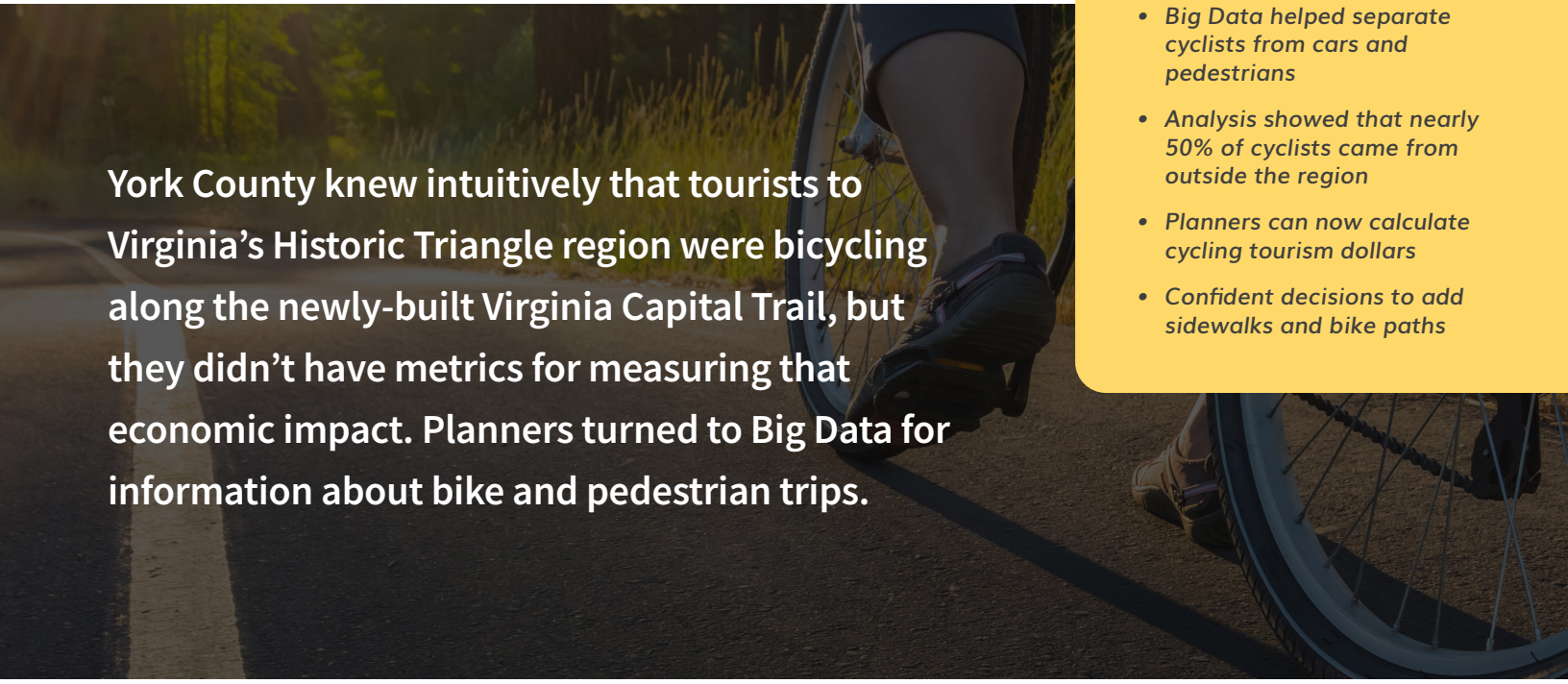
Virginia Bike Tourism: Measuring Cycling's Economic Impact

EXECUTIVE SUMMARY

Officials guessed that bicycling tourists had economic impact, but needed hard data to guide investment planning.

- *Big Data helped separate cyclists from cars and pedestrians*
- *Analysis showed that nearly 50% of cyclists came from outside the region*
- *Planners can now calculate cycling tourism dollars*
- *Confident decisions to add sidewalks and bike paths*



York County knew intuitively that tourists to Virginia's Historic Triangle region were bicycling along the newly-built Virginia Capital Trail, but they didn't have metrics for measuring that economic impact. Planners turned to Big Data for information about bike and pedestrian trips.

Mission: Steering Committee Needed Accurate Bike Data

The York 2040 Steering Committee included representatives from Williamsburg, York County, Hampton and Virginia Beach, working on a comprehensive transportation plan required by Virginia to be reviewed every five years.

