



Blueprinting Tomorrow's Transportation

A planner's guide to data-driven, resilient, and equitable networks





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The strategic role of transportation planning in shaping the future of mobility

Transportation planning today is more complex than ever. According to the U.S. Department of Transportation, the number of trips taken by Americans has increased by nearly 20% over the last two decades, while infrastructure budgets have not kept pace with this growth. Aging infrastructure, tight budgets, climate volatility, new technology, and rising demands for safety all converge on planning teams.

And yet, many agencies still rely on dated data to perform their jobs. Maintaining, upgrading, and expanding transportation networks effectively with limited resources becomes a major challenge as a result.

Moving from reactive maintenance to proactive design is the best way to enable transportation infrastructure design that handles growing demand while serving all members of the community.



The evolving landscape of transportation planning

Transportation planners are under increasing pressure on multiple fronts. Urbanization, for example, is a key challenge. While 55% of the world's population lived in cities in 2018, that share is [projected to reach 68% by 2050](#), as nearly 2.5 billion people are expected to move to urban centers. This shift, in turn, will significantly increase demand on transportation and road networks.

The urban-rural imbalance is especially significant in the United States. Studies show that [transportation access especially continues to decline](#) in suburban centers, where

underserved groups experience longer travel times and fewer reliable transit options. In rural areas, that lack of access becomes even more stark, impeding access to employment, healthcare, and innovation.

Quality of life for constituents remains at the core of it all. But maintaining and increasing that quality of life has become more complex. It's no longer feasible to plan from limited datasets or outdated models; instead, planners must move toward systems that are built on comprehensive data that enables a more proactive and strategic approach.





Key challenges and imperatives in contemporary transportation planning

Funding remains a core challenge across transportation agencies. Federal programs such as the Infrastructure Investments and Jobs Act (IIJA) can temporarily provide resources, but don't tend to support long-term funding. Meanwhile, state and local budgets can fluctuate as local economic conditions change. In a [2023 National League of Cities survey](#), 58% of planners cited budget unpredictability as a major barrier to long-term mobility strategies.

Uncertainty goes beyond the budget, as well. Climate disruption has become more common. [According to one report](#), nearly 1,100 critical infrastructure sites like schools, hospitals, and utilities could experience monthly flooding. The same report noted that in many zones in the state of Virginia, recurrent floods already reduced highway accessibility by more than 40% during morning commutes.

Only a data-based approach can enable the flexibility needed to overcome these challenges. Resilient and safe systems can enable better planning and reporting frameworks—both to make better decisions and to accommodate reporting requirements.

Harnessing data for strategic transportation insights

Transportation planners have always relied on data for decision-making. Today, connected vehicles contribute to a plethora of quantifiable information. With these insights, planners can more easily calculate important metrics like AADT, VMT, origin-destination patterns, and vehicle speeds. That information, in turn, enables a better ability to prioritize corridors in need of more urgent help, overstretched arterial roads, and more.

This kind of predictive insight helps transportation agencies integrate more high-quality data into their long-range planning and project prioritization efforts. It can also guide funding applications, building a better case for major investments related to safety



Streamlining regulatory data collection and reporting

Automating HPMS Reporting

Meeting the federal Highway Performance Monitoring System (HPMS) mandate requires a massive data collection effort. Traditionally, this involves costly field surveys and disparate datasets that must be manually harmonized, a process that is both inefficient and prone to inconsistencies. Blynscy® revolutionizes this process by using AI to automatically extract critical HPMS data points from imagery. We provide a standardized, network-wide view of pavement conditions and roadway characteristics. This automated approach ensures consistent collection of high-quality data, leading to more accurate HPMS reporting, significant cost savings, and a more reliable foundation for infrastructure planning.

Streamlining MIRE Data Collection

Compiling the Model Inventory of Roadway Elements (MIRE) is a foundational requirement for enhancing safety analysis, but it has historically been a labor-intensive and expensive task. Our AI-powered solution automates the inventory process by analyzing high-resolution imagery to identify, classify, and geolocate hundreds of roadway assets simultaneously. From traffic signs and signals to guardrails and pavement markings, our platform creates a comprehensive digital inventory of your network. This dramatically reduces the cost and time required for MIRE data acquisition, improves asset management decisions, and enhances worker safety by minimizing the need for manual roadside data collection.





Partnering with BlynCSy: Your roadmap to next-generation transportation planning

Transportation planners need reliable and comprehensive data to make informed decisions, but traditional collection methods are often slow, inconsistent, or incomplete. BlynCSy helps to close that gap by combining AI-driven analysis with street-level imagery, making it easier for planners to get a comprehensive view of the environment and conditions for better decision-making.

BlynCSy's platform supports planners across core workflows. For long-range planning, it helps to evaluate trends, track infrastructure changes, and confirm current conditions, without needing constant expensive field surveys. Features like lane count, sidewalk presence, facility type, and pavement condition can be visually verified across entire corridors.

