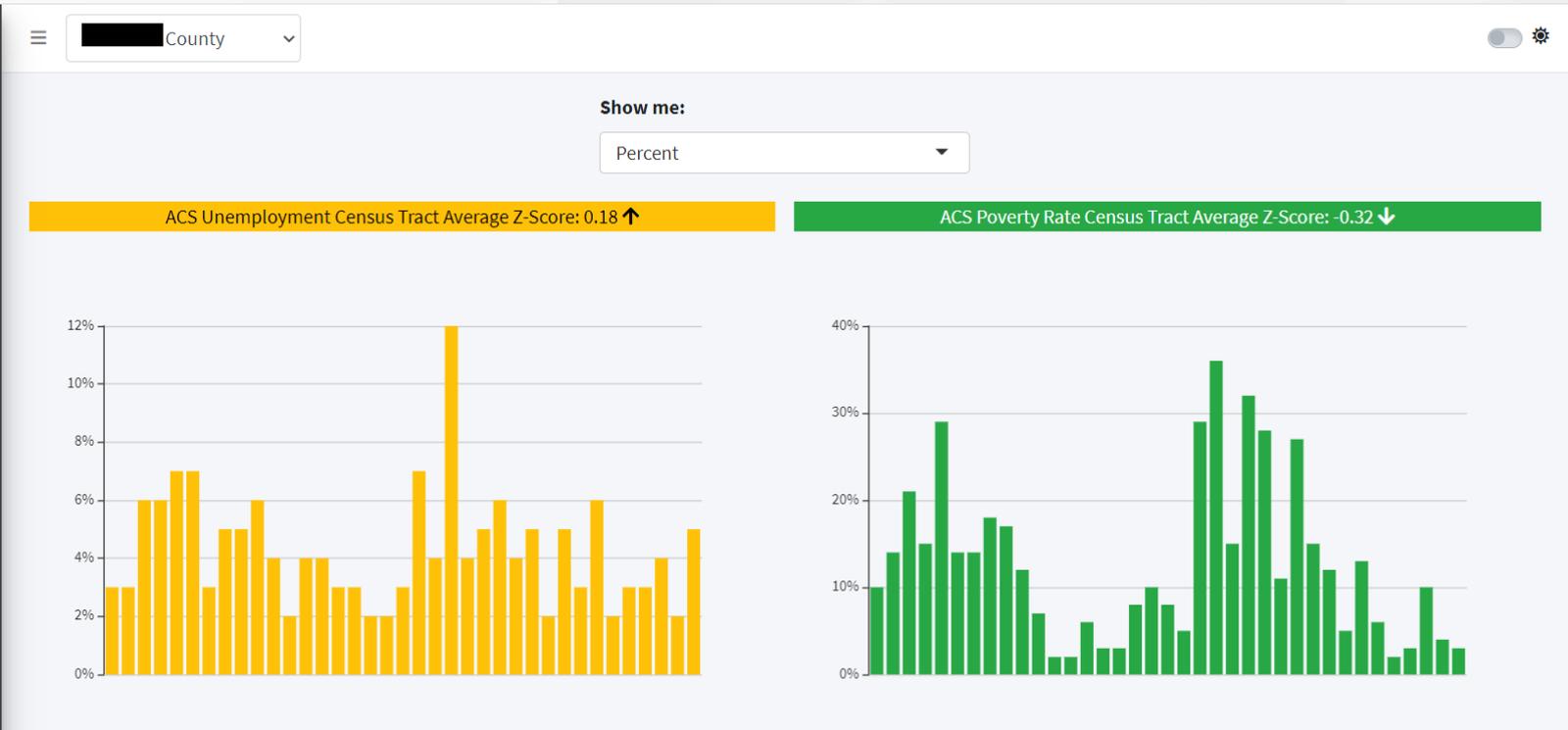
Example: Unemployment COVID Composite Tool

