

AI & Data Strategic Considerations

FHWA CLAS Innovation Exchange
May 21, 2026



U.S. Department of Transportation
ITS Joint Program Office

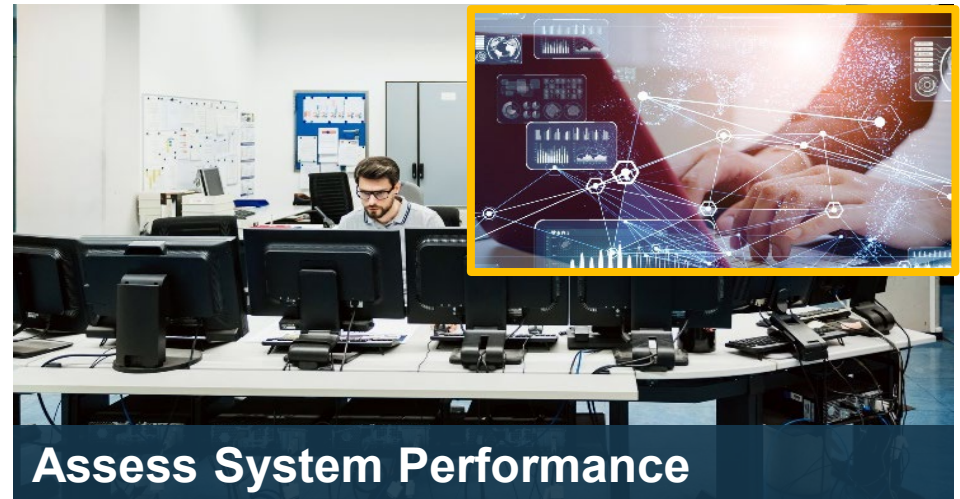
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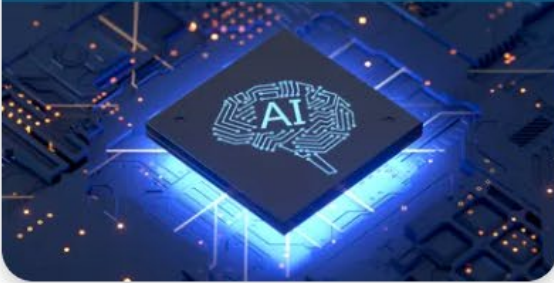
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AI and Transportation



ITS JPO Mission & Research Areas

ARTIFICIAL INTELLIGENCE (AI)



AUTOMATION PROGRAM



AI FOR TRANSPORTATION PLANNING AND DESIGN



SMART COMMUNITY RESOURCE CENTER (SCRC)



INTEROPERABLE CONNECTIVITY/SPECTRUM



INTERSECTION SAFETY



ITS4US



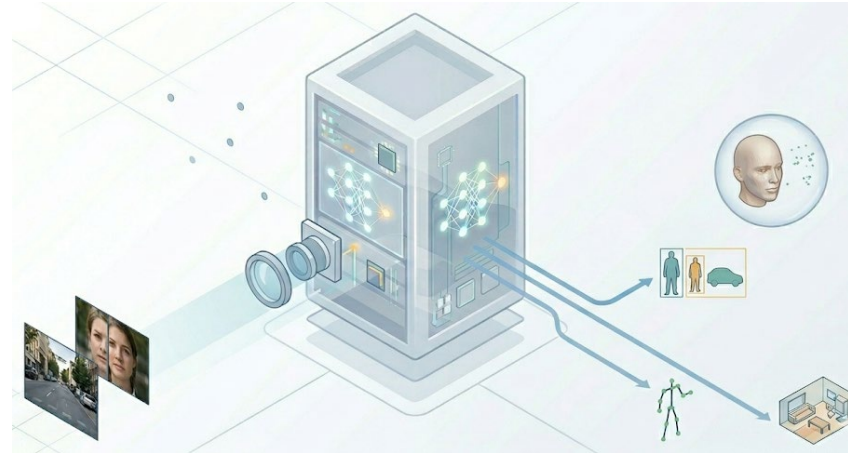
VEHICLE-TO-EVERYTHING (V2X) DEPLOYMENT



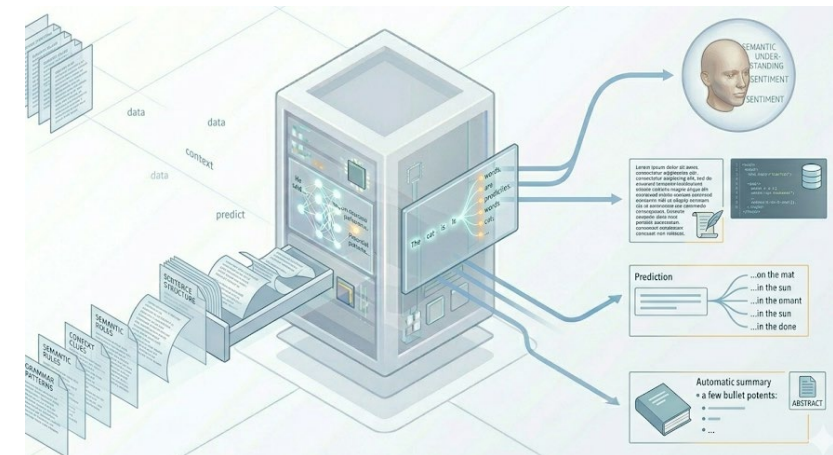
What is AI?



