NEW PAG TECHNOLOGY GUIDES TRANSPORTATION INVESTMENTS

Data Analytics for Regional Mobility Improvements

Disclaimer: For visioning purposes only, document may not reflect current state of project

TUCSON, AZ (Business Wire) May 27, 2021 Pima Association of Governments (PAG) today showed off new technology that enhances decision making for planning future infrastructure and where those investments should be made. The Transportation Investment Analysis (TIA) tool provides data driven insight to compare the impact and benefits of different transportation projects to different areas of the PAG region. TIA- makes it easier for citizens, business owners and other stakeholders to see the return on their tax investments.

Leadership Quote

"I am so excited about the future of the greater Tucson region. With the right investments in our infrastructure there is nowhere we can't go and the new TIA tool will help ensure we use our tax dollars to their fullest potential," said PAG Regional Council Chair, Mayor Ed Honea . "It's always been so hard to understand which projects from so many good ones will advance our region's economic competitiveness. The analytics from TIA are so easy and clear to understand they help make community meetings more informed and productive. Although the data analytics are just one piece of the decision-making process, this high-quality source of information is a helpful guide."

Problem + Opportunity

Transportation infrastructure is essential to the vitality of the region. Roads, bridges, rail lines and transit facilities, airport terminals and other infrastructure all require continual investments to build, expand and maintain. Given that these investments are primarily paid for with limited tax dollars, leaders must make tough decisions about which projects to fund first. It's not always clear which projects or packages of projects will have greater impact on the economic vitality of the region and overall quality of life.

Customer Testimonial

"The Pima Association of Governments investment planning tool has helped our task force prioritize the transportation projects that can better our quality of life in our region," said Yolanda Herrera, long-range transportation plan task force member. "Our task force, assisted by PAG, has collected historical, current, and forecasting data to see how each project would benefit our communities to help determine the regional future we want."

Customer Experience

When developing transportation plans and programs, PAG has more projects looking for investment than the region can possibly fund. PAG goes through a deliberate, multi-month process with a task force, committees and others to review and decide which projects to advance. Utilizing artificial intelligence to sift through mountains of data, the new tool helps decision makers develop plans that will maximize the benefit of the region's transportation investments. With all of the new data and

analytics from the PAG TIA, decision makers have more resources to both make more informed decisions and share them with the public and other community stakeholders.

Call to Action

For more information on PAG's transportation planning process and the new TIA planning tool, please visit www.pag.org/transportation.

Pima Association of Government – Transportation

Frequently Asked Questions (FAQ)

General

1. How will the tool be used?

The Transportation Investment Analysis (TIA) tool will be used in the development of long-range transportation plans to provide data-driven insight. Specifically, the tool will help to compare the potential impacts and benefits of different transportation projects among different areas of the greater Tucson region. This will not only help transportation planners and local officials but will also make it easier for citizens, business owners and other stakeholders to see the return on their tax investments.

2. How will communities benefit from the use of the tool?

Needs on the transportation system far exceed available funding to pay for them, and the recent COVID-19 crisis, for example, is expected to exacerbate the funding gap. This tool is designed to assist communities in prioritizing limited transportation dollars on projects that help to enhance the economic impact to the region.

3. Who will use the tool?

Initially, the tool will be used and tested by transportation planners and others at PAG, the region's metropolitan planning organization, with input from municipalities, tribal governments, Pima County, the state and others. In the future, a public facing tool could be considered so that voters can explore the various projects and their potential impacts and benefits.

4. How often will the tool be used?

Initially, we anticipate that the tool will be used and developed for PAG's next long-range transportation plan update, scheduled to begin in 2021 or 2022. This will beta-test the tool for additional use cases, including the biennial development of PAG's Transportation Improvement Program as well as other regional transportation planning efforts.

5. Can this tool be applied to other use cases?

Potentially, the tool could be applied to other use cases, but it's too early to know. Results of the beta test will help determine how the tool can be applied to other use cases.

Tool development

6. How much will it cost to build and operate the tool?

The costs to build and operate the tool are still being evaluated.

7. Who builds the tool's algorithms?

We anticipate that the tool's algorithms will be developed through collaboration between PAG and the ASU/ASW Smart City Cloud Innovation team.

8. Who determines the algorithm inputs?

For initial tool development and testing, the algorithm inputs will be determined by PAG and the ASU/AWS Smart City Cloud Innovation Center team. However, we anticipate seeking feedback from a broader audience in later stages of the tool's development and use.

9. What will/should be the inputs?

A wide variety of data sources typically used for transportation planning and economic analyses will be used for the algorithm inputs. For example, this may include traffic counts, project cost estimates, data on demographics, wages and occupations, land use and zoning information, and many other inputs.

10. How does the tool interpret the data?

How the tool will interpret the data is still being evaluated.

Accuracy and security

11. How do we validate/trust the results of the tool and security of the data?

Various aspects of the tool will be documented, such as in a reference manual or a methodology report, so that other tool users can independently generate the same results by following the step-by-step procedures. The data will be sourced from government entities as well as from publicly available information gathered by trustworthy sources. Moreover, no data products that include personally identifying information will be used. Standard security practices will be employed to prevent unauthorized access to, and manipulation of, the tool.

12. What QA processes will be in place?

Internal reviews of both inputs and outputs by PAG staff members will help to assure quality.

13. How do you guarantee integrity/validity/accuracy of the systems?

To generate high quality results, only accurate and current data sources will be used. These standards will be considered whenever additional data sources are suggested for inclusion in the tool. Since tools like this can only provide estimates and projections to model reality and cannot represent real world conditions perfectly, it's important to note these limitations when interpreting any of the results.

Miscellaneous

14. Can the data/access be sold?

We anticipate that the tool could be made open source. Additionally, PAG could create a revenue generating model in the future, as appropriate.

15. Will this technology steal jobs?

No. The tool will supplement existing planning and analysis processes and is not intended to replace the role of PAG staff and others. Moreover, the transportation project prioritization generally occurs with input from elected leaders and citizens' committees established by various jurisdictions.

16. What happens if the outputs are not used?

The tool is intended to provide decision support as one input of a multi-step and multi-faceted process. If the outputs are not used, the tool can be considered for the next transportation planning process.

17. What other factors are used to inform transportation investment decisions?

Many factors inform transportation investment decisions. These include public input, jurisdiction needs and priorities, available funding, traffic safety and congestion, air quality, return on investment, and many others. All of these are considered when developing transportation plans and making investment decisions that are approved by elected leaders.