Composite Layers

- Community Resilience
- Financial Support
- Real-Time Metrics

Composite Map

Map



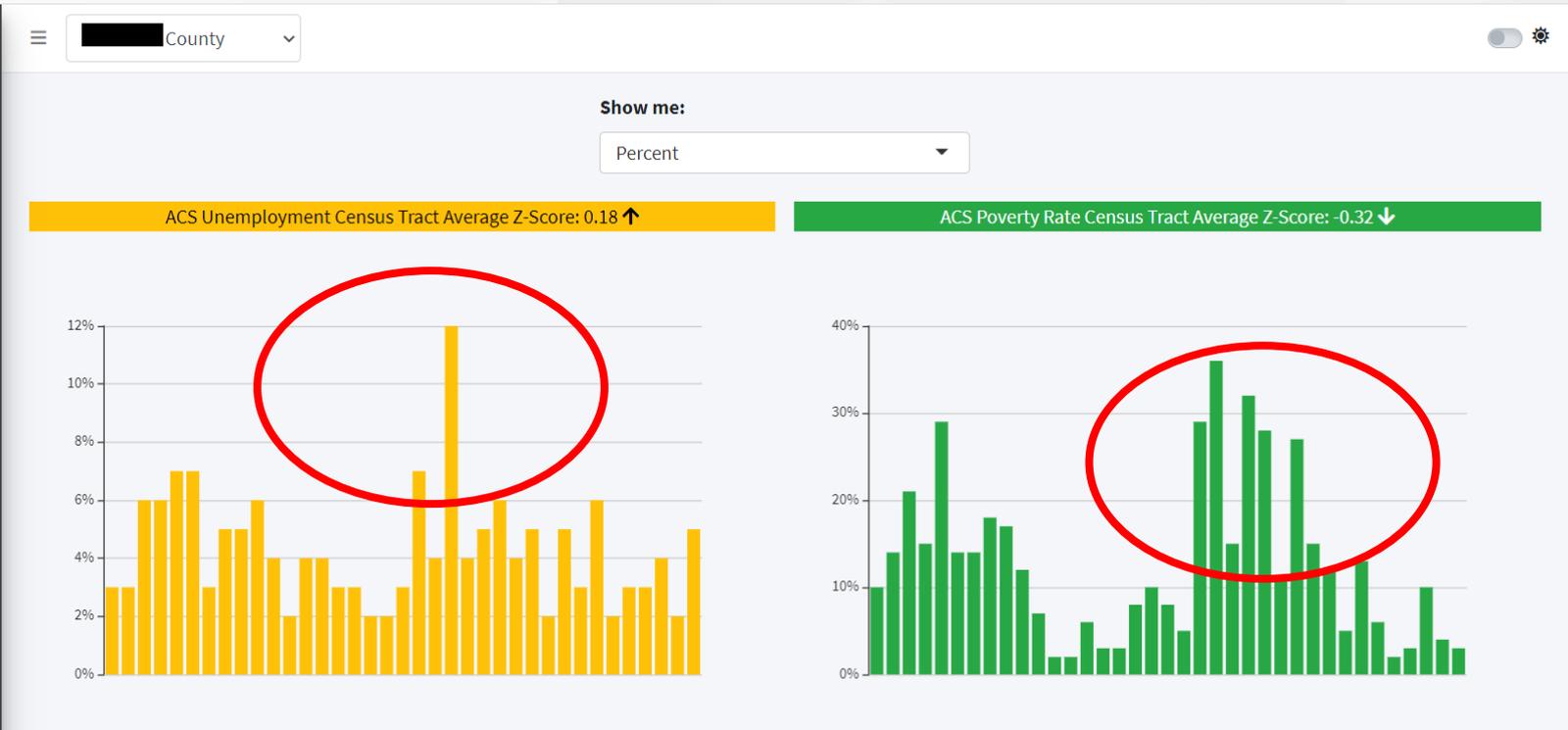
UNEMPLOYMENT

POVERTY

Example: Unemployment COVID Composite Tool

Composite Layers

- Community Resilience
- Financial Support
- Real-Time Metrics
- Composite Map
- Map