Machine learning (NUMBERS)



Computer vision (IMAGES)



Generative AI (LANGUAGE)

Image Source: Gemini

AI Program

Transforming
Safety | Mobility | Efficiency | Resiliency



by
Developing Enabling Tech | Deployment Testing | Driving Adoption

Image Source: Gemini

AI Program: Resources

1 Get AI-Ready

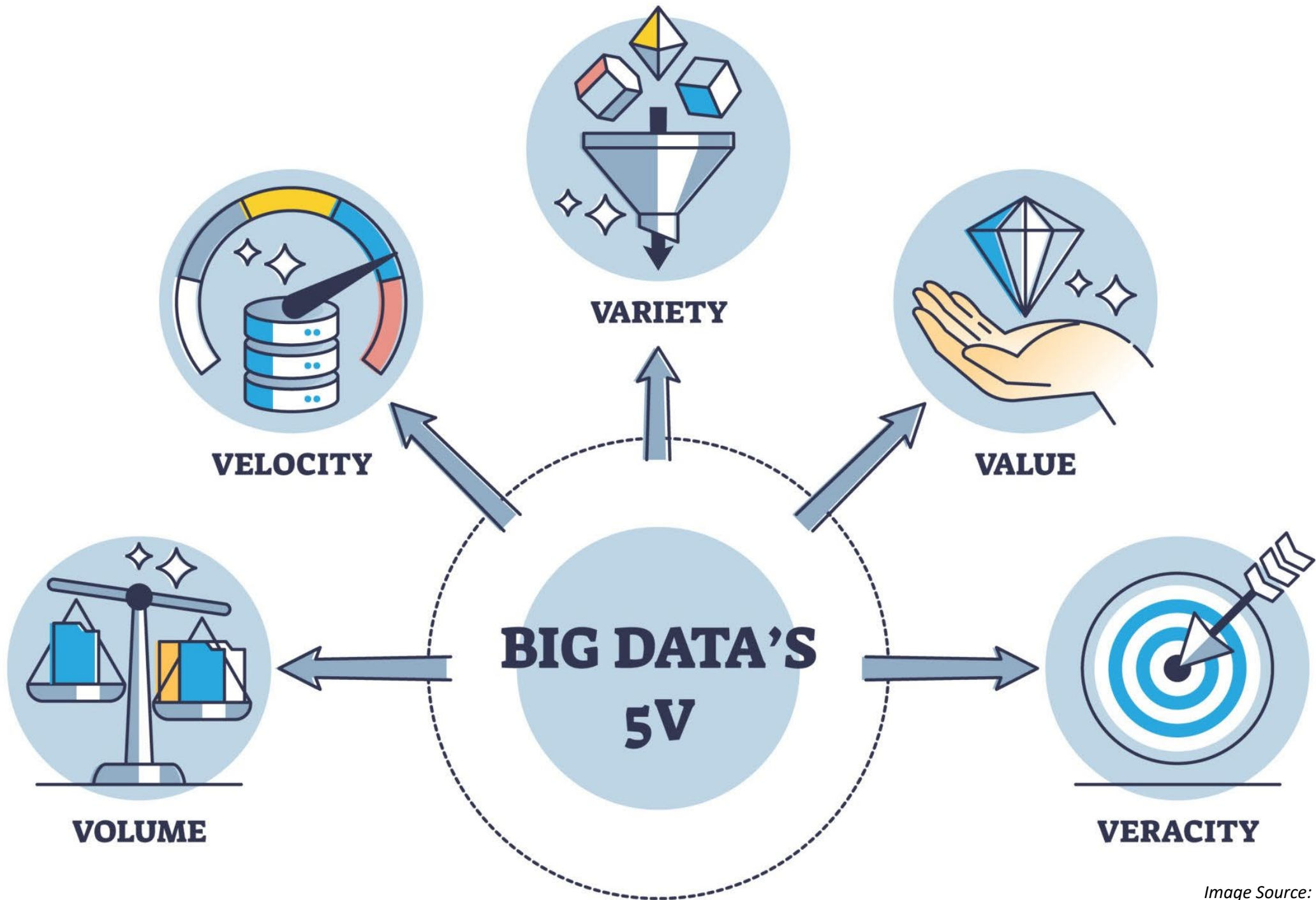
- AI Risks
- AI Evaluation
- AI Testing
- AI & Data Considerations

2 Put AI into Practice

- Funding Opportunities
- Project Highlights

3 Learn & Connect

- AI Organizational Assessments
- AI Case Studies
- AI Webinars, Peer Exchanges, Workshops
- AI “Insights” & Informational Materials



