MTI Research Snaps:

# From White Lines to Green Lanes, How does Level of Traffic Stress (LTS) Do against a Ride Feedback App?

Presented by

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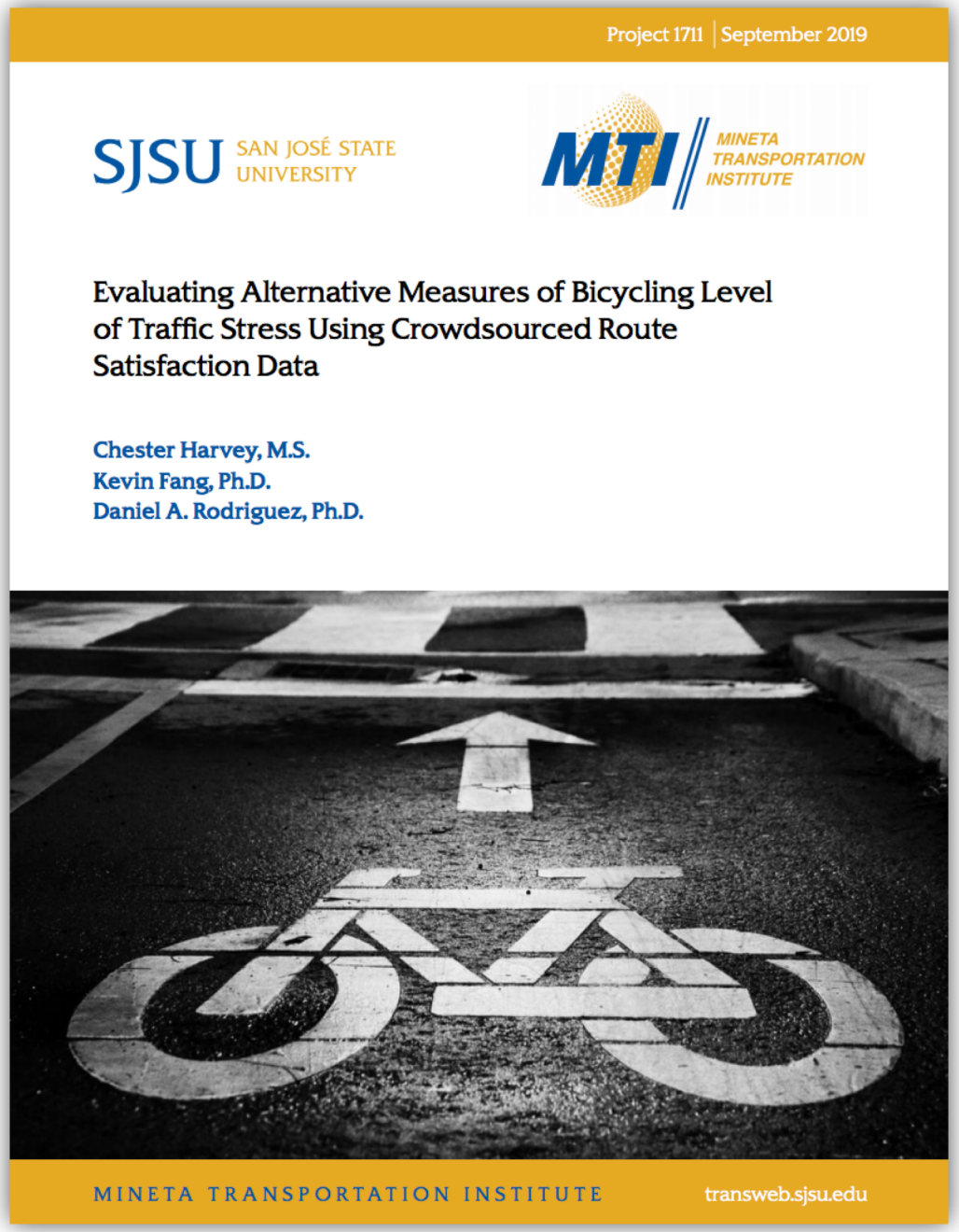


