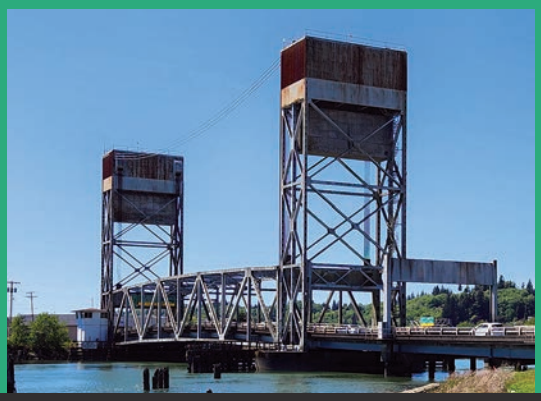
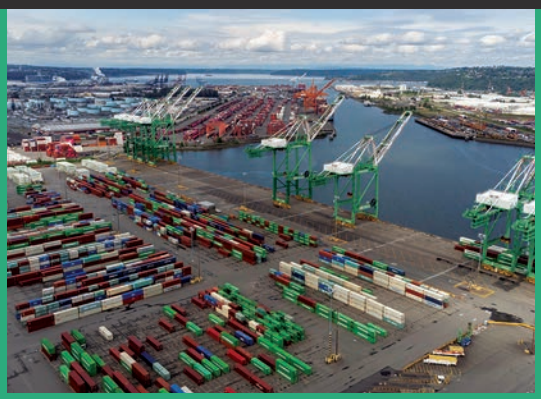


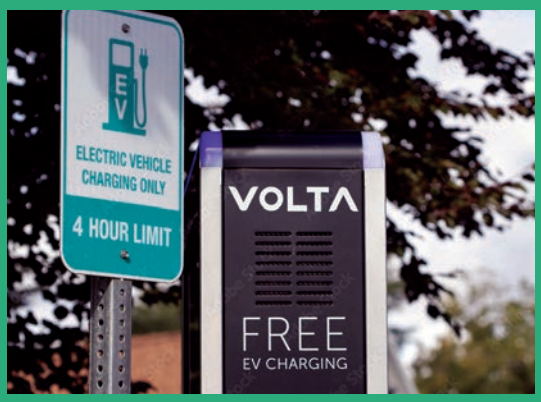


Gridlock 2050

A Call to Action

CHALLENGE SEATTLE | MAY 2026



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Letter from Challenge Seattle's CEO

"The cost of inaction will far exceed the price of smart investments today"

Washington's economy and quality of life depend on a transportation system that works for everyone. It's what gets people to work and school, moves goods across the state and around the world, and connects communities large and small. From airplanes carrying Eastern Washington cherries to overseas markets to buses that take workers to jobs, transportation is the invisible engine that keeps Washington moving.

Over the past 25 years, our state has added more than 2 million people and invested billions in transportation infrastructure. But those investments haven't kept pace with growth. Without bold action now, our system will fall even further behind. By 2050, 1.8 million more people are expected to call Washington home. We must prepare today for the transportation demands of tomorrow.

The lesson is clear: delay doesn't just cost more—it costs us opportunity to good paying jobs, affordable housing, school, and time with family and friends.

Major infrastructure takes time to plan, permit, design, and build. It has taken more than 50 years to plan, get approval, and construct the North-South Spokane Freeway. Projects like the SR 99 tunnel, the SR 520 bridge, and the third runway at Sea-Tac all took more than a decade to deliver. Turning down a Puget Sound regional transit system, as we did in the 1970s, cost decades of progress and billions more to build a similar system decades later in a more developed region. If we want a transportation system that meets the needs of 2050, the time to act is now.

Imagine a future where we have planned for future growth. This will mean getting to work school, or a night out is faster and easier than ever. High-speed, reliable transit will connect communities, roads are safe and well-maintained, hay grown in eastern Washington reaches overseas destinations, and traffic congestion is a problem of the past. A well-integrated system that is easy to use will make it possible for us to enjoy our state's quality of life. Now imagine the opposite: gridlocked highways, strained transit systems, and infrastructure so outdated it holds back economic growth. The choices we make today will define which future we get.

This report lays out a bold but achievable vision: an integrated and financially sustainable statewide transportation system that connects people, communities, and economic opportunity across all modes. This will take planning for the system, agreeing on sustainable funding, and then building for the future.

We hope that it acts as a starting point for strategic collaboration at a time when traditional revenue sources for transportation are not keeping pace with needs. Costs are increasing due to inflation and rapid changes in federal policy. Gas tax revenues are declining. Projects are taking much longer to plan and permit, contributing to a loss in confidence in the government's ability to deliver.

Without decisive action, the cost of inaction—lost productivity, higher transportation costs, and declining quality of life—will far exceed the price of smart investments today. It's time for bold leadership to build the infrastructure that will carry us into the future. The question isn't whether we can afford to invest; it's whether we can afford not to.

Let's get to work together.

Chris Gregoire
CEO, Challenge Seattle

CHALLENGE SEATTLE

Executive Summary

To meet the needs of a growing and rapidly changing population, we must rethink how we plan, pay for, and build our transportation system

Over the past 25 years, Washington has added 2 million residents—and by 2050, nearly 2 million more are expected to call this state home.

We've already felt the impacts of not planning ahead: longer commutes, paralyzing gridlock, aging infrastructure, sudden bridge closures, multi-hour ferry waits, and packed airport terminals. These strains will only intensify without bold action.

A key challenge is that Washington's transportation planning is siloed, fragmented, and outdated. Roads, ferries, rail, air, transit, and bike infrastructure are each planned in isolation. Agencies and jurisdictions often work in parallel—not in partnership—leading projects to compete for funding rather than contribute to a shared vision.

The way we fund transportation is no longer working or fair. As more people drive more efficient, hybrid, and electric cars, they no longer pay a gas tax for the roads they drive on. This decline in gas tax revenue is expected to accelerate over time, shifting the burden of paying for transportation to those who cannot afford new vehicles. To generate current levels of revenue, the gas tax would need to increase by 1.7 cents per gallon, per year, between now and 2040—resulting in a gas tax increase of $1 per gallon.

Meanwhile, our transportation system powers the state's economy—but it's no longer keeping pace with demand or delivering the experience Washingtonians deserve.

To meet the needs of a growing and rapidly changing population, Washington must rethink how we plan, pay for, and build our transportation system. Siloed and fragmented approaches are no longer sufficient. By designing a system that works across all modes and communities, we can deliver something more than just infrastructure—we can deliver a better way of life.

