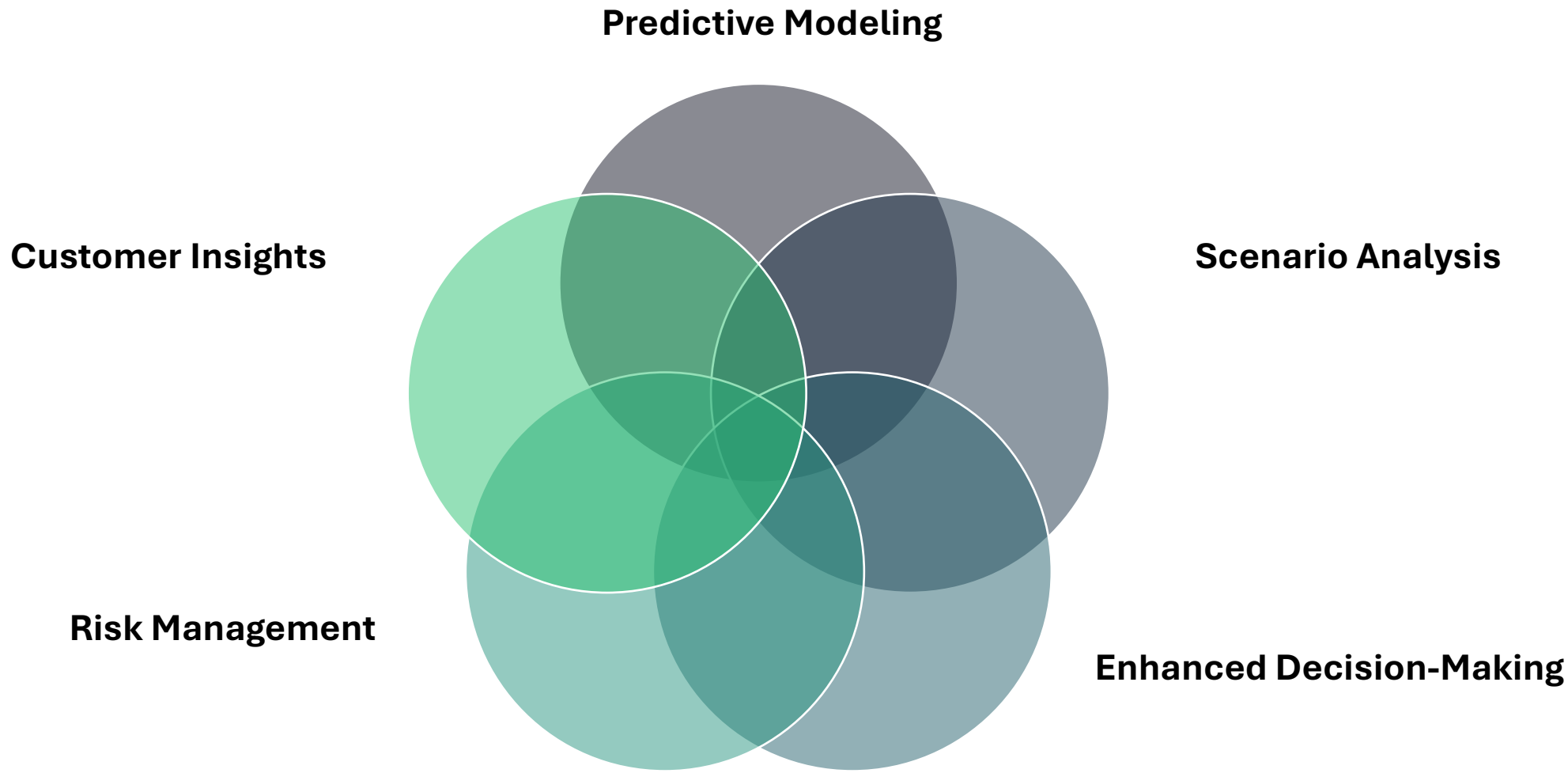
The Real Value of AI: Data-Driven Decisions for Transit Operations

October 2026

Areas of AI application



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AI Beyond the Hype

Transit Agencies Already Have the Data

Most agencies collect massive volumes of data every day:

- CAD/AVL & vehicle telemetry
- Fare collection systems
- Automatic Passenger Counters (APC)
- Maintenance work orders
- Asset management systems
- Workforce scheduling data
- Network and device monitoring systems

The Challenge

Data is plentiful. Actionable insight is scarce.