Access the full research report at http://transweb.sjsu.edu/research/1711-Bicycle-Level-of-Stress-Crowdsourced-Route-Satisfaction

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# Levels of Traffic Stress

**LTS 1**
*Separated bike lane*

**LTS 2**
*Buffered bike lane on a calm street*

**LTS 3**
*Narrow bike lane or shoulder on a busy street*

**LTS 4**
*No bike lane on a busy street*

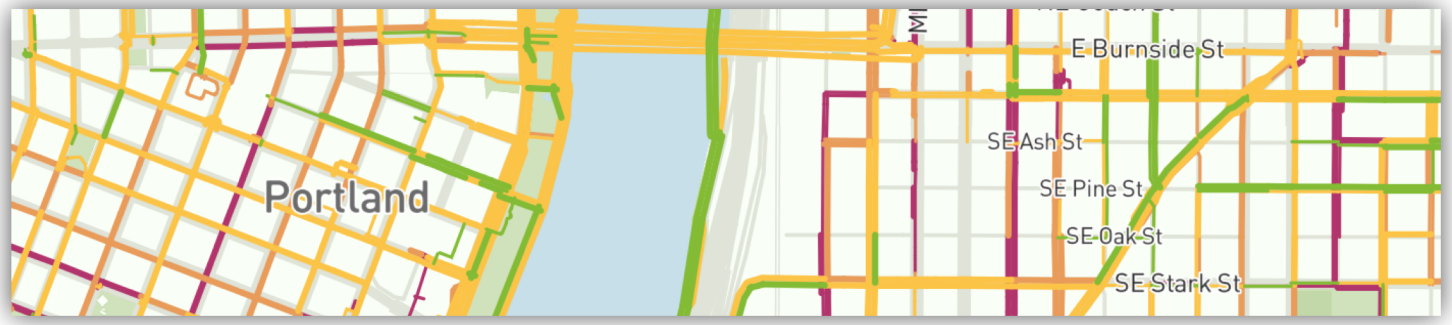
Adapted from City of Bend, OR

| Author(s) | Abbreviated Name | Year | Input Variables |
|---|---|---|---|
| Conveyal[2] | Conveyal | 2015 | 4 |
| Furth[3] | Furth | 2017 | 6 |
| Lowry, Furth, and Hadden-Loh[4] | Lowry | 2016 | 4 |
| Mekuria, Furth, and Nixon[5] | Mekuria | 2012 | 18 |
| Montgomery County, Maryland[6] | Montgomery | 2017 | 12 |
| Oregon Department of Transportation[7] | ODoT | 2017 | 15 |
| People For Bikes[8] | PFB | 2017 | 6 |

# Key Questions

- Do different LTS methods yield comparable results?

- Does LTS reflect how bicyclists actually feel?