Our vision for Washington's integrated and financially sustainable transportation system in 2050 is ambitious—and achievable.

It's a system that absorbs population growth without increasing congestion, connects communities and enhances livability, and moves the greatest number of people in the most effective way possible. It supports a thriving and trade-dependent economy, expands access to opportunity, reduces greenhouse gas emissions, and protects our ecosystems. It has sustainable funding with diverse, stable, fair, and predictable sources that are scalable and flexible. Above all, it delivers a seamless, world-class experience for every user—whether driving, biking, walking, rolling, riding transit and ferries, or flying.

This level of integration and financial sustainability has never been achieved in the United States. Washington can lead the way.

This report outlines five next steps to make that vision real:

1. **Engage the public in developing the plan for an integrated and financially sustainable transportation system.**
2. **Prepare a roadmap and sustainable funding plan to achieve the 2050 vision.**
3. **Integrate planning across modes.**
4. **Centralize transportation data for planning, public involvement, and decision making.**
5. **Foster innovation through public-private partnerships and next-generation infrastructure.**

The decisions we make today will shape Washington for decades. We can choose progress—or let delay and disconnection define our future.

Without investing beyond what is planned today, the economic impact to the state will be $370 billion by 2040

Economic Impact to Each Person

~$1,550
Annual Economic Impact in 2020

~$2,600
Annual Economic Impact in 2040

~$43,600
Total Economic Impact 2020-40

Economic Impact to the State

$370,000,000
Total Economic Impact 2020-40

The Case for Change: Why Washington Must Act Now

TRANSPORTATION TODAY

Washington state is a great place to live, work, and do business with the numbers to prove it. Since 2000, our population has grown by 36% compared to a national average of 21%.[1]

Transportation fuels our economy. It plays an essential role in creating and connecting people to good paying jobs, boosting our state's competitiveness, and helping small and large businesses thrive by reducing the cost of moving people and goods. Our infrastructure is working hard every day to support a growing population and economy.

Washington is One of the Most Trade-Dependent States in the Nation

Approximately 40% of jobs in the state are tied to international commerce.

In 2024, the state exported $57.8 billion of goods to the world.

This makes how freight moves to and through our state critical to our economic prosperity.

On an average weekday across Washington:

- 400,000 cars and trucks drive on I-5 and I-405 through the Puget Sound region, the heart of the state's economy.
- 473,000 people ride Sound Transit, King County Metro, Pierce Transit, and Community Transit services combined.
- 145,000 passengers travel through Sea-Tac Airport and Paine Field.
- 44,700 passengers ride a Washington State ferry.
- 18,000 cars and trucks cross the Columbia River on I-90.
- 8,000 trucks cross Snoqualmie Pass, carrying goods to customers around the state and to overseas markets.[2]
- 2,720 riders take Amtrak Cascades.[3]

In recent years, we've tried to catch up with our growth and preserve our existing roads and bridges. We have made progress, thought big, and accomplished bold and innovative projects. We replaced the seismically vulnerable SR 520 floating bridge and Alaskan Way Viaduct with groundbreaking engineering solutions. We are delivering the largest transit expansion program in the United States. We have made Snoqualmie Pass safer and more likely to stay open during the winter months.

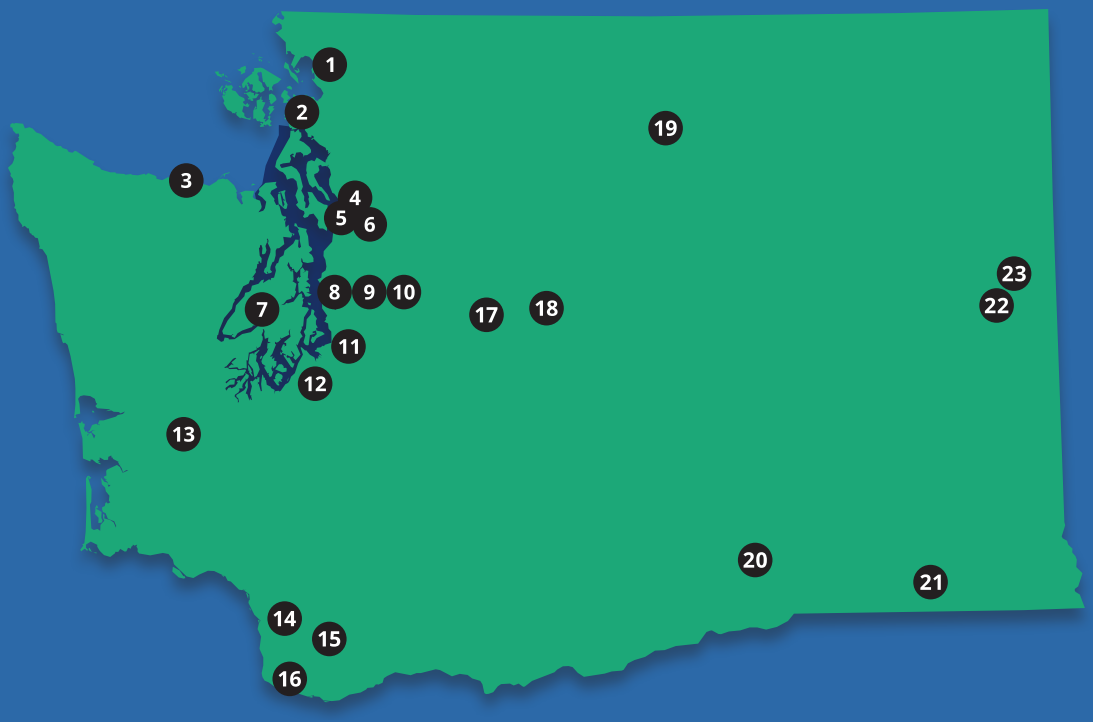
We have also made the transportation system easier to use. OneBusAway was created by two University of Washington doctoral students to make transit more usable, accessible and predictable. It's used today by more than 100,000 riders a day in the Puget Sound region and millions more worldwide. Riders can use an ORCA card to travel on nine different transit systems and ferries, and everyone can tap to pay on six systems with more to come in the future.

With the leadership of state elected officials, and strong support from the public, business, labor, and the environmental community, $44 billion has been invested in Washington's state, regional, and local transportation system and $68.7 billion in the Puget Sound region's transit system since 1996.