Where AI Creates Value:

- Identify problems before they become failures
- Prioritize operational resources
- Improve service reliability
- Reduce maintenance costs
- Increase revenue protection
- Support faster decision-making



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Case Study #1 - Predictive Maintenance

Problem - Maintenance teams often discover problems after a failure occurs. This creates:

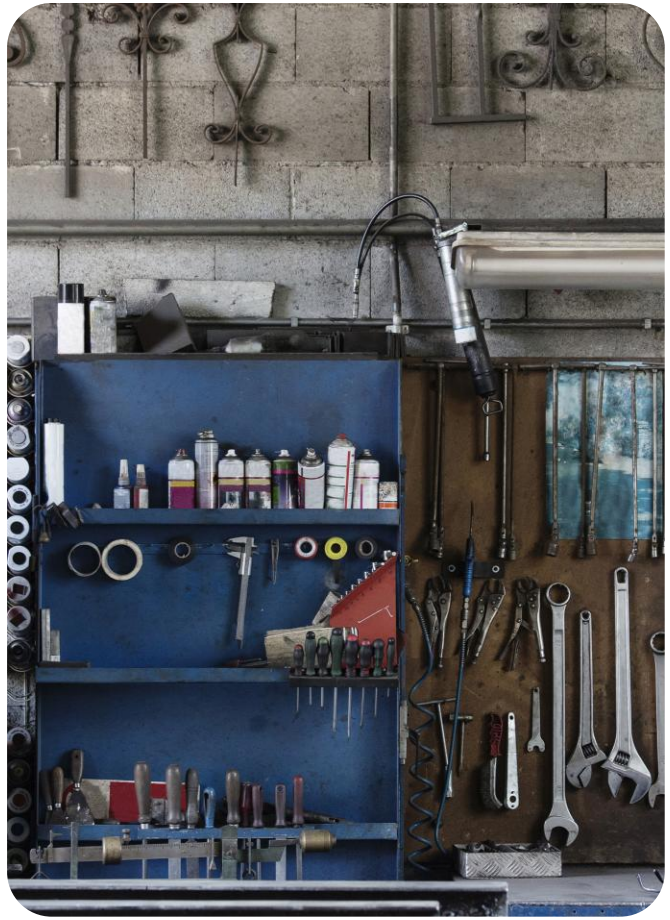
- Road calls
- Missed service
- Customer impacts
- Overtime costs

AI Approach - *Combine*:

- Vehicle diagnostics
- Historical maintenance records
- Asset lifecycle information

Benefits

- Earlier fault detection
- Reduced road calls
- Better parts planning
- More targeted maintenance activities



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Workforce & Resource Planning

Problem

- Many agencies face:
- Technician shortages
- Retirements
- New-hire ramp-up challenges
- Growing asset complexity
- **AI-Driven Insights**

Analyze:

- Work order trends
- Staffing levels
- Asset failure rates
- Seasonal demand patterns

Outcomes

- Better crew scheduling
- Improved shop productivity
- Reduced overtime
- Smarter hiring forecasts

Example

- Predict maintenance workload 30-90 days in advance and staff accordingly.



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Fare Systems & Revenue Assurance