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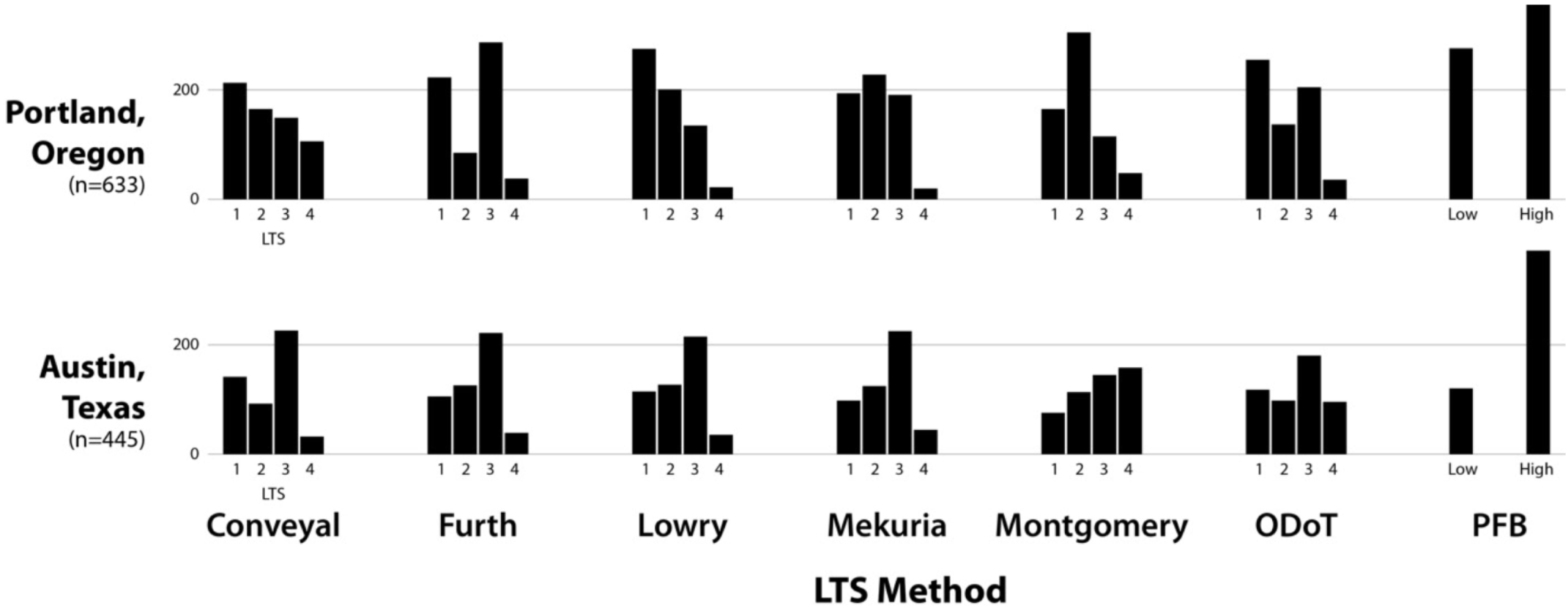
# Differences Between LTS Methods



| | |
|---|---|
| Conveyal | LTS 4 |
| Furth | LTS 3 |
| Lowry | LTS 1 |
| Mekuria | LTS 1 |
| Montgomery | LTS 2 |
| ODoT | LTS 1 |
| PFB | High |


NW Gilson St Between 19th Ave and 18th Ave in Portland (source: Google)