More than 20 Years and $44 Billion of Investments Across the State Since 2003*

State Improvements

1. **I-5 Slater Road Interchange -** *Bellingham*
2. **Anacortes Ferry Terminal -** *Anacortes*
3. **US 101 – Elwha River Bridge Replacement -** *Port Angeles*
4. **US 2 Trestle -** *Everett, WA*
5. **Mukilteo Ferry Terminal -** *Mukilteo*
6. **SR 9/Snohomish River Bridge -** *Snohomish*
7. **SR 3 Belfair Bypass -** *Belfair*
8. **Colman Dock Ferry Terminal -** *Seattle*
9. **SR 520 Floating Bridge -** *Lake Washington*
10. **I-405 Corridor Improvements -** *Bellevue*
11. **SR 167/SR 509 Gateway Project -** *Puyallup to SeaTac*
12. **JBLM Congestion Relief -** *Joint Base Lewis McCord*
13. **SR 107/Chehalis River Bridge -** *Halfway between Aberdeen and Olympia*
14. **I-5 East Fork Lewis River Bridge Replacement** *- Lewis County (just south of Woodland in Clark County)*
15. **SR 502 Main Street Project** *- Battle Ground*
16. **Interstate Bridge Replacement** *- Vancouver, WA*
17. **I-90 Snoqualmie Pass -** *Snoqualmie Pass*
18. **SR 28 East Wenatchee Corridor Improvements** *- Wenatchee*
19. **SR 155 Spur/Okanogan River Bridge Replacement** *- Omak*
20. **SR 241 Mabton Area Bridge Retrofits** - Mabton
21. **US 12 -** *Walla Walla*
22. **I-90/Medical Lake & Geiger Interchanges** *- Spokane*
23. **US 395 North Spokane Corridor -** *Spokane*



Puget Sound Improvements

- **Construction of New Ferries**
- **Ferry Electrification**

Statewide Improvements

- **Youth Ride Free on Transit**
- **Transit Grants**
- **Bridge and Road Maintenance and Preservation**

*Not a complete list of investments

The Case for Change

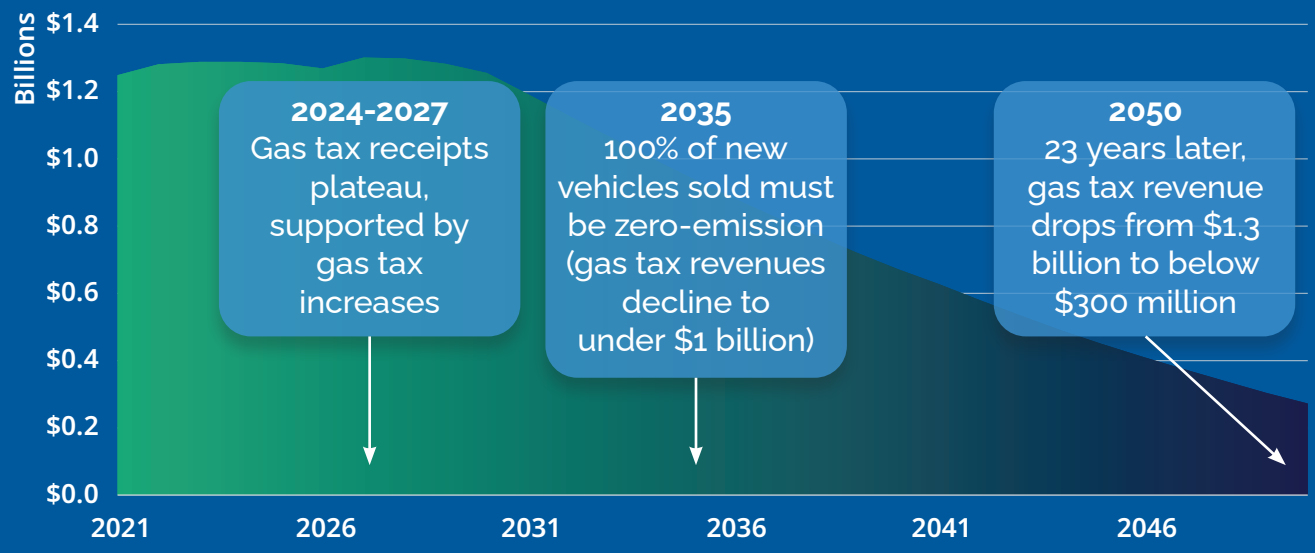
FUNDING IS NOT KEEPING UP

While the State of Washington, regional transit agencies, airports, counties and cities spend billions of dollars each year to keep our roads safe, add capacity, and maintain and preserve the infrastructure for future generations, we are still falling behind. This funding is used by the Washington Department of Transportation, Washington State Patrol, and counties and cities. Historically, this has been based on a simple principle: a user pays for the benefit of using our roads, bridges, and ferries. Taxes on fuel make up 30 percent of the transportation revenue and historically increased each year as our population grew.

Over the last few years, revenue from fuel taxes have begun to plateau, even as the tax on fuel has increased. This is due to changes in our state's policy and consumer demand that have accelerated the transition to electric and hybrid vehicles. This well-intended policy change to reduce carbon emissions—transportation is responsible for 40% of our state's emissions—has unintended consequences for transportation funding.

By 2050, fuel tax revenue is forecast to drop by over 70 percent due to more efficient, electric, and hybrid vehicles on the road. Without new revenue sources, we will move away from a user pay approach with more of the burden to pay for roads, bridges, and ferries falling on those unable to afford new or electric cars. And this decline in revenue is coming at a time when our transportation needs are greater than ever. WSDOT estimates we are falling short by $1.51 billion each year to keep our roads, bridges, railroads, and ferries in a state of good repair. And this does not include what is needed to add capacity for our growing population.

