

Prince George's County Public Schools

Comprehensive Transportation Audit & Opportunity Analysis: Executive Summary

January 2024



4MATIV



PGCPS

4MATIV is a student transportation strategy, technology, and management company with a highly analytical approach to **system transformation and holistic sustainability**.

Our team has a **depth of experience across education and mobility**. Our work includes major projects for districts and state systems nationwide, including: *Cincinnati (CPS), Houston (HISD), Indianapolis (IPS), KIPP Schools, Prince William County (PWCS), Providence (PPSD), DC Office of the State Superintendent of Education (OSSE), and the Rhode Island Department of Education (RIDE)*.



The Comprehensive Audit and Opportunity Analysis identifies key opportunities for improving student transportation

Findings and analysis cover six major areas:

- I. Landscape
- II. Service Configuration
- III. Supply
- IV. Organizational Capabilities
- V. System Performance
- VI. Resource Stewardship

The audit and opportunity analysis entails thorough evaluation:

- **Gather data** including a site visit, interviews, focus groups, policy and document review, system configuration details and finances
- **Analyze** the existing student transportation system
- **Identify** strengths and areas for improvement
- **Recommend solutions** for immediate stabilization, long-term improvement, and holistic sustainability
- **Propose revisions** to systemic practices and/or policies
- **Estimate potential gain** from implementing proposed solutions

The report outlines findings and recommendations in six areas

I. Landscape	<i>System Overview, State and Federal Regulations, District Policies, Regional and National Comparisons</i>
II. Service Configuration	<i>Bell Time Balance and Alignment, Service Levels, Walk Zone Audit, Route Distance and Duration, Seat and Trip Utilization</i>
III. Supply	<i>Vendor Options, Fleet Assets, Alternative Modes, Service Differentiation, Modal Mix</i>
IV. Organizational Capabilities	<i>