



Research Stage 1 Problem Statement

Number 26-62 – “Performance Measures to Track and Monitor ODOT Equity Progress”

1. Concisely describe the **transportation issue** (including problems, improvements, or untested solutions) that Oregon needs to research.

Monitoring equity in transportation requires a robust framework to assess how transportation systems impact different demographic groups and communities. However, implementing practical equity measures that are effective to monitor progress can be difficult for several reasons: a) **Legacy structures:** equity is a relatively new concept and therefore legacy procedures, manuals, and data collection practices have not been conceived or designed taking into account equity considerations; b) **Data gaps:** equity requires data and knowledge about communities, demographic groups, and issues that are usually not reflected in traditional transportation decision-making, policy, processes, planning, design, and construction. To address these challenges, this research aims to develop clear definitions, methods, and metrics of equity that are inclusive of low-income and BIPOC populations. Further, the study will incorporate community engagement, gathering insights directly from these populations through surveys, focus groups, and workshops to ensure that metrics reflect the realities and priorities of those most affected by transportation inequities. By integrating these considerations, the study will offer actionable tools for advancing equity within Oregon’s transportation framework, ensuring relevance to current and future needs through a dynamic and adaptive approach.

2. What **final product or information** needs to be produced to enable this research to be implemented?

This research will focus on the development of metrics, using quantitative and qualitative indicators that encompass various dimensions of transportation equity, such as accessibility, affordability, safety, and environmental justice. These metrics will be designed to complement existing tools like ODOT’s Strategic Equity Index (SEI), leveraging its framework to identify and prioritize areas with the greatest equity needs through more granular and targeted metrics. Additionally, the research will incorporate insights from the Environmental Justice Index (EJI) to measure and address the cumulative impacts of environmental burdens on communities through a transportation equity lens. Specifically, the study will identify regions where environmental and transportation inequities overlap, allowing ODOT to prioritize interventions that improve accessibility, affordability, safety, and environmental justice. Further, to ensure long-term relevance, the research will also develop a dynamic framework that enables periodic updates to the equity metrics, reflecting changes in demographics, economic conditions, and environmental challenges.

The research output will include sets of metrics and measures that can be implemented in the short-term because relevant data is available and/or compiled by other local, state, or federal agencies. These metrics will integrate community input, ensuring that they address the lived experiences and priorities of low-income and BIPOC populations. Another key output will be the identification of data limitations in terms of temporal/spatial granularity, limitations that can hinder the equity monitoring or future developments in terms of equity tracking measures or indexes. The identification of data silos, or fragmented data, within ODOT is another important outcome. For transportation agencies, having areas (regions) or divisions that focus on safety, operations, policy, and construction may have important benefits in terms of focus and

specialization but are problematic in terms of equity that usually cuts across administrative/jurisdictional or modal boundaries. This research will also provide recommendations on how to bridge these silos, ensuring that equity metrics are consistently applied across all divisions and programs.

3. (Optional) Are there any individuals in Oregon who will be instrumental to the success of implementing any solution that is identified by this research? If so, please list them below.

Name	Title	Email	Phone
Matt T. Bagwell	Research Office	Matt.T.BAGWELL@odot.oregon.gov	

4. Decision making lenses

Climate

4f. Will addressing the **transportation issue** identified as a need in Question 1 develop, or validate methods for the estimation, measurement, or monitoring of transportation generated greenhouse gasses (GHG)?

Yes No Unsure

4g. If climate or GHG is not the focus of this **transportation issue** identified in this problem statement, will the research apply a GHG analysis to transportation infrastructure, planning, operations, maintenance, or materials?

Yes No Unsure

4h. Will the addressing the **transportation issue** include development or testing of construction practices, methods, or materials to establish potential reductions in greenhouse gas emissions?

Yes No Unsure

4i. Will the solving the **transportation issue** in question 1 study or support the reduction of vehicle miles traveled and single occupancy vehicle travel or support transition to electric vehicles (or other types of zero emission vehicles) or low-carbon alternative fuels?

Yes No Unsure

4j. Will the solving the **transportation issue** in question 1 lead to work that will support, measure, monitor, transportation system resilience in response to expected climate events, effects, or natural disasters in general?

Yes No Unsure

4k. Will the solving the **transportation issue** in question 1 lead to work that may result in better environmental conditions for wildlife and native vegetation ?

Yes No Unsure

4l. If you answered yes to any of the climate questions above or can provide alternative details related to climate, please provide additional information:

Equity

4a Is the **transportation issue** identified as a need in Question 1 specifically focused on transportation equity?

Yes

No

Unsure

4b If the **transportation issue** is not focused on transportation equity, will the primary topic be assessed for equity benefits or impacts within the research project?

Yes

No

Unsure

4c Is the implementation of potential findings from this research likely to directly involve participation from an identified group that would benefit from an equitable process or outcome?

Yes

No

Unsure

4d Is the intended final product or information expected to support ODOT's equity efforts (Including but not limited to supporting one of the equity related objectives of the [ODOT's Strategic Action Plan](#) or [Oregon Transportation Plan](#)) ?

Yes

No

Unsure

4e If you answered yes to any of the equity questions above or can provide alternative details related to equity, please provide additional information:

The focus of this proposal is on equity and is directly related to one of the priorities of the Oregon Transportation Plan Strategic Action Plan: equity. It is also directly related to the strategic directions of "Social Equity". Without proper monitoring of equity performance measures, it is not possible to: a) identify disparities and inequalities in terms transportation access, affordability, safety, and mobility, b) assess the impact of short, medium, and long-term policies and investments that seek to ameliorate disparities, and c) enhance public trust and engagement in communities that not received adequate attention or funding.

Safety

4m. Will solving the **transportation issue** in question 1 support improving **safety culture** for either transportation workers or the traveling public?

Yes

No

Unsure

4n. Will the solving the **transportation issue** support improving safety through **healthy and livable communities**?

Yes

No

Unsure

4o. Will solving the **transportation issue** support improving safety through using **best available technologies**?

Yes

No

Unsure

4p. Will solving the **transportation issue** support improving safety through **communication and collaboration**?

Yes

No

Unsure

4q. Will the solving the **transportation issue** support improving safety through **investing strategically**?

Yes

No

Unsure

4r. If you answered yes to any of the safety questions above or can provide alternative details related to safety, please provide additional information:

5. Other comments:

ODOT has been a leader in transportation research and innovation. Focusing on transportation equity monitoring is a timely research idea due to the growing awareness and advocacy in relation to social justice issues. Being proactive in designing and collecting data for sensible equity performance metrics will likely have long-term benefits for ODOT and the Oregon transportation system.

This research will be conducted in collaboration with Dr. Miguel Figliozzi, a professor in the Department of Civil and Environmental Engineering at Portland State University.

6. Corresponding Submitter's Contact Information:

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