Gasoline Tax Revenues Decline as Fuel Efficiency Grows



EXAMPLE: Two Camrys, Two Very Different Fuel Taxes Paid*

2009 Toyota Camry
25 MPG — $198 state fuel tax paid

VS

2023 Toyota Camry Hybrid
52 MPG — $95 state fuel tax paid

*Per 10,000 miles driven

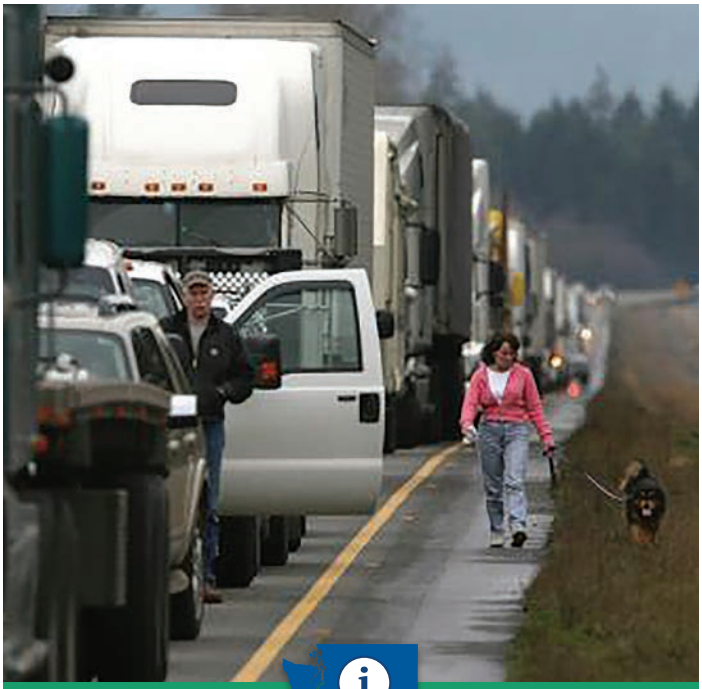
OUR INFRASTRUCTURE IS FALLING BEHIND

Even with historic investments, Washington's transportation system is no longer keeping pace with the demands of a growing population, a changing economy, declining funding, and an evolving climate. The result is a system that strains every day to keep people and goods moving—and too often falls short.

More people are stuck in traffic. There were 169 million hours of delay in the Puget Sound region in 2022, which translates to 82 hours stuck in traffic for the average commuter each year, the fifth highest of metro areas in the United States. This congestion costs our state $4.5 billion and the average commuter $1,874 annually.[4] Personal costs come in the form of higher-fuel costs, vehicle wear and tear, and higher childcare costs from sitting in traffic. Our economy loses out when workers are late, reducing the work they can accomplish; higher delivery costs inflate prices, and a smaller labor pool is available to employers. Congestion also contributes 621,000 metric tons of excess carbon dioxide emissions, exacerbating climate change.

Goods are also stuck in traffic. More than half of the goods moving around our state are carried in trucks. Truck delays are higher in urban areas and along high-volume corridors such as I-5 and I-405 through Seattle, Tacoma, Olympia, and Vancouver, I-90 east of Snoqualmie Pass, and US 2 in Spokane.[5] Wine, cherries, and hay from eastern Washington are in gridlock, making it more expensive to reach overseas markets.

Commutes are longer. Nearly one million Washington households are cost-burdened, spending more than 30% of household income on housing-related costs. The lack of affordable housing is driving people further and further away from their jobs, which increases demand for transportation infrastructure. Since 2010, the population of super commuters—those commuting more than 90 minutes each way—in the Puget Sound region has increased by 75 percent and we now rank as third out of the top 25 metropolitan areas in the country with an increasing number of super commuters.[6] This equates to over $7.1 billion of lost productivity per year.[7]



The Growing Cost of Ever-Increasing Congestion

According to WSDOT, 451 new lane miles at an estimated cost of $161 billion would be needed to drive the posted speed limit at all times.

This would require a gas tax increase of $3.30-$3.50 per gallon.

Roadway safety is moving backwards. Crashes on Washington's roads resulted in 731 fatalities[8] and 2,825 suspected serious injuries[9] in 2024.

Infrastructure is failing. More than 55 percent of bridges across the state are in fair condition and degrading into poor condition, which leads to weight-restricted bridges, road closures and lengthy detours, especially in rural areas and across eastern Washington. The current investment levels in preservation are only 40 percent of what is needed to keep our infrastructure in a state of good repair.

The Case for Change

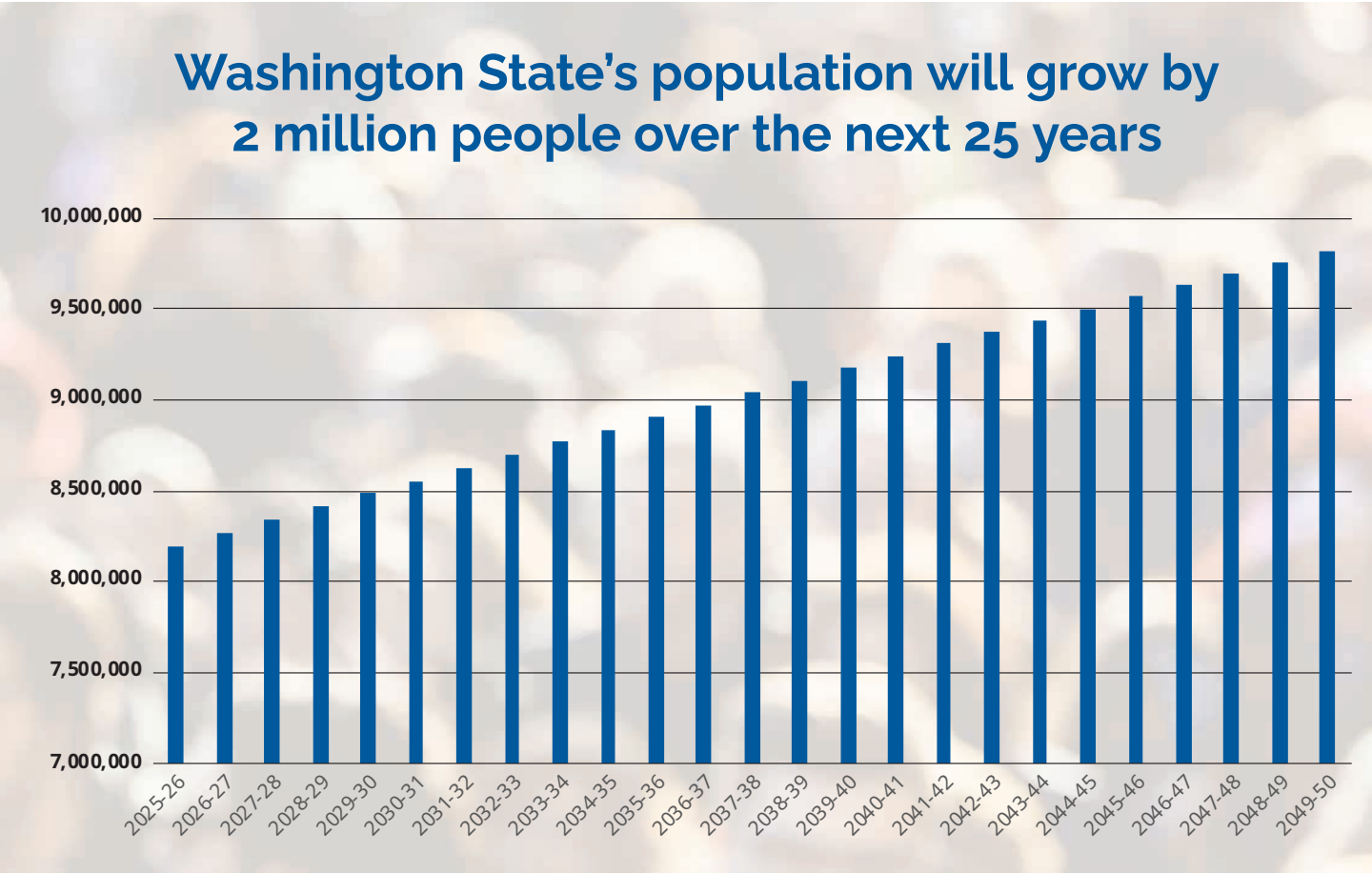
Ferries are aging. Ferries are a symbol of Washington State, yet their reliability remains inconsistent. In 2024, there were 3,645 trip cancellations mostly due to a shortage of work crew.[10] Washington State Ferries announced in April 2025 all crew positions were filled; however, more investments are needed to retain and grow the workforce to meet future demand. The fleet operates with four fewer boats than needed to provide reliable service and 11 of the existing 21 vessels are scheduled to be retired by 2040.[11]

