
avanade
With once-in-a-generation funding, state and local governments can make transformational impact on transportation safety
Do what matters

When it comes to transportation safety, all state and local governments want to do what matters for their constituents. Where they differ is the lens through which they create and manage their safety programs.

State Departments of Transportation (DOTs) want to reduce traffic fatalities and serious incidents. They examine the crash reports submitted by local law enforcement agencies to understand root causes such as driving under the influence (DUI) incidents or construction hazards.

County transit authorities view their programs from the perspective of economic development opportunity and quality of life such as attracting companies to do business with the promise of sound and easy commuting for their workforce. They're also concerned with pedestrian and cyclist welfare, and other various functions that draw people into the county, areas not typically monitored or funded by State DOTs. Finally, municipalities focus on resident lifestyle: What brings people downtown to dine, shop or attend an event, and how are their experiences impacted by other factors, including parking simplicity, sidewalk usage and event traffic & management?

These intertwined goals of human, organizational and community betterment are all important to the people who live, work and play in these constituencies, and yet, they're often left wondering, "What gets done?"

The dynamics at play

Historically, governments had precious little budget to address even the most basic traffic and safety needs (filling potholes, re-striping a fading crosswalk). But with the passing of the Infrastructure Investment and Jobs Act (IIJA), state and local governments have access to game changing, once-in-a-generation funding to rethink transportation safety solutions even beyond streets and to fortify the security of those services.

Programs can be created around anything that moves – cars, trains, bikes, ships – and the people that move with and near those vehicles. The opportunities are enormous. Maybe even too enormous, because – at long last – what really stretches before these governments is the chance to bring to life their visions for the public agencies they want to become, in service to both their employees and citizens, and the myriad ways they can use technology to progress their communities with safer roads, job sites, commercial districts and more.

Then there's the question of the existing technology, which has often been purchased in departmental silos as "pet" projects by department heads with no thought to interoperability. Much of this software was installed by boutique systems integrators or hardware manufacturers who take a transactional view of these projects and are slow with updates or support; the software may even be facing end-of-life. Data storage is on premise.

The dynamics at play...cont

And about that data. State and local governments have certainly become data rich through their hardware and its associated software, but they're analytics poor, unable to organize the information to do something meaningful with it. They're unsure of how to utilize data beyond the sole use case of the individual application producing it. (Indeed, lots of specialized systems integrators and construction and engineering firms can study near misses at intersections. The issue is that they're mostly looking at rearview mirror information instead of providing data governance and insights.

At the heart of the IIJA is the need to modernize and digitize core and critical infrastructure

Avanade helps governments navigate the IIJA by transforming their business, modernizing their operating environment and re-inventing citizen experiences, focusing around these high demand areas:

Roads, bridges and major projects

Governments are looking to repair and rebuild roads and bridges with a focus on climate change mitigation, resilience, equity and safety for all users.

Our offer: Avanade Future of Transport Operations

Ports and waterways

Modern, resilient and sustainable port and freight infrastructure will strengthen supply chains, expedite commerce and reduce environmental impacts.

Our offer: Avanade 5G / Digital Transformation

Safety and research

U.S. traffic fatalities are increasing. Governments need to fast-track digital adoption to support safer and more resilient transportation infrastructure and worker safety.

Our offer: Avanade Smart Solutions for Safety

Security

Government organizations are struggling to meet citizen demand for fast, secure services while also staying ahead of threats and key risks.

Our offer: Avanade Cyber Security for Government

The mandate: put digital at the core.

State and local governments are looking to repair and rebuild roads and bridges with a focus on climate change mitigation, resilience, equity and the welfare of all users. They need to fast-track digital adoption to support safer and more adaptable transportation and infrastructure and to protect workers. They have a role to play in strengthening supply chains, expediting commerce and reducing environmental impacts through modern and sustainable ports and railways that can withstand global disruptions. And they must preserve and protect the trust of their citizens by staying ahead of cybersecurity threats and risks.

All of that is possible through digital transformation. Governments must put digital at their core, rooted in a business case that demonstrates value for people, organizations and communities – transformation that makes a genuine human impact.

The right partner will optimize the value of your ecosystem first and then look beyond

The ability to apply intelligent automation and AI to capture data analytics and insights may be hiding in plain sight. Many state and local governments have already made an investment in Microsoft technologies, and some boutique providers may even be hosting their applications in Azure, but neither the smaller systems integrators nor their government customers are looking at the Microsoft footprint strategically to understand what can be achieved more effectively. The right partner for a digital transformation program will not only make these simple (yet profound) assessments but will also conduct a business value analysis, define challenges, create a strategy and roadmap based on speed to value and demonstrate how their solutions will achieve transportation safety goals. They'll also have access to – and intimate knowledge of – the most innovative solutions available, and how to push those solutions in exciting new directions.

With proven methodologies, deep expertise and leading-edge technology, Avanade can be the trusted partner to state and local governments who are seeking to fulfill the promise of the IIJA – maximizing cloud platforms, mobile applications, social media and big data securely to transform the way they serve citizens, empower employees and protect transit workers. We also have a critical understanding of the Personal Identifiable Information (PII) and the data restrictions placed on government agencies.

Since our founding as a strategic alliance between Accenture and Microsoft more than 20 years ago, Avanade has become the leader in the Microsoft services marketplace with the right perspective and tools to lead digital transformations, combining the best in strategy and technology to help clients unlock more value from their IT. We're continually innovating at the Accenture Technology Labs, Microsoft Technology Centers and Accenture and Avanade Digital Showcase at Microsoft. We have deep connections with the Microsoft engineering community and therefore know where the Microsoft platform has been and where it's going. It makes us uniquely qualified to demonstrate exactly what's possible when business insight and technology come together. And our early adopter programs give clients access to next-generation Microsoft technologies, offering them a window into the future of innovation.