Committee members were considering adding more sidewalks and bicycle paths in the localities to provide greater safety and ease of access. But officials needed more information about the potential value of such investments.

The Hampton Roads Transportation Planning Organization (HRTPO) created a study asking a critical question: What portion of Virginia Capital Trail visitors bring in money from outside the region?

> "This is a very powerful tool because it lets us know where people are coming from and going to. We found that half the people are not from this area, and so they're bringing money from outside."
>
> ROBERT CASE
> Chief Transportation Engineer at HRTPO

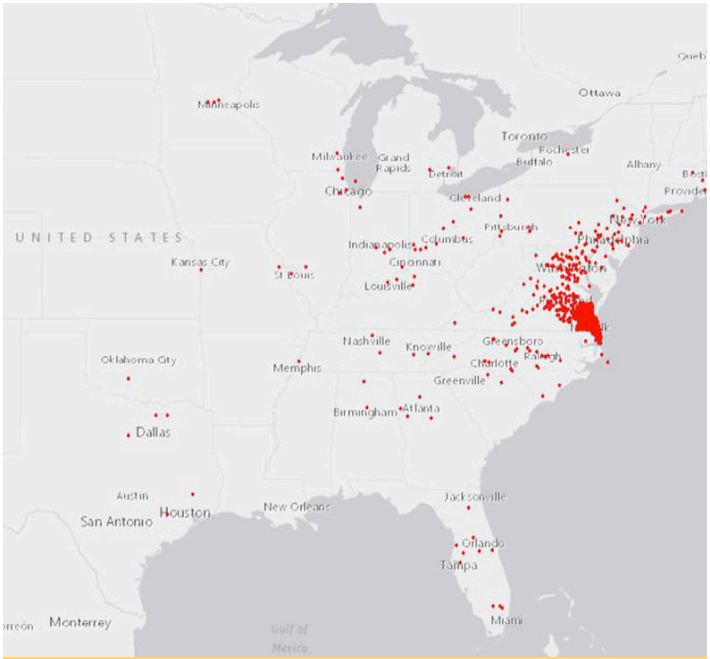
Analysis: How Many Cyclists Are Visitors?

HRTPO chief transportation engineer Robert Case used StreetLight InSight® to create a Home and Work Locations analysis, focusing on cyclists using the Virginia Capital Trail.

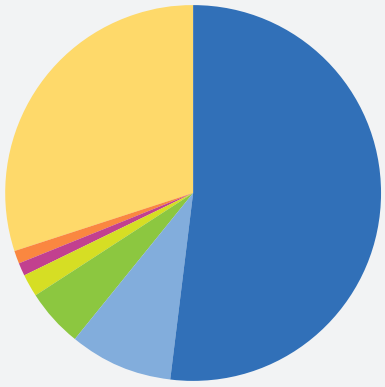
By marking the gazebo at the trailhead – a location where cyclists often gather to begin their journey, or pause at the journey's end – Case was able to analyze the inferred home locations of those cyclists whose journeys began or ended at the gazebo.

The analysis drew from *StreetLight InSight*'s database of aggregated location "pings" collected via apps that use location-based services (LBS) installed on mobile devices. The proprietary algorithm can infer home locations (within a one-kilometer grid) for those devices.

Case's analysis revealed that about half of the devices that pinged at the gazebo did not "live" in the area.



Trail Visitor Data Visualization



- 52% Virginia Beach-Northfolk-Newport News, VA-NC
- 9% Richmond, VA
- 5% Washington-Arlington-Alexandria, DC-VA-MD-WV
- 2% New York-Northern New Jersey-Long Island, NY-NJ-PA
- 1% Philadelphia-Camden-Wilmington, PA-NJ-DE-MD
- 1% Baltimore-Towson, MD
- 30% All Other Areas

Home Locations of Trail Visitors

Results: Constituents Get More Involved

Committee members got the data they needed, and HRTPO plans a future survey to calculate local spending by Virginia Capital Trail visitors. The survey cost will be based on the number of days required to collect a statistically significant number of respondents, which is a function of what percentage of users are visitors. Because planners now know that percentage, they will be able to estimate the survey expense.

In addition, the cycling report caught the eye of local media, calling widespread community attention to the planning committee's work.

Community engagement is critical, as the committee plans to collaborate with localities to create public input campaigns. HRTPO plans to prioritize projects using a score based on feedback and need.

> **"We wanted to make sure that we are accessible to all kinds of users."**
>
> STEVE LAMBERT, Transportation Planner at HRTPO