Road closures driven by climate change. More frequent wildfires are forcing the closure of roads, such as the 2022 Bolt Fire and 2025 Labor Mountain Fire. In January 2022, flooding forced sections of Interstate 5 closed, and snowstorms closed Cascade Mountain passes, cutting off Puget Sound from the rest of the state. While they were reopened after a few hours, it was an important reminder of our dependency on roads to connect and support our economy. In 2007, I-5 through Lewis County was closed for several days due to flooding at an estimated cost of $166 million. The average hourly cost of delay due to a closure of Snoqualmie Pass on a weekend is $67,576.[12]

Sea-Tac faces an air travel and cargo crunch. Sea-Tac is already the 8th largest airport in North America and its capacity is limited to 33 million passenger boardings, significantly less than forecasted demand. For example, there were 24 million passenger boardings annually in the central Puget Sound region today, but by 2050, the demand is expected to be 55.6 million with a total capacity of 49.3 million (including regional airports such as Paine Field). As soon as 2029, this will result in passenger delays that will become intolerable around 2034. The Federal Aviation Administration could also control the number of flights similar to JFK and LAX today. Air cargo capacity will also be constrained. Based on current plans, the central Puget Sound region will begin to fall short of on-airport warehouse space starting in 2027.

On August 4, 2025, WSDOT discovered cracking and advanced corrosion on the 93-year old SR 169 Green River/Dan Evans Bridge and restricted vehicles to one-way alternating traffic.

The bridge will be closed when repairs are made, forcing the more than 11,000 drivers who use the bridge each day to take a nine-mile detour.



DEMAND WILL OUTPACE CAPACITY IN THE COMING YEARS

Our quality of life, good paying jobs, and innovation are expected to attract another 2 million people.[13] and job growth is expected to grow by nearly 1 million[14] by 2050. Nearly every county in Washington will experience growth, increasing demand for transportation across the state. This in turn will place greater demands on the transportation system.

- Vehicle miles traveled are forecast to increase by 13% by 2040, driven by population and job growth.[15]
- Demand for take-offs and landings in the Puget Sound region are projected to double by 2050 from over 400,000 to over 800,000 per year. This is expected to result in a regional gap in service by 2050 that is roughly equivalent to all passengers served at Sea-Tac in 2019.[16]
- Demand for air cargo is expected to more than double, growing from 539,600 metric tons in 2017 to 1,319,300 tons in 2050. Based on current plans, the region will fall short of on-airport warehouse space for air cargo by 20277.[17]
- Freight volumes are forecast to increase 45%,[18] and imports and exports by more than 50%.[19]
- Rail volumes are expected to grow, and BNSF and Union Pacific have no planned track extensions. BNSF, the largest freight rail operator in Washington, estimates five of their main corridors will be over capacity by 2035 if the status quo remains.[20]
- The number of truck miles traveled per day is forecast to increase by 27%.[21]
- Each Washington resident will experience $2,600 annual economic impact by 2040.[22]
- The total economic impact to the state will be $370 billion from 2020-2040.[23]
- Washington State's adopted policy goal is to reduce vehicle miles traveled by 50 percent per year.

SOCIETAL SHIFTS ARE RESHAPING DEMAND

These challenges are amplified by deep societal shifts that are transforming how Washingtonians live, work, and move. A recent report by the National Academies of Sciences, Engineering, and Medicine[24] identified several of these trends—shifts in demographics, economic patterns, technology, and climate—that will shape the future of transportation.

In Washington, these trends are already taking hold.

Demographics are shifting. Immigration is now the primary driver of population growth. By the mid-2030s, older adults will outnumber children for the first time in U.S. history. Growth is concentrating in metropolitan areas and megaregions, placing greater strain on regional systems.

Personal costs for housing and transportation will continue to increase. Rising prices for housing, food, and healthcare are forcing people farther from urban job centers. Transportation—still the second-largest household expense—has become a barrier to economic opportunity for many.

Work patterns are changing. Telework and hybrid jobs have altered peak travel patterns and made traditional planning assumptions less relevant. The rise of flexible schedules and shared living is reshaping how and when people move.

Technology is transforming. The shift toward electrification, automation, and real-time mobility platforms offers new opportunities—but also requires major investment in infrastructure, regulation, and workforce readiness.

Extreme weather events are more disruptive. Floods, wildfires, extreme heat waves, and ice storms are more frequent, more intense, and more disruptive. Without stronger infrastructure and forward-looking design, closures and losses will continue to mount.

WE ARE AT A CROSSROADS

Together, this underscores one urgent reality: Washington's current approach to planning and investing in transportation is no longer sufficient. We need a new model—one that is integrated, financially sustainable, resilient, forward-looking, and designed to serve a changing population and economy.

Fast Forward: A 2050 Transportation Vision

We must start now and take a fundamentally different approach to planning our future transportation system. We have a responsibility to future generations to invest in an integrated and financially sustainable transportation system that works for everyone—making it easier to get around, whether you're driving, taking transit, riding a ferry, biking, flying, rolling, or walking.