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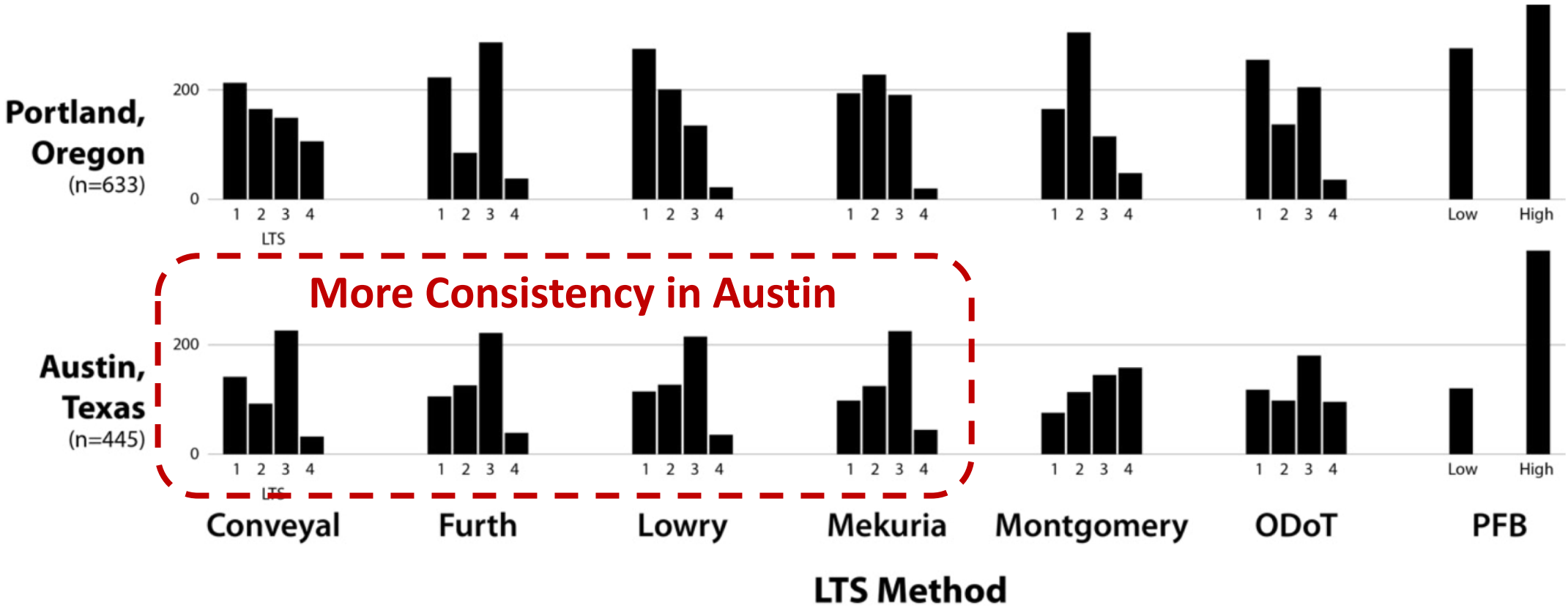