UNEMPLOYMENT

POVERTY

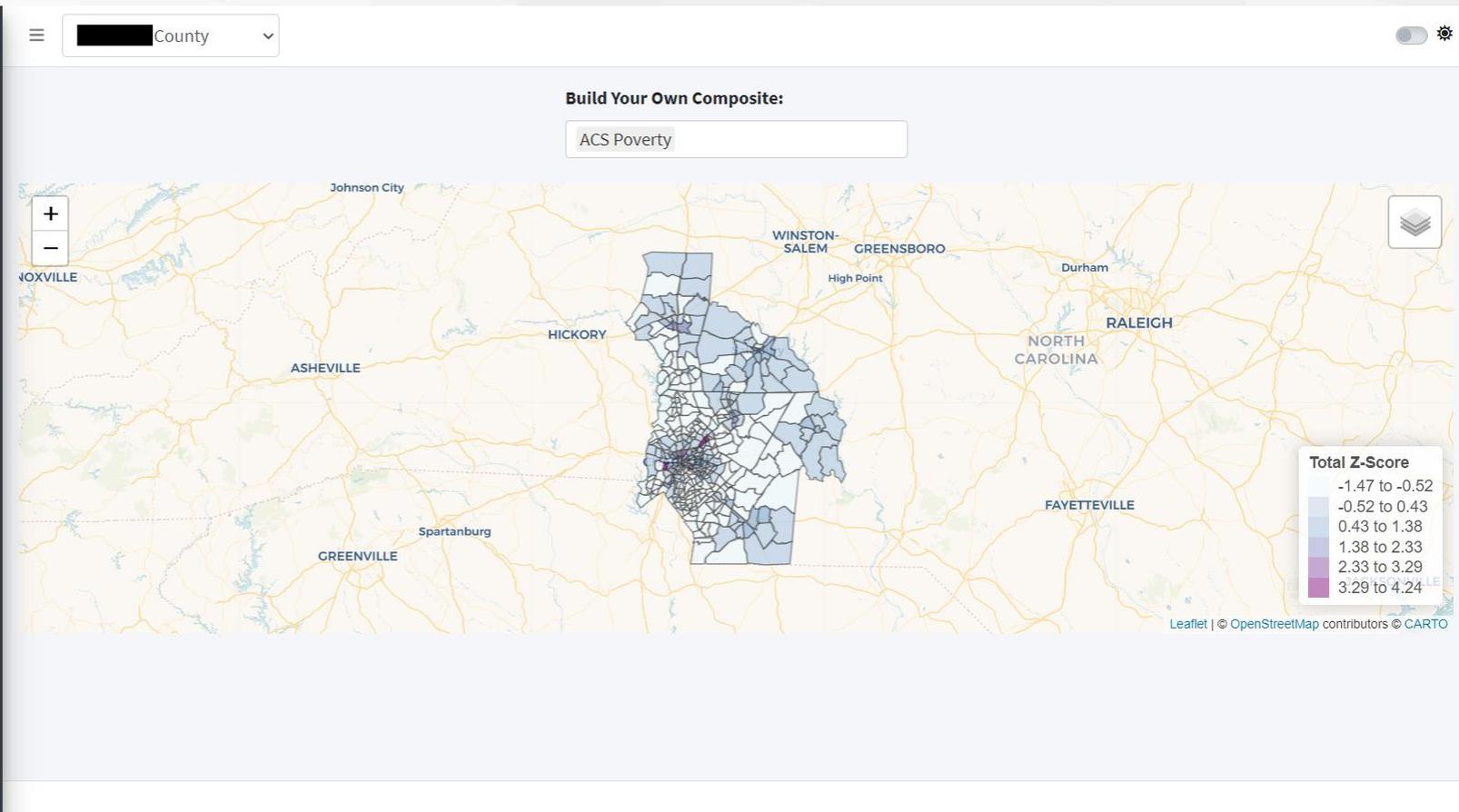
Example: Poverty Rate COVID Composite Tool

Composite Layers

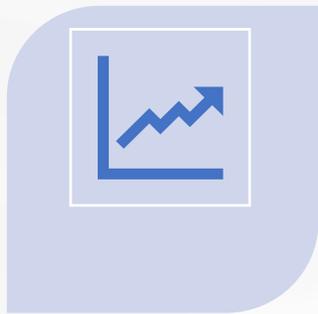
- Community Resilience
- Financial Support
- Real-Time Metrics