Digital transformation for business value and community impact

Being digital first means driving meaningful outcomes, whether that's productivity, collaboration, efficiency or risk mitigation.

Leveraging innovative digital technologies such as IoT, digital twin, thermal recognition and mixed reality headsets not only ensures worker safety, but it improves their productivity, collaboration and effectiveness. Imagine providing workers with HoloLens guides for flexible, hands-free training at their own pace from remote experts. They can attain new skills and feel more successful and integral to their organization. In fact, connected learners are 66% more likely to be engaged and more than four times as likely to be retained.

Automating processes enables more efficient safety incident reporting and reduces re-work due to human errors. AI ensures someone is always available to speak to field workers, and comments can be translated to pull out essential safety elements and map them to the incident management system. And, in the paper-dominated environment of field-related processes, Azure-based technologies allow field workers access to asset information such as work orders, material availability, documents, drawings and procedures so that they can capture data directly from the worksite and initiate critical processes (unplanned maintenance, emergency work orders).

Infrastructure maintenance becomes more predictable, maximizing energy efficiency and decreasing the overall risk profile. And that also extends to fleet maintenance, where advanced technology can understand utilization, demand and capacity, and to construction sites, enabling better cost and schedule control.

Managing to OSHA standards becomes more streamlined, ensuring data is properly captured, elevated and put into meaningful context to promote and support safe operations and avoid costly fines or budget penalties.

To improve both citizen and employee safety, public safety agencies, operations and field personnel can be connected with real-time data to simplify and improve incident response time with a common operating picture. Data from weather, time of day and day of the week can improve the safety of roads and highways for citizens and workers, and in some cases the probability of accidents can be accurately predicted by as much as 100%. Sensors on luminaires can monitor energy consumption, predict lighting network maintenance, monitor parking availability, track the need for street cleaning andeven provide internet throughout the city.

But the right partner won't simply flip the switch on any of these implementations.

They'll have an organizational change plan to drive user enthusiasm and adoption. The plan must understand multiple personas: the executive who wonders about their company's return to service, cost avoidance or reputational impact if something goes wrong; the employee who wonders if technology will take their job away; the citizen who wonders why they should use a 24/7 system when they're more comfortable with a phone call or in person visit.

There's also a robust management requirement around intelligent automation. The right partner will put governance and risk management controls in place, help establish steering and funding committees and leave agencies with a strong Center of Excellence.

Finally, a true partner will go beyond security staff augmentation to staff enhancement and evolution, passing on the knowledge and skills needed to keep a system up and running at its best, even as they expertly provide short-term targeted skills supplementation or full-fledged managed services, executing secure integration across IT, OT and IoT assets.

Achieve change and realize outcomes that enable people to operate and live in safer environments

Powered by the Microsoft ecosystem, Avanade helps you design and deliver safety outcomes across your key priority areas:

Human impact — Improve the quality of your services while preventing accidents and helping all people feel safer.

Organizational impact — Create efficiencies with cross-organizational coordination while increasing retention and job satisfaction.

Community impact — Enable an operational culture that helps make your public spaces a destination of choice

Generative AI: transform employee operations and citizen interactions

We'd be remiss not to discuss generative AI. When the IIJA was signed in 2021, you could count on one hand the number of technology providers who were not just aware of this next computing era, but also undertaking robust proofs of concept and sharpening their thinking about its responsible use. Microsoft and Avanade were in that pioneering group. For the last three years, we've been on the leading edge of innovation with generative AI, and Avanade has been working with Azure OpenAI – the newest generation of generative models from Open AI and Microsoft, built on Microsoft supercomputers and massive data sets – for more than a year and a half. These are the models behind ChatGPT, and we can cut through the hype to show you how to harness them now and apply them to your traffic and safety agendas.

In fact, early adoption will give you an inside track on understanding the technology that many government agencies and entities are being asked to regulate. Simply putting your public-facing information into ChatGPT capabilities could enable citizens to find relevant information quickly and easily using natural language prompts, and even translate into multiple languages. For organizations that are more advanced in their digital enterprises, generative AI can be a connection point to partners, including other agencies, to expand their knowledge bases and inform better decisions.

It’s time to make your transportation safety vision a reality

There was a time when budgeting for, and experimenting with, advanced technologies was only for the private sector. Governments dared not even dream it. But today, the promise of the IIJA is real, and with the right partner, a trusted and experienced guide on this digital journey, governments can go beyond imagination to plan, fund and experience the transportation safety programs of the future.

Machine data modeling that monitors employee safety and draws important correlations among incidents, reducing costly time lost to injury. Mixed reality training and collaboration tools to elevate the employee experience and boost attraction and retention rates. A multi-tenant data hub across agencies that improves incident response times for citizens. Fleet analytics that optimize resource deployment and reduce carbon emissions. These possibilities are finally within reach – so are you ready to make the genuine human impact that IIJA funding will unlock? Contact us to learn more about opportunities to advance your traffic, safety and security goals.

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About Avanade
Avanade is the leading provider of innovative digital, cloud and advisory services, industry solutions and design-led experiences across the Microsoft ecosystem. Every day, our 56,000 professionals in 26 countries make a genuine human impact for our clients, their employees and their customers. Avanade was founded in 2000 by Accenture LLP and Microsoft Corporation. Learn more at www.avanade.com.

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