Problem

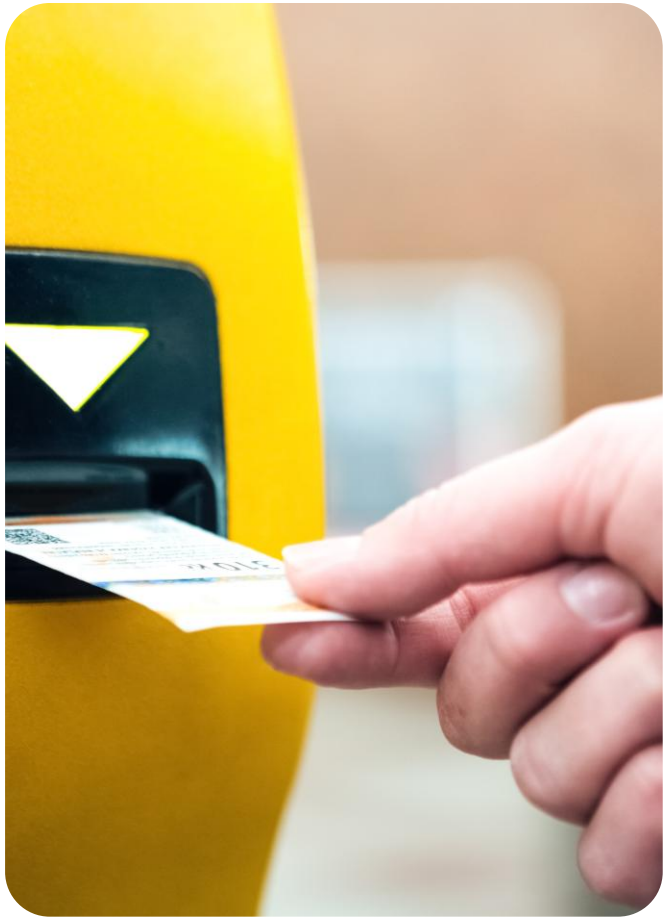
- Validators and fare collection devices frequently operate in imperfect network environments.
- Challenges include:
- Intermittent connectivity
- Delayed transactions
- Offline operations
- Revenue leakage risks

AI Use Case

- Monitor:
- Device performance
- Communications health
- Transaction patterns

Benefits

- Detect abnormal behaviors
- Anticipate device failures
- Protect revenue streams
- Reduce service disruptions
- This is one of the operational use cases agencies can implement today.



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Farebox + APC Analytics

Traditional Approach

- Someone exports reports and manually looks for insights.

AI-Enabled Approach

Correlate:

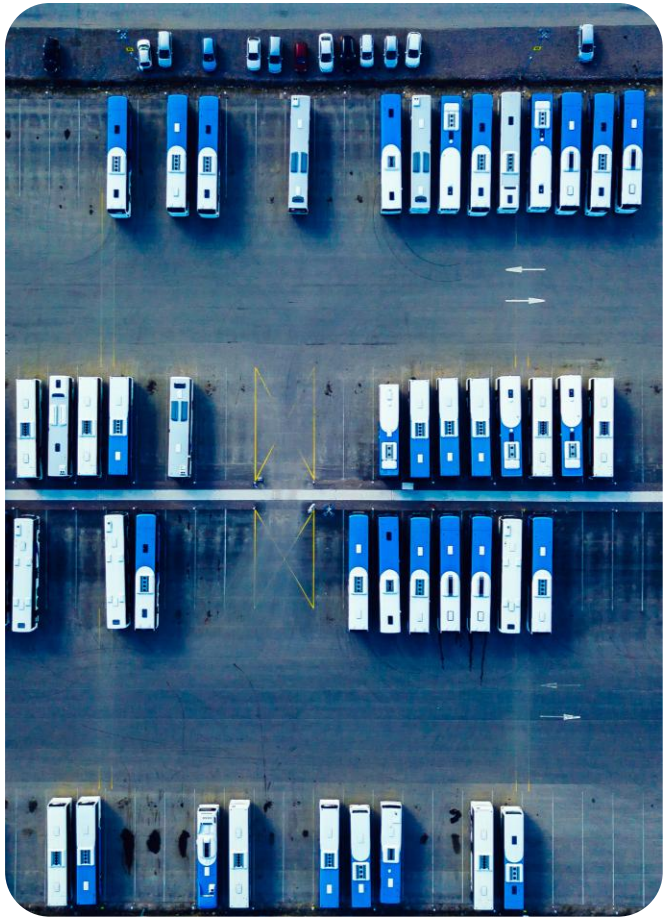
- Passenger boardings (APC)
- Fare transactions
- Route performance
- Time-of-day utilization

Questions AI Can Help Answer

- Are ridership counts matching fare activity?
- Where are opportunities for fare compliance improvement?
- Which routes show unusual patterns?
- Where should investigations be focused?

Outcome

- Move from reporting data to generating recommendations.