Composite Map

- Map



Analysis



PAST
PERFORMANCE

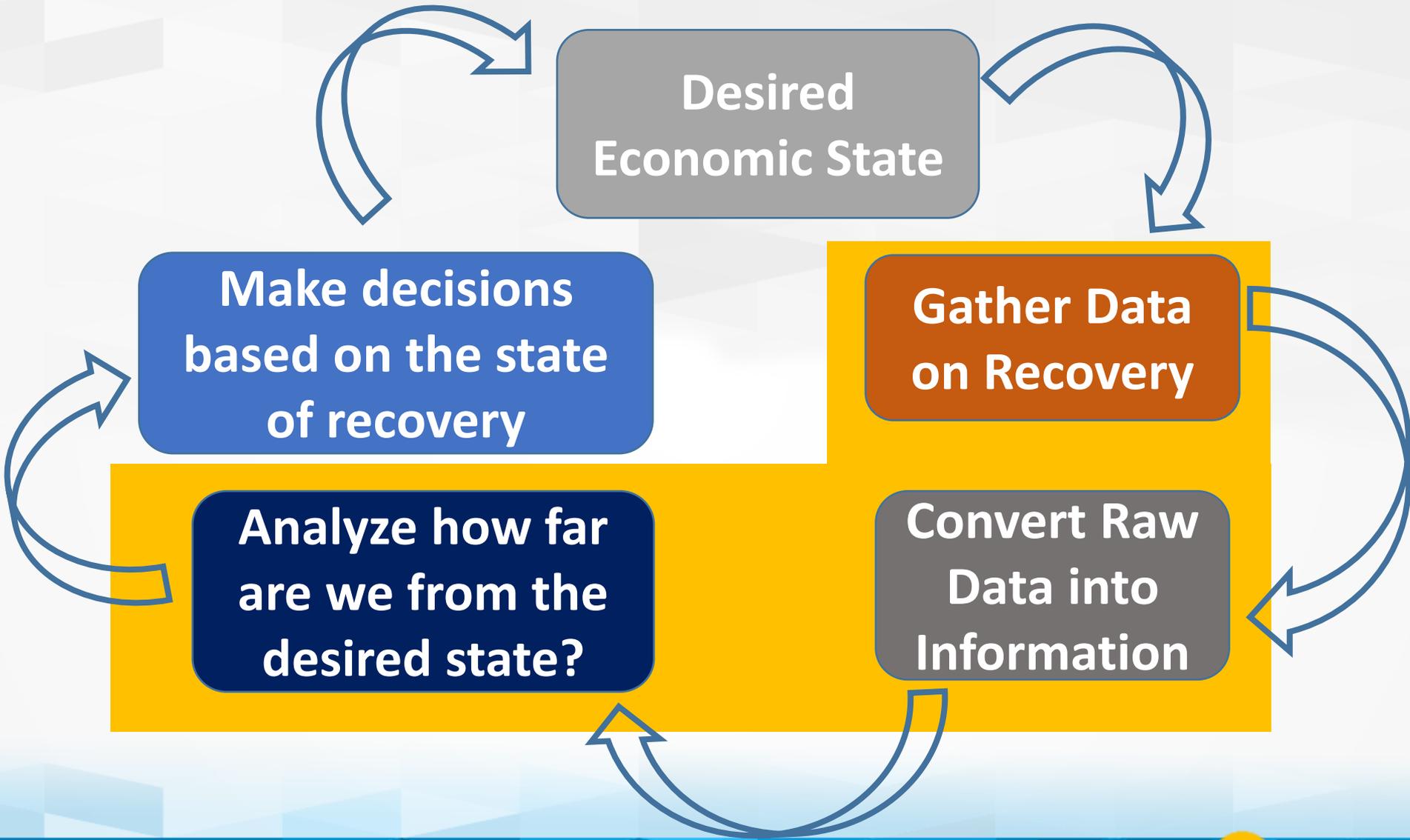


TARGETS



BENCHMARKING

Decision-making cycle



Decision making



Making strategic decisions based on the analysis



Going back to the strategic plan to figure out what worked



What strategic alternatives should be strengthened or discontinued



What can we do differently to get better results?

Poll

Which comparison methodologies are used in your organization?

- Past performance
- Set targets
- Peers

Selected References

- Ammons, D. (2020). Performance Measurement for Managing Local Government.
- Behn, R. D. (2003). Why measure performance? Different purposes require different measures. *Public administration review*, 63(5), 586-606.
- Moynihan, D. P. (2008). *The dynamics of performance management: Constructing information and reform*. Georgetown University Press.
- Pasha, O., Kroll, A., & Ash, M. (2018, July). Assessing Police Performance Systems: The Impact of CompStat on Crime. In *Academy of Management Proceedings* (Vol. 2018, No. 1, p. 15169). Briarcliff Manor, NY 10510: Academy of Management.
- Poister, T. H. (2016). *Measuring performance in public and nonprofit organizations*. John Wiley & Sons.

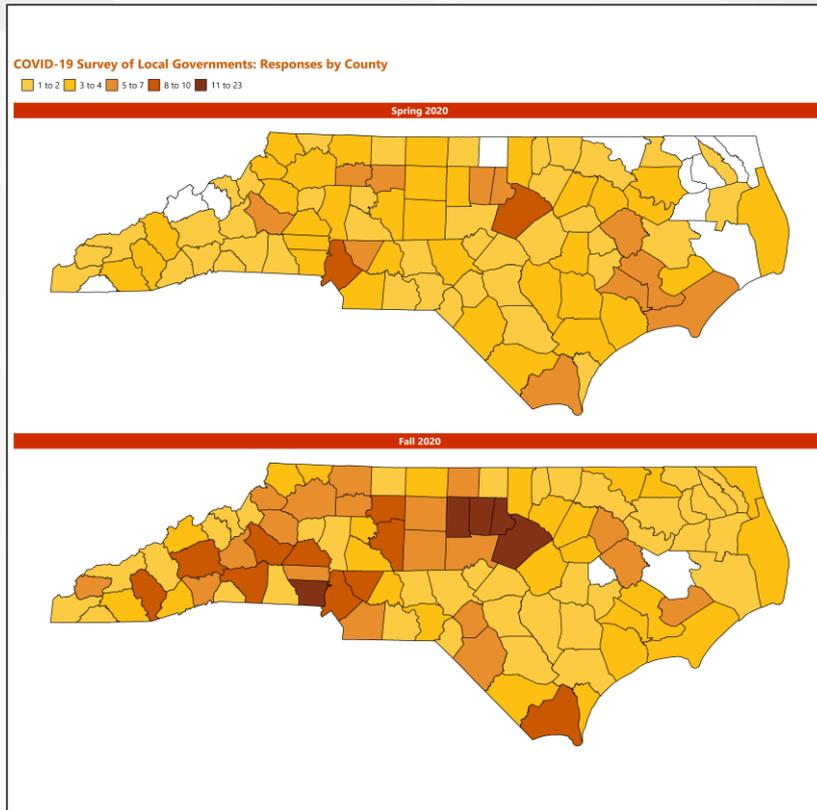
What everyone should know from the Fall Survey of Local Governments



Anita Brown-Graham

Director, ncIMPACT Initiative
Professor of Public Law and Government
School of Government
University of North Carolina at Chapel Hill