Imagine if by 2050 you could:

- Arrive at Sea-Tac Airport and take high-speed rail to Portland or Vancouver using a ticket purchased with the airline ticket—and at a discount because the operators share codes.
- Charge your car while driving using photovoltaic cells embedded in the roadway and those cells were designed, tested, and manufactured in Washington.
- Use a single app—created by a Washington-grown business—to find and purchase a ticket for the fastest, cheapest, and least environmentally impactful way to get to your destination.
- Know that eastern Washington farmers can reliably load their crops on trucks, travel across Snoqualmie Pass to cargo planes at Sea-Tac Airport, and reach global customers within hours.

That's the kind of integrated, user-centered system Washington can build.

Our vision for Washington's integrated and financially sustainable transportation system in 2050 is ambitious and achievable.

It's a system that absorbs population growth without increasing congestion, connects communities and enhances livability, and moves the greatest number of people in the most effective way possible.

It supports a thriving economy, expands access to opportunity, reduces greenhouse gas emissions, and protects our ecosystems. It has sustainable funding—diverse, stable and predictable sources that are scalable and flexible.

Above all, it delivers a seamless, world-class experience for every user—whether driving, biking, walking, rolling, riding ferries and transit, or flying.

DB Rail&Fly

Lufthansa Airlines partnered with Deutsche Bahn with Rail&Fly—a program that allows international customers to buy a rail ticket at the same time they purchase a plane ticket.

Fast Forward: A 2050 Transportation Vision

What will it take to achieve this plan? It will take an all the above approach, that includes the following components:

- Invest fully in the maintenance and preservation of our state and local roads and bridges so we don't pass on higher costs to our children and grandchildren.
- Make transportation safer, resilient, and with more choices for the ways that people want to travel around, to, and through Washington.
- Integrate transportation modes for an efficient, cost effective, seamless and connected user experience
- Implement strategies to meet the state's 2050 greenhouse gas reduction goals.
- Develop a sustainable transportation funding plan for state and local transportation priorities.
- Incorporate public-private partnerships.
- Reduce construction costs and disruptions due to duplicative work and ensuring market conditions are a competitive market for public works projects.

"Whether government is bigger or smaller is the wrong question. What it needs to be is better. It needs to justify itself not through the rules it follows but through the outcomes it delivers."

Abundance *by Ezra Klein and Derek Thompson*

According to a 2022 analysis, the integration of a broadband or electricity installation with an existing road or rail project can create 18% to 33% savings, depending on the use of conduit, direct bury, or aerial installation.

A Blueprint for Transformative US Infrastructure, Boston Consulting Group, 2022

- Be innovative by demonstrating transportation technology advancements, investing in technology development, and offering incentives to those who are researching and developing innovative transportation solutions.
- Integrate other priorities such as broadband, electrification, or utilities (water, energy or sewer) into projects to maximize effectiveness of investments in new or improved corridors.
- Streamline permitting and reduce delays that can make projects more expensive.
- Support workforce development so all Washingtonians can take advantage of good-paying jobs building and operating the transportation system.
- Integrate land use into transportation decisions at the state, regional, and local levels.
- Establish accountability measures – goals and outcomes, data-driven decision-making; public oversight, strong financial stewardship – to build trust and political durability of investment decisions.

Next Steps: Achieving the Vision

It will take all of us working together to realize a vision of a 2050 integrated and financially sustainable transportation system. The current model of planning and investing in transportation is broken. Too often it's the loudest voices that hold up or push a project forward. State transportation funding packages every few years mean the issues of the day can drive project funding decisions rather than progress toward a long-term vision.

The steps necessary to realize this vision will need to be bold and innovative. It will take new transportation solutions that we should embrace and invent ourselves—continuing our global leadership of innovation. Should we build a new international airport and where? Should we build high-speed rail or add lanes to Interstate 5 or both? How do we move more freight reliably and cost-effectively between eastern and western Washington and to international markets? How do we plan for technological advancements, like self-driving cars and electric vertical takeoff and landing aircraft?

The steps that will be needed to realize our vision is broad public support for action, so our efforts do not stall. A statewide strategic investment plan should prioritize state, regional, and local projects for funding. Integrated planning across all modes should be based on high-quality and current data. This will take innovation, public-private partnerships, and working with our neighbors to the north and south because transportation does not stop at Washington's borders.

Next Steps: Achieving the Vision

STEP 1

Engage the public in developing the plan for an integrated and financially sustainable transportation system

Achieving a fully integrated and financially sustainable transportation system by 2050 will require all of us, united by a shared vision for action. Washingtonians have already shown they understand the importance of investing in transportation—supporting transformative investments like Sound Transit 3 and upholding the Climate Commitment Act to fund clean transportation.

Meeting the demands of future growth while preserving our current system will take bold ideas, major investments, and broad public backing. Without a shared vision, progress will stall.

Building public support will take an education campaign — building understanding about the consequences of not investing in an integrated and financially sustainable transportation system. Policymakers should understand the public's values and priorities and reflect them in the vision and solutions, and ask the public to weigh in on the choices and trade-offs that will need to be made.

This type of engagement, listening, and reflecting back will build public understanding for the scope and scale of the investments required to maintain our state's prosperity and what it will take to pay for it.

Case Study: Your Utah, Your Future 2050

Envision Utah shaped the Your Utah, Your Future plan through a powerful, multi-phase engagement process grounded in the voices and values of Utahns. It began with statewide focus groups, revealing how key community priorities—like economic opportunity and environmental quality—connect to deeply held personal values.

Nearly 53,000 residents shared their input through a large-scale survey, validated by a scientific poll. The interactive "Build Your 2050 Utah" web app let users explore future scenarios and choose the path that best matched their vision. By combining public input with expert insight, the final plan reflected not only technical rigor but the shared hopes of Utah's people—ensuring a future built by and for the communities it serves.