AI & Data: Governance & Management

*Shared policies, roles, structures and standards that ensure
Data is treated as a high-value asset*

- **Data Ownership** and Accountability
- Accuracy & **QA/QC** Protocols
- **Interoperable** Standards
- **Metadata** Catalogs

AI & Data: Collection, Storage & Access

Data Collection & Storage

- Identification of available **public & private** sources
- Unified & **scalable** data repositories
- **On-site** data **processing**
- Application of **quality checkpoints** & validation
- Active **update cycles**

Data Access

- **Role based** permissions
- **Cross-agency** and cross-program **collaboration**
- **Open data** for innovation
- Active **access management**

AI & Data: Privacy & Security



Data Privacy

- **Privacy by design** & technical masking
- Data minimization & **strategic retention**
- **Edge computing** & data reduction approaches
- **Transparency** & public trust



Data Security

- Infrastructure **hardening & encryption**
- “**Data poisoning**” defenses
- **IT** coordination
- Vendor safety & **system resiliency protocols**

AI & Data: Lessons Learned from Peers



Data **infrastructure** is a prerequisite.



Consider data **provenance**.



Factor in time for **sensor set up**.



Start with a **rules-based** system to fix data errors.



Collect data that is **actionable**, not just available.

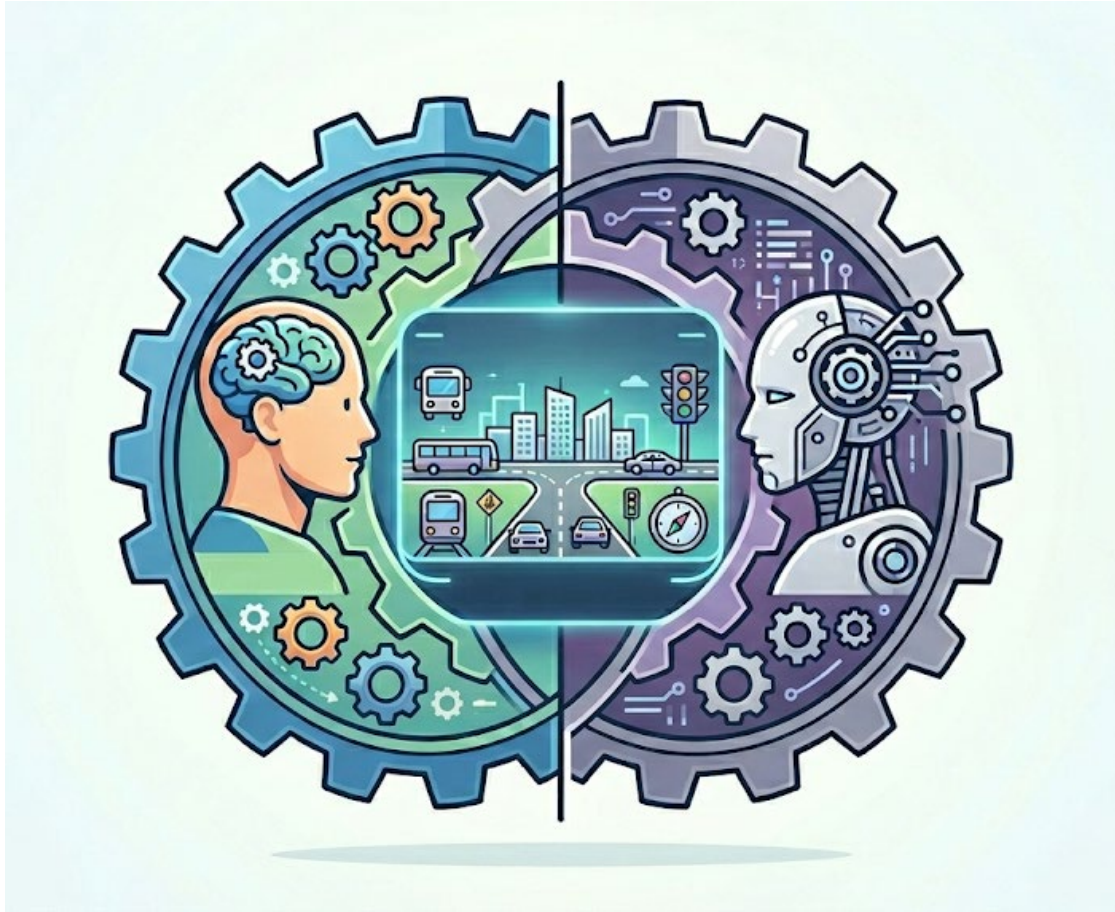


Validate at every step with agency staff in the loop.



Pilot before scaling.

AI & Data: Workforce Integration



- In-house AI expertise
- Human validation
- Data-driven decision culture

Image Source: Gemini

We Want to Help You!

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How We Support You



Development Tools



Field Testing & Pilots



Knowledge Sharing



Guidance for Trustworthy AI



Webinars & Outreach