Survey Coverage



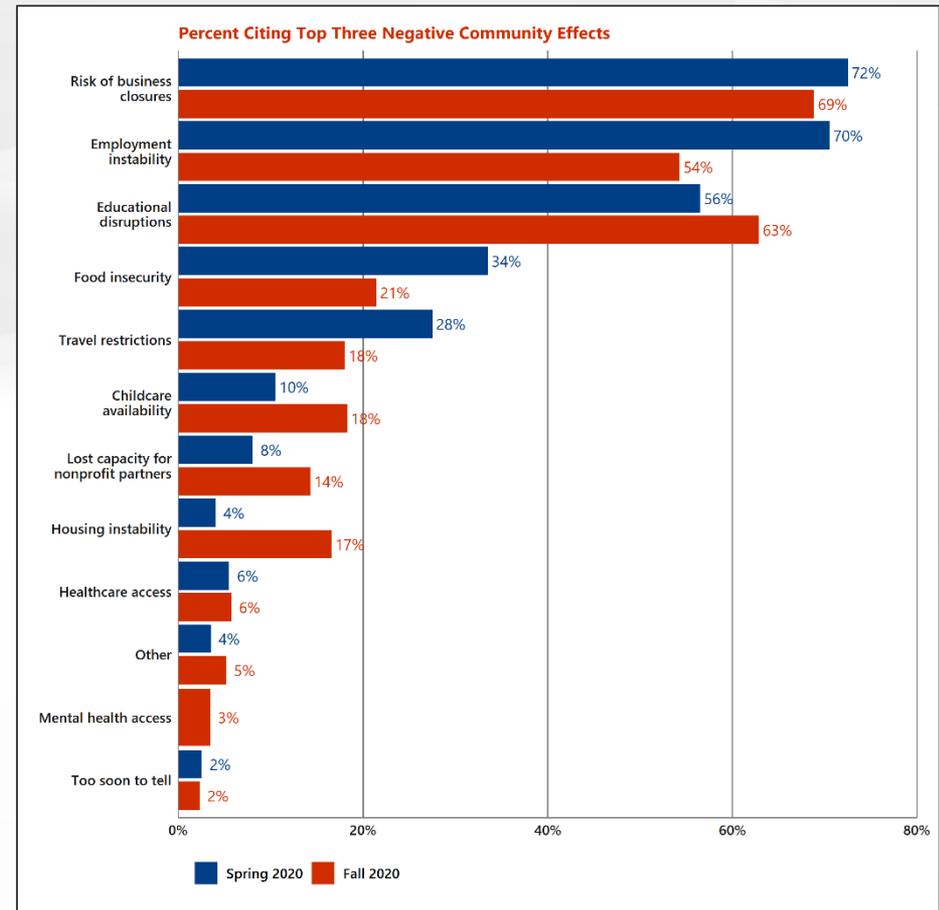
- Fall survey covered 98 out of 100 counties with either a county or municipal government response. 67 percent of responses came from municipal government while 33 percent came from county government.

- We collected responses from 70 county governments (70 percent) and 172 municipal governments (31 percent).