Beyond data collection, BlynCSy can also enhance public engagement by providing lean, current imagery to make planning proposals easier to explain and visualize. It can streamline data collection and verification for planning studies and federal reporting all while facilitating more effective decision-making and project communication. Even safety planning can be improved, with visual confirmation of roadway features making it possible to identify potential hazards that have not yet been captured in crash data.

The Blynscy and Google advantage: Unprecedented visual intelligence for planners

Beyond AI, one of the most promising technological advances in transportation planning in recent years is the use of street-level imagery. The partnership between Google and Blynscy allows planners to gain access to high-resolution visuals, including anything from corridors to intersections and individual facilities.

By analyzing both historical and current street-level imagery, planners can perform anything from existing conditions analyses to site screenings and assessments of deteriorating conditions over time. AI tools can automatically scan images to identify features like lane markings, signage, sidewalks, and land use patterns, saving time on field visits while supporting more consistent assessments.

For planners working on long-range transportation plans (LRTPs) or highway performance monitoring systems (HPMS), the data gleaned from these images can become a crucial component. Images can also help with public engagement, able to show current conditions and their change over time to improve project proposals and communication.



Planning transportation networks of tomorrow

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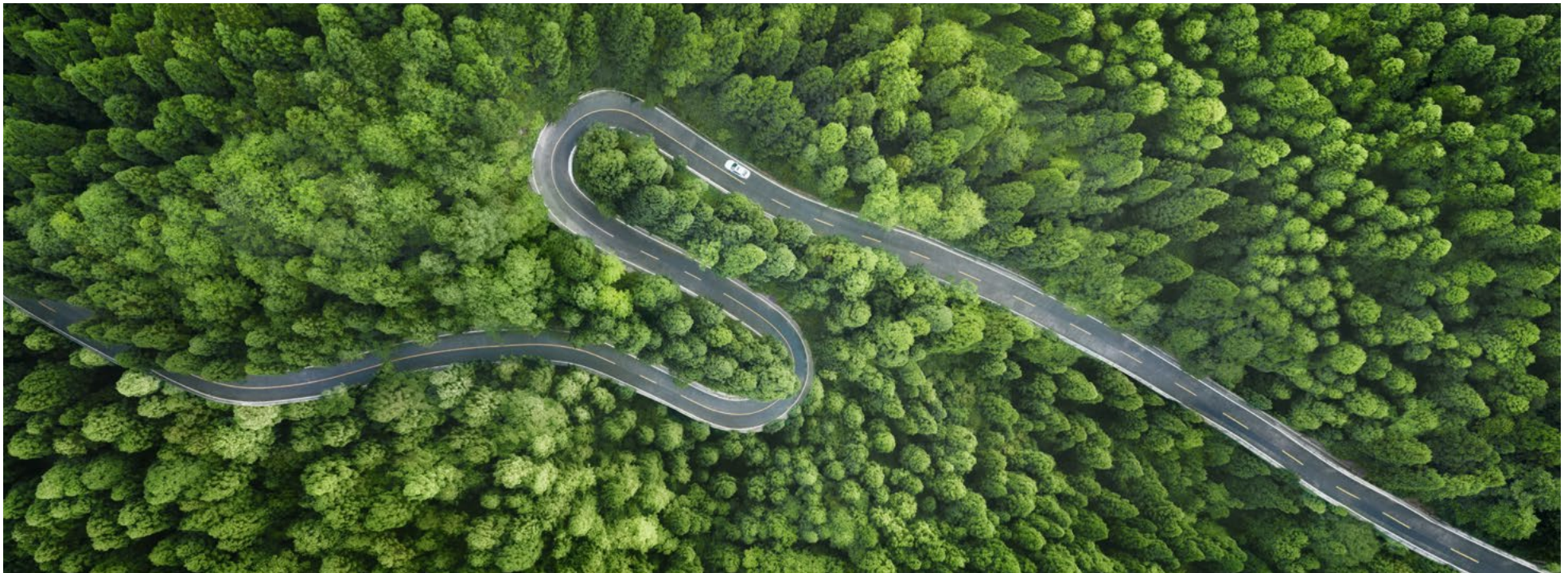
Transportation planners are navigating one of the most demanding eras in infrastructure history. Growing and changing populations, climate impacts, rising safety expectations, and increased needs for equity all require more responsive and strategic planning.

With Blyncsy, planners can prioritize their investment, streamline their reporting, target safety improvements, and build public trust. We are a leading provider of AI-powered, real-time roadway condition assessment and asset inventory solutions. Our platform collects and analyzes visual roadway data to deliver actionable insights that help transportation agencies make faster, more informed decisions about traffic,

safety, and infrastructure health. With a strong focus on privacy and data security, we designs our tools to meet the needs of public-sector organizations at scale. We supports agencies in improving the efficiency and resilience of the communities they serve through smarter, more data-driven operations.

Planning, at its best and with the support of that data, not only focuses on fixing problems but improving the quality of life in the communities it serves. It's about shaping the future, one roadway and infrastructure project at a time.

To explore Blyncsy's capabilities for your agency, request a personalized demonstration today, schedule a strategic consultation, or download planning-focused resources.





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