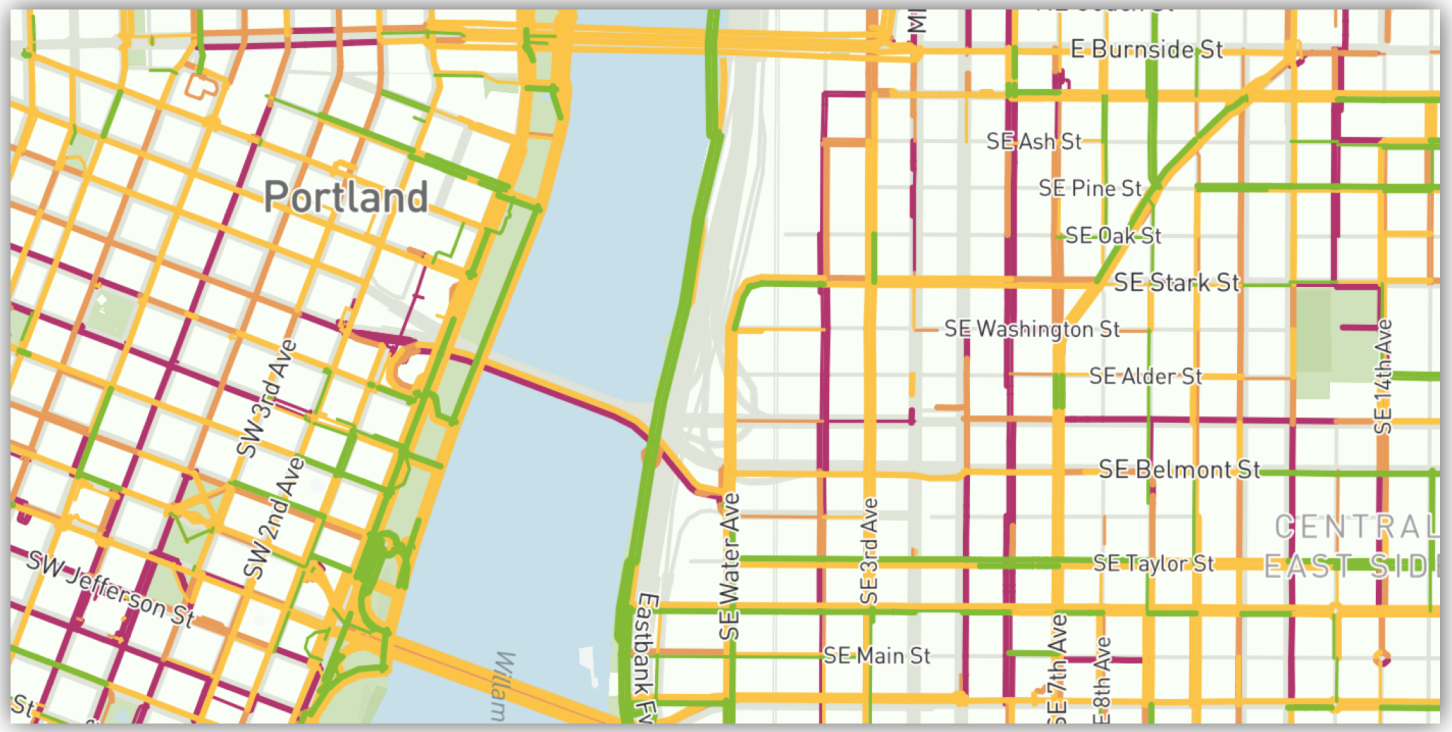
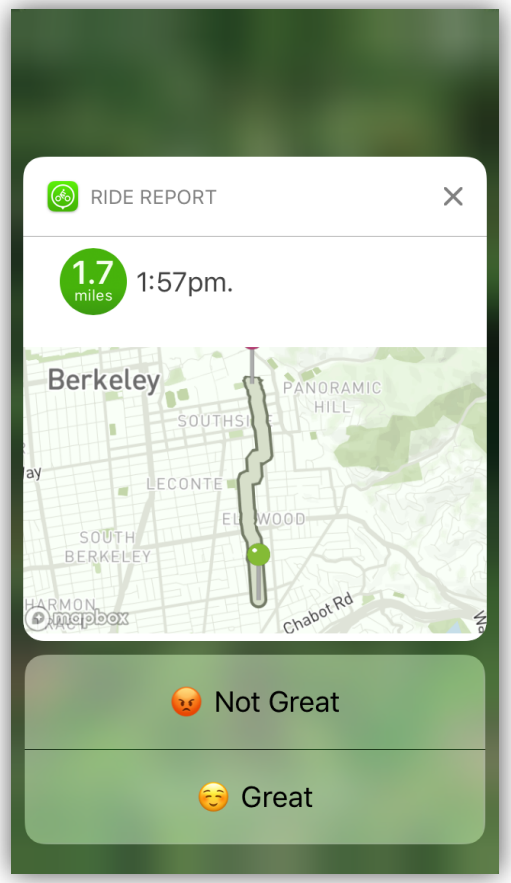
# Differences Between LTS Methods