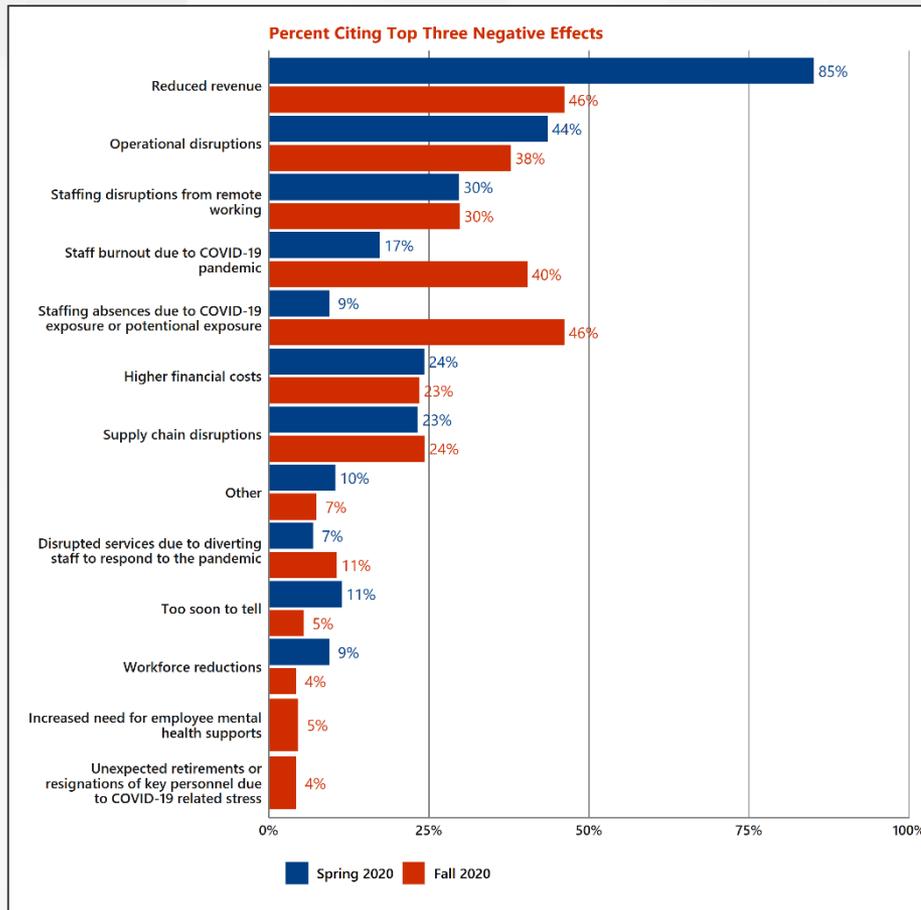
Negative Community Impacts

From our spring survey to our fall survey, for top three negative community impacts, the percentage of respondents citing:

1. Employment Instability decreased by 16 percentage points
2. Housing Instability increased by 13 percentage points
3. Food Insecurity decreased by 13 percentage points
4. Travel Restrictions decreased by 10 percentage points



Negative Local Government Impacts



From our spring survey to our fall survey, for top three negative local government impacts, the percentage of respondents citing:

1. Reduced Revenue decreased by 39 percentage points
2. Staffing Absences Due to COVID-19 Exposure or Potential Exposure increased by 37 percentage points
3. Staff Burnout Due to the COVID-19 Pandemic increased by 23 percentage points

Positive Impact Themes

Community

- Community Unity
- Tourism and Occupied Rental Properties
- Service Transitions and Changes to Operations That May Be Long-lasting
- Societal Shifts such as Recognition of Underlying Issues Like Broadband Access

Local Government

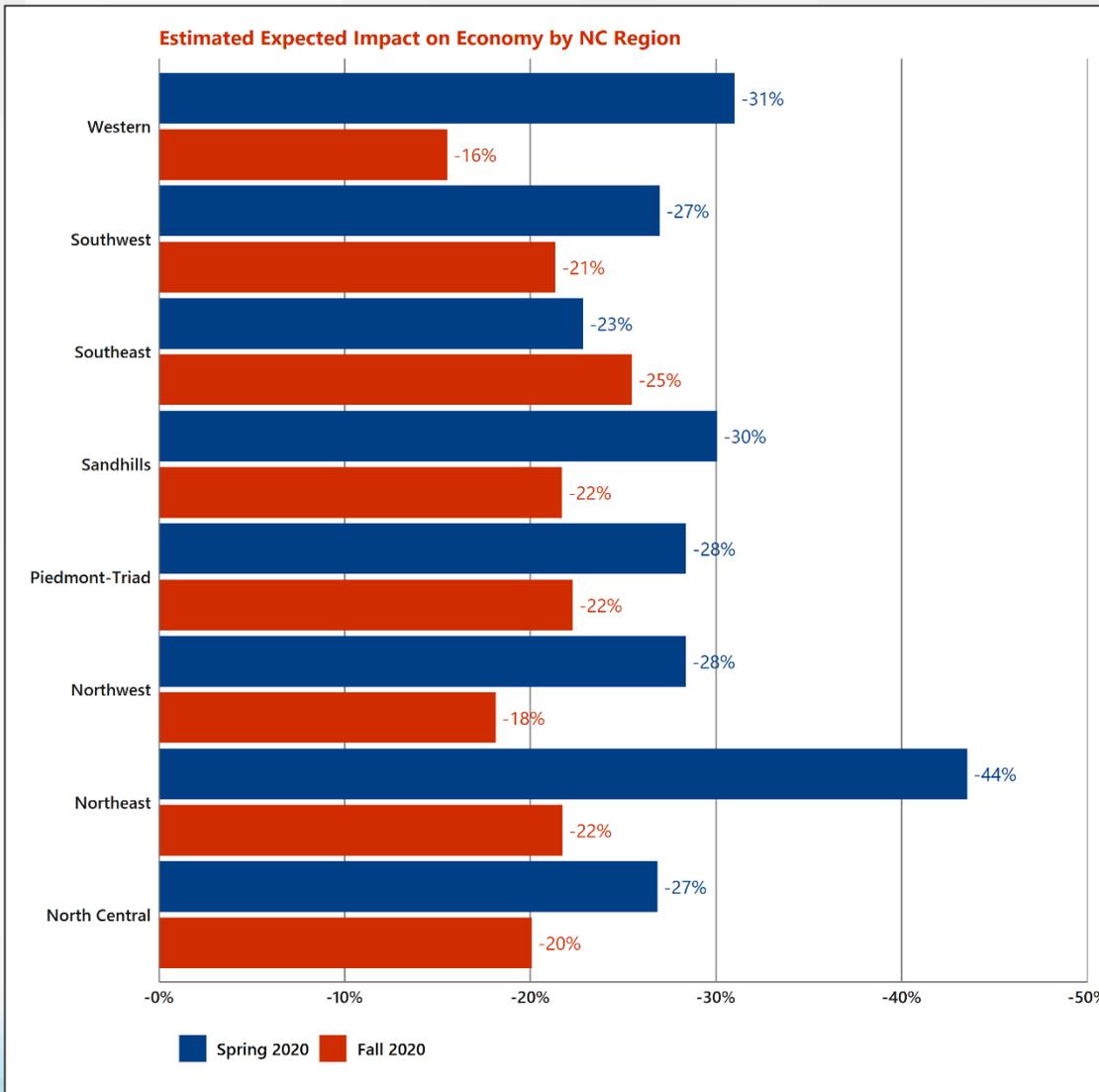
- Benefits Of Remote Work
- Changes to Service Delivery
- Hard Work and Resilience
- Improved Revenues
- Opportunity for Change
- Improvements to Emergency Preparedness