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OT + IT Operational Intelligence

Operational Technology (OT)

- Fare systems
- Vehicle systems
- Passenger counters
- Communications infrastructure

Information Technology (IT)

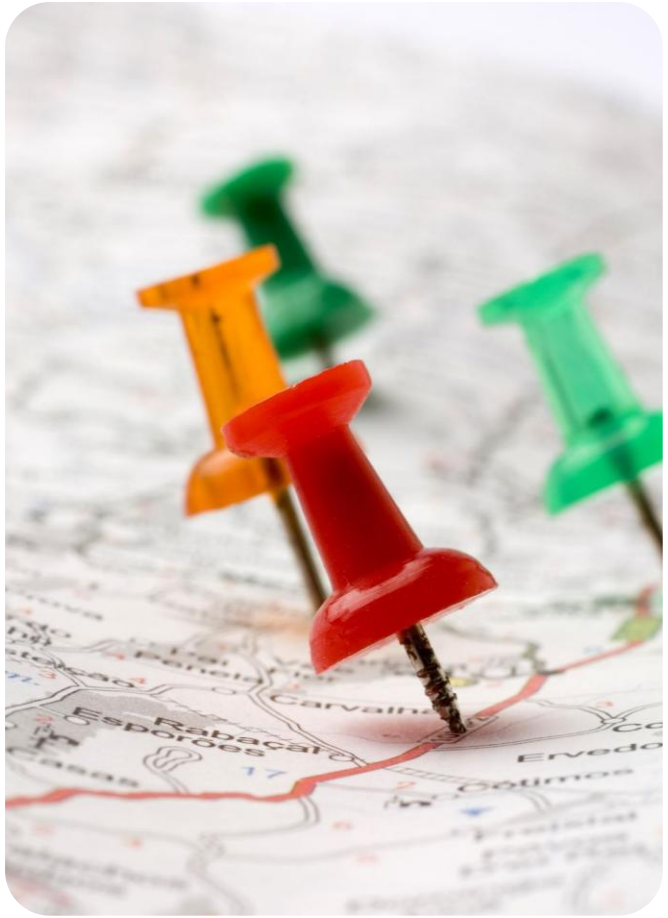
- Networks
- Servers
- Cloud systems
- Applications

AI Opportunity

Identify relationships across systems that humans cannot easily detect.

Examples:

- Device health impacting revenue
- Network outages impacting operations
- Asset issues impacting service delivery



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What Makes AI Successful?

Not Technology

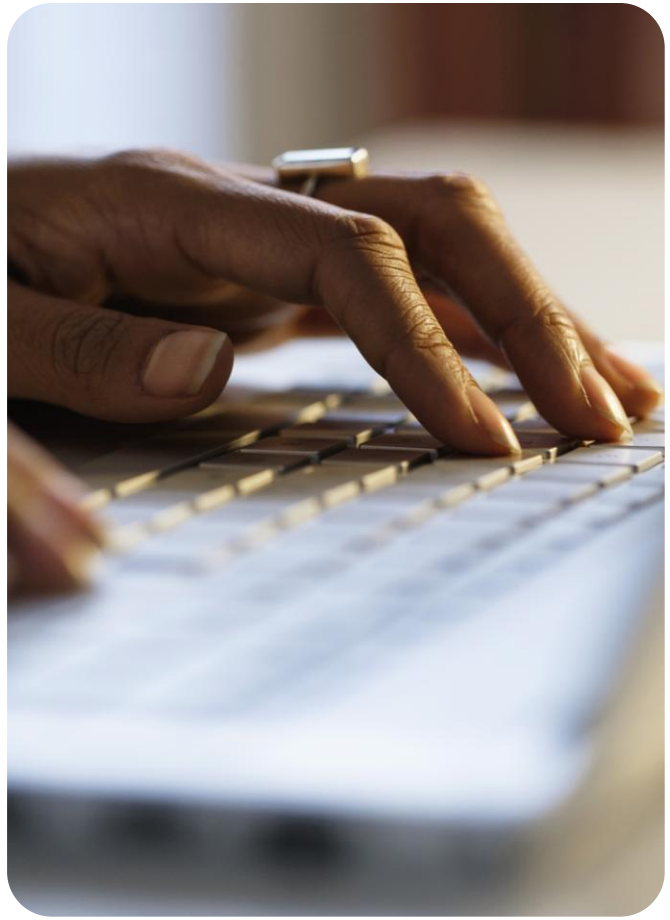
The most successful agencies start with operational questions.

Focus Areas

- ✅ Clear business problem
- ✅ Trusted operational data
- ✅ Measurable outcomes
- ✅ Collaboration between operations, maintenance, and technology teams

AI Should Answer

- What should I pay attention to?
- What is likely to fail?
- Where should I deploy resources?
- What action should I take next?



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Thank You

Contact

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