# LTS vs. Ride Report

Ride Report

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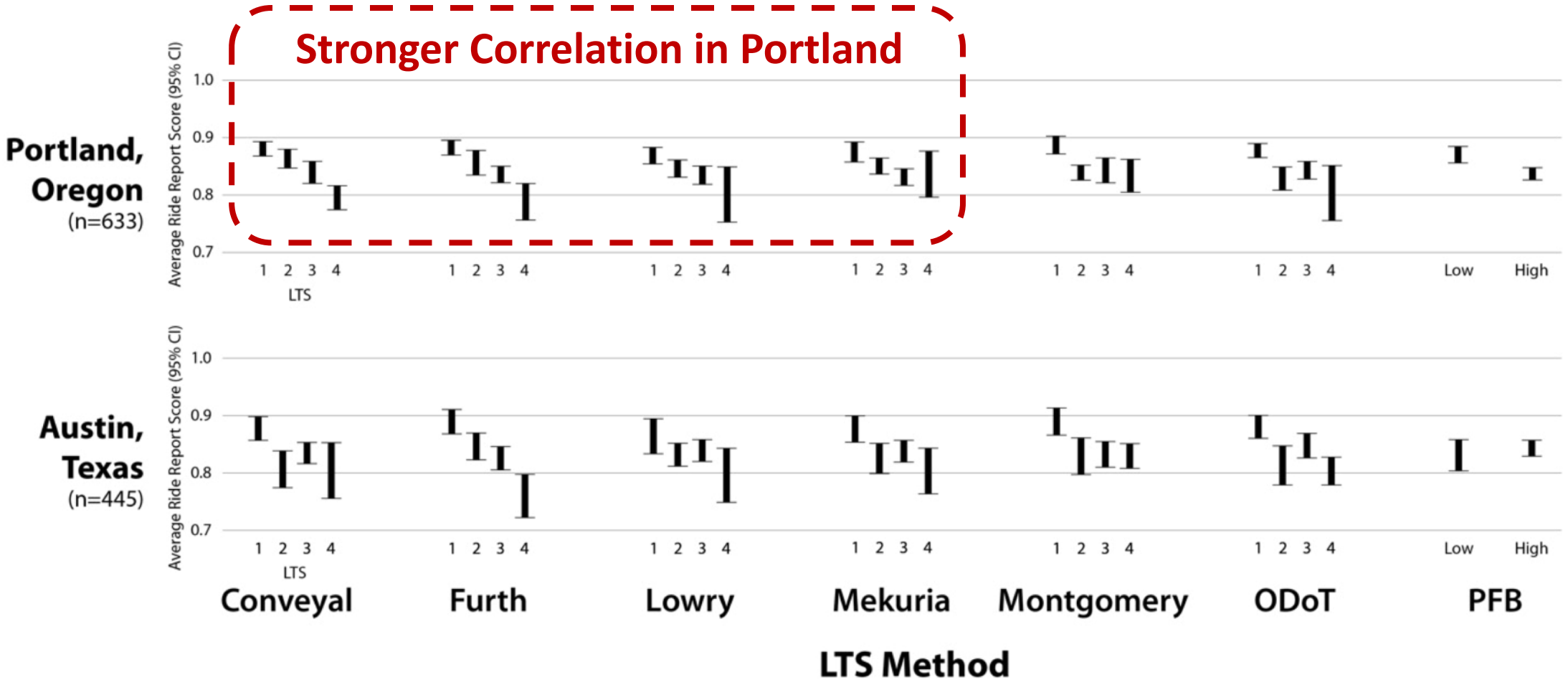
# LTS vs. Ride Report



# LTS vs. Ride Report

**Stronger correlations among traditionally underrepresented cyclists**

- Trips to/from disadvantaged communities
- Shorter trips
- Midday trips
- Slower cyclists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# Key Takeaways

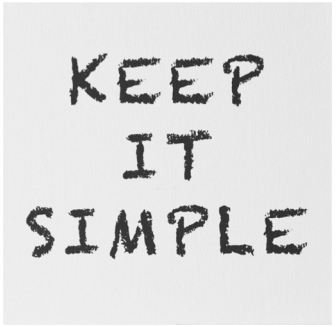
## $LTS_a \neq LTS_b$

- Worth specifying WHICH method you're using

  e.g.: "…LTS analysis using the Mekuria LTS method…"

## LTS is fairly representative of perceptions

- Especially among traditionally underrepresented cyclists




## Consider simple(r) methods

e.g.: Conveyal, Furth ("LTS 2.0"), Lowry

- Fewer data requirements
- Well-correlated with cyclists' perceptions

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# Thank you for joining us for:

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Research Snaps

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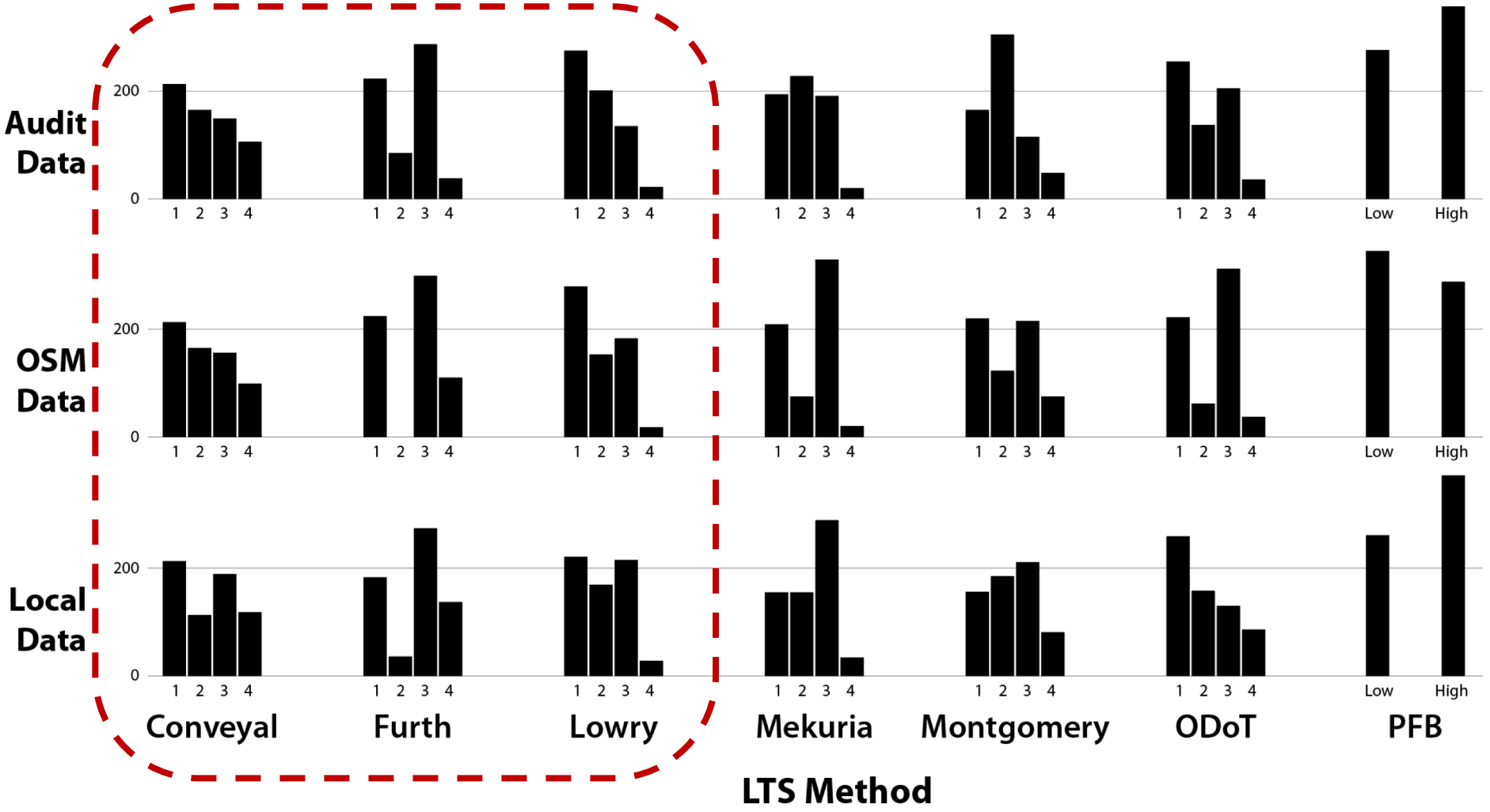
# Differences Between Data Sources




**Simpler Methods Less Sensitive to Data Differences**

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