Poll

Of the positive community impacts, which resonates most with your experience?

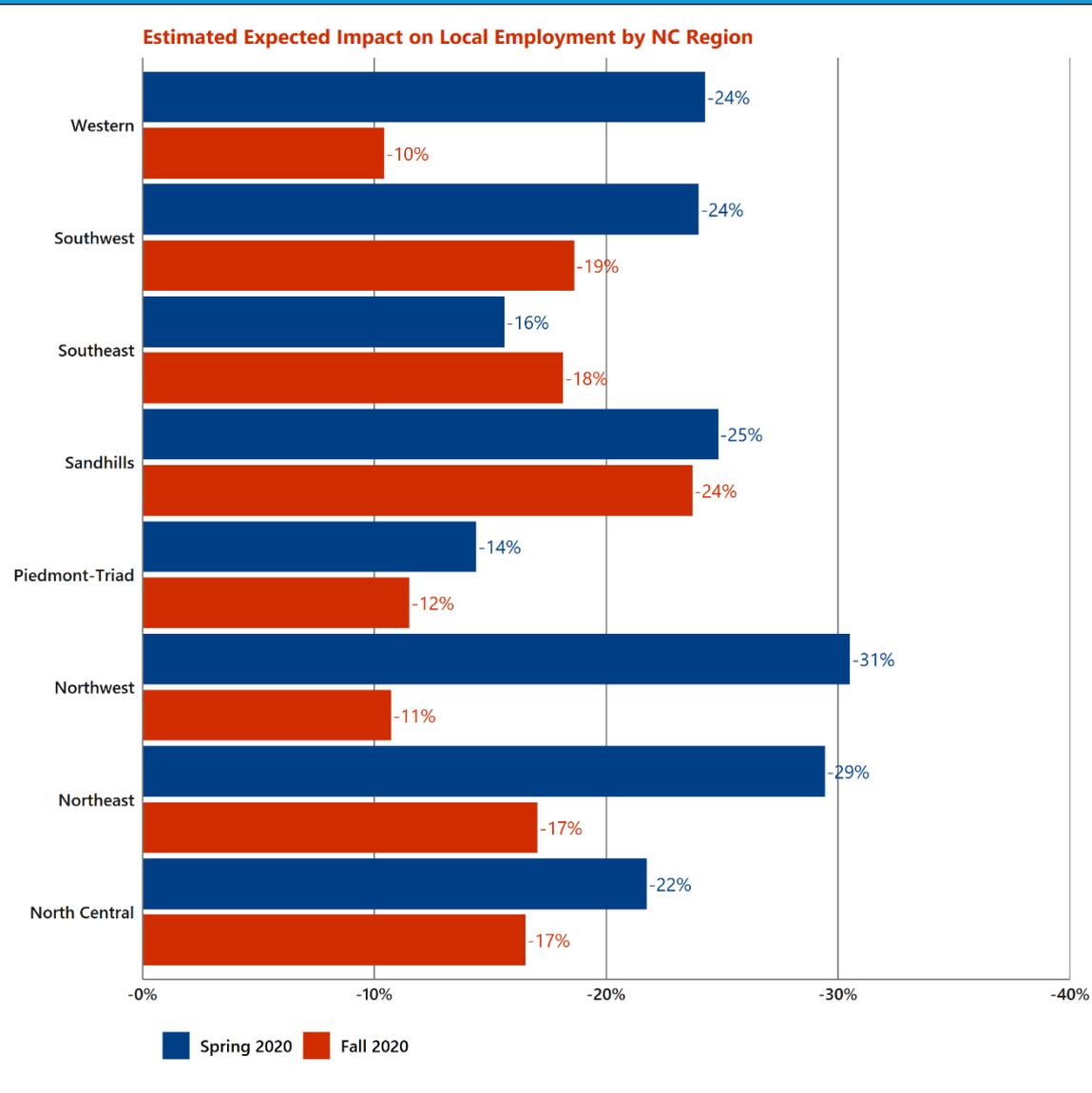
- Community Unity
- Tourism and Occupied Rental Properties
- Service Transitions and Changes to Operations That May Be Long-lasting
- Societal Shifts such as Recognition of Underlying Issues Like Broadband Access