Visualizing the Cost of Inaction

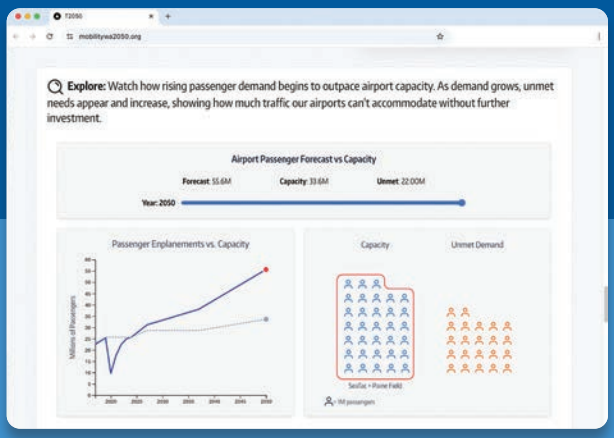
Tansportation planning is based on data and models that forecast our future needs so engineers and designers can identify needed investments. Those data and models are central to planning for our future; however, the public doesn't relate to charts, graphs, and reports.

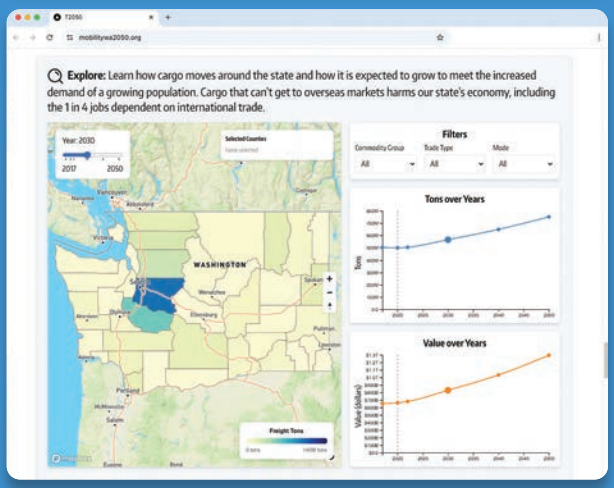
What is meaningful to the public is impact to their daily lives. How much longer will it take to get to work? How long will the detour be if a bridge was no longer safe to drive on?

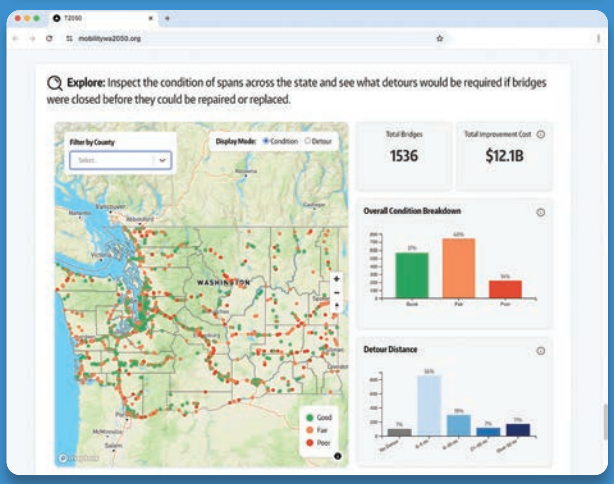
Data visualization, using a human-centered design approach, can help make large data sets easier to understand. Applying these practices with the existing planning models and data provides a high-level overview of the potential effects and tradeoffs that large-infrastructure system plans may have if coordinated, done piecemeal, or not at all.

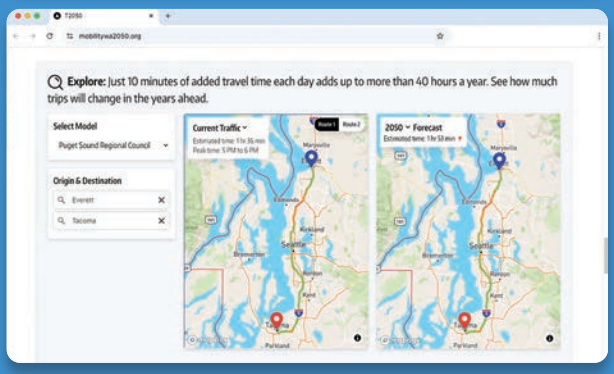
The University of Washington's Human-Centered Design and Engineering at the College of Engineering developed a series of data visualizations to tell the story of what will happen if we don't plan for our future transportation needs that is relatable to the public.

These visualizations can be found on the Transportation 2050 website and are ready for use by policymakers and transportation agencies to engage the public in the plan of an integrated and financially sustainable transportation system.









Data visualization tools from the University of Washington's Mobility Innovation Center Transportation Visualization Project

A public-private partnership made up of WSDOT, King County, Alaska Airlines, Boeing, Challenge Seattle, and Microsoft funded the 2050 Transportation Visualization Project through the University of Washington's Mobility Innovation Center.

STEP 2

PREPARE A ROADMAP AND SUSTAINABLE FUNDING PLAN TO ACHIEVE THE 2050 VISION

Achieving a vision requires a plan to achieve it. Now is the time to agree on how we will build an integrated transportation system—in partnership with the public—and the sustainable funding plan to pay for it. Today, transportation investments are largely decided on independently by jurisdictions across the state. Developing a statewide plan will integrate planning across modes and jurisdictions and prioritize investments that work together to connect roads, buses, trains, ferries, airports, and pathways and trails across the state.

The plan should describe what is needed to maintain and preserve our infrastructure in a state of good repair. It should include how we will add capacity to the system to move our growing population. And it should lay out the costs for achieving the vision so that state policymakers and local elected officials can identify and agree on sustainable funding with diverse, stable, fair, and predictable sources that are scalable and flexible. When looking at possible funding sources, this plan should consider how the societal shifts outlined earlier in this report will impact both the availability and fairness of the funding source over time.

> **"We always overestimate the change that will occur in the next two years and underestimate the change that will occur in the next ten. Don't let yourself be lulled into inaction."**
>
> ***Bill Gates***

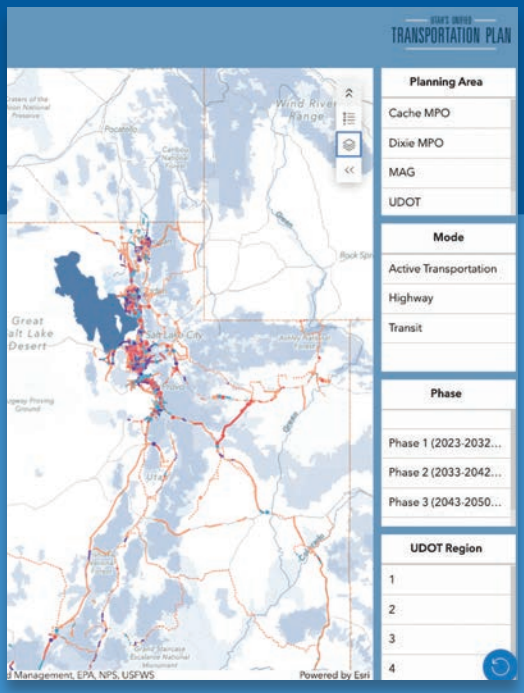
This plan should be prepared as soon as feasible and reviewed regularly to ensure it continues to meet the goal of an integrated and financially sustainable transportation system.