Optimism – Expected Impact on Local Economy by Region

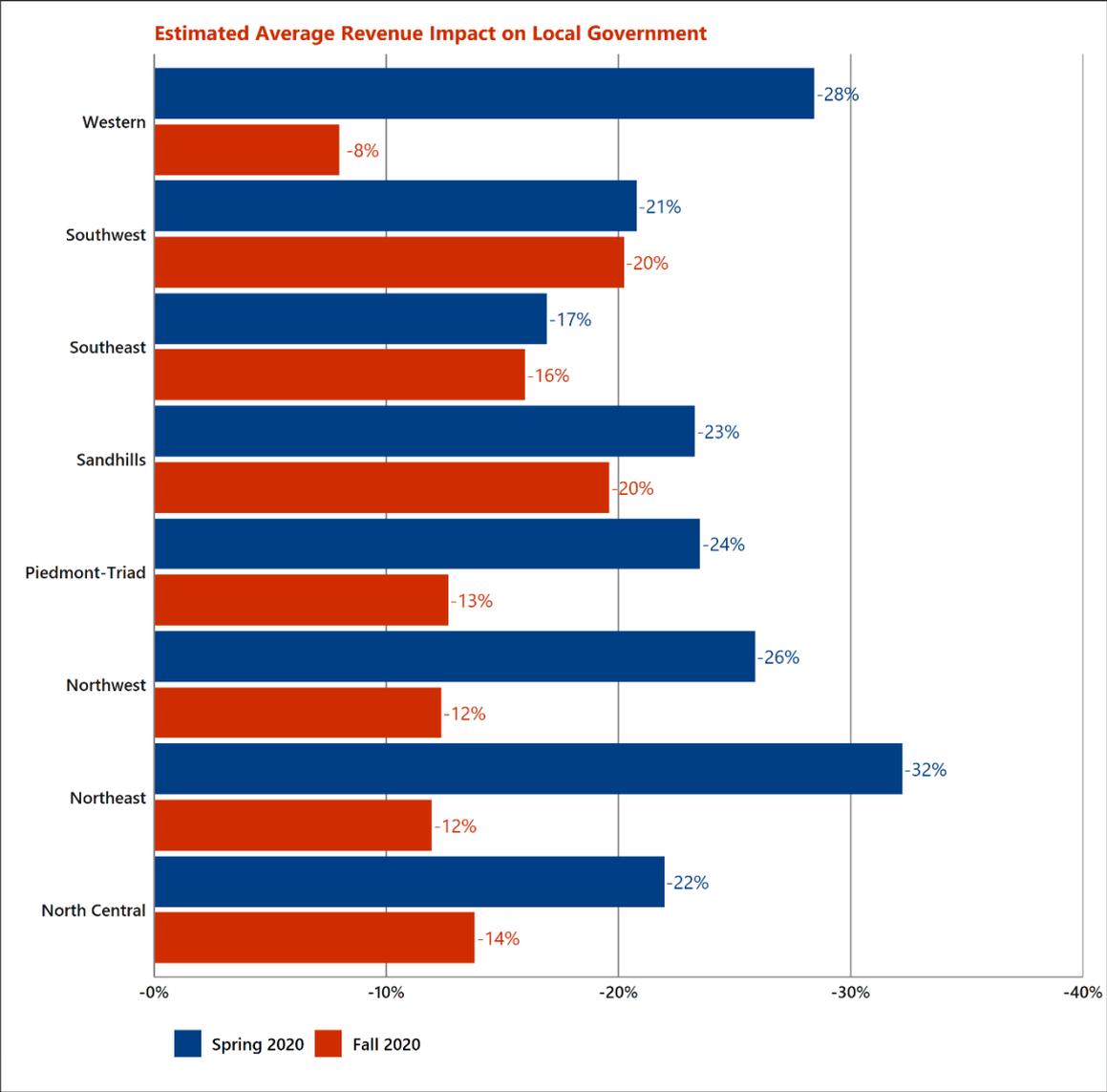


For impact on local economy, local workforce, and local government revenue, respondents appear much more optimistic about potential impacts over next 90 days.

Optimism – Expected Impact on Local Employment by Region



Optimism – Expected Impact on Average Local Government Revenue



Next Steps

30-minute Post-Session Q&A with all presenters

Webinar Evaluation Survey – only 5 questions

Link in chat box & by email

Visit project page for updates: go.unc.edu/KeystoRecovery

Case studies, Data Analysis, Resources, and more

Stay Connected

Email: ncIMPACT@unc.edu

Twitter: @ncIMPACTsog and @NCGrowth

Facebook: NCImpact Initiative and NCGrowth