Preparing the plan should not be an excuse to stop making incremental progress on near-term actions that we all agree are needed—such as investing in maintenance and preservation.

Case Study: Utah's 2023-2050 Unified Transportation Plan

Utah's Unified Transportation Plan is a model of collaboration, uniting the Utah Department of Transportation, regional planning organizations, and the Utah Transit Authority in a shared vision for the state's future. Together, they identify needs, craft solutions, and coordinate implementation with a data-driven, goal-oriented approach.

Projects are prioritized based on outcomes like health, mobility, economic growth, and community connectivity. Starting with an open list of needs, the plan phases projects based on available funding and impact. This thoughtful, united effort has mapped out a $153 billion investment through 2050—ensuring Utah's transportation system supports a thriving, connected, and growing state.



Online data visualization tool from Utah's Unified Transportation Plan website

STEP 3
INTEGRATE PLANNING ACROSS MODES

Currently, fragmented decision-making processes and compartmentalized responsibilities among various agencies lead to siloed decision-making, delays and increased costs. WSDOT alone prepares at least nine different statewide plans covering different modes and programs. Individual projects are funded because they are shovel-ready when funding decisions are being made or there are advocates pushing for the projects, rather than whether they meaningfully prepare Washington for future growth.

To meet the challenge in front of us, we must be more strategic and thoughtful by integrating planning across modes so that we are efficient with public resources and build a transportation system that is not dependent on one mode, road, or bridge. WSDOT has already begun integrating planning across modes by creating the Cascadia I-5 and High-Speed Rail Program and coordinating with the work plans to address the state's future air mobility needs. This work was recognized by the American Association of State Highway and Transportation Officials as a "moonshot" approach to planning.

STEP 4
CENTRALIZE TRANSPORTATION DATA FOR PLANNING, PUBLIC INVOLVEMENT, AND DECISION-MAKING

Planning should also be based on high-quality data. WSDOT and metropolitan planning organizations were generous with their time and sharing of data to inform the University of Washington's 2050 transportation visualizations. However, this exercise uncovered challenges that will prevent us from making data-informed decisions about our future. Transportation planning agencies recognize the need for better data coordination across jurisdictions but lack a mechanism to achieve it.

What is needed is a centralized digital hub with current data and forecasts on which decisions about an integrated transportation system can be based. This data should be comprehensive—and statewide—so that the needs of urban, suburban, and rural communities are considered. Achieving a centralized data hub will speed up decision-making because time-intensive efforts to fuse data and reconcile differences will be eliminated.

"You must start with robust, high-quality data to build visualizations that truly illustrate complex patterns and effectively communicate them to non-expert audiences."

Professor Cecilia Aragon, University of Washington, Department of Human Centered Design & Engineering

STEP 5
FOSTER INNOVATION THROUGH PUBLIC-PRIVATE PARTNERSHIPS AND NEXT-GENERATION INFRASTRUCTURE

Washington is home to one of the most innovative economies in the world. Microsoft, Costco, Starbucks, Amazon, Boeing, and many others started here and have grown to be global innovation leaders. We should take full advantage of this history and culture of innovation to ensure our transportation system is prepared for future population growth.

The transportation sector is evolving quickly—driverless cars, air taxis, sustainable aviation fuel—and we should continue our culture of innovation by encouraging these advancements be created here in Washington. This could include creating programs to encourage pilot demonstrations to happen here—like testing in-road charging technology on our state roads.

We should be cost-efficient in the delivery of public infrastructure. One of the challenges facing our state is that there are many agencies delivering construction projects to the market at the same time and there is a limited number of companies able to deliver complex and technically challenging projects. This limits competition during the bidding process and can increase project costs.

A statewide infrastructure coordination effort could proactively identify project delivery risks before they materialize and recommend strategies to individual agencies. This could also serve as a resource to smaller jurisdictions as they manage capital delivery programs. Private and public utilities should also be included in this effort to identify opportunities to integrate and coordinate construction for maximum efficiency.

Finally, the Washington State Legislature's Joint Transportation Committee conducted an extensive review of the state's public-private partnership policy and recommended updates, which were adopted during the 2025 legislative session. This work should be advanced so there are more models for delivering public works projects.

Case Study: Michigan Central Innovation District

In November 2023, the nation's first wireless-charging public roadway became operational in Detroit's Michigan Central innovation district.

This 30-acre campus serves as a real-world test bed to build innovative transportation solutions and in turn spur economic development and jobs.

The campus includes the Bagley Mobility Hub, a six-story structure that serves as an autonomous vehicle testing area.

Michigan Central and MDOT created the Advanced Aerial Innovation Region to accelerate commercial drone development and position Michigan as a leader in next-generation aerial mobility

The Time to Act Is Now

We should take pride in the progress that has been made. We built the world's longest floating bridge to cross Lake Washington. The SR 99 tunnel was the largest bored tunnel when it was built. Light rail travels across the I-90 floating bridge, another first in the world. Puget Sound is home to the largest transit expansion program in the United States.

We could be satisfied with that progress and leave decisions about the future to the next generation. This happened in 1970 when King County voters rejected a proposed regional mass transit system. The $1.2 billion transit system was to be funded by $440 million in local bonds ($3.7 billion in 2025 dollars) and $881 million in federal funding ($7.5 billion in 2025 dollars).

Nearly 40 years later, that system is almost built at a cost of $21.7 billion in local funds and a much smaller percentage of federal funding. Not only did the same miles of light rail cost local taxpayers $18 billion more, we also incurred the lost opportunity cost of no regional transit system for nearly 40 years and are being impacted by system construction in a denser and more developed region.

If we wait until 2050 to solve the 2050 problem, we'll be even further behind. It takes time to plan, design, and build major infrastructure investments. Once the decision was made to build a third runway at Sea-Tac Airport, the SR 99 highway tunnel under downtown Seattle, and a new SR 520 floating bridge, building in a dense urban area, complex construction, and funding availability meant projects took a decade or longer to build.

We are up to the challenge—we can meet the ambitious goal of being ready for the future. The time to act is now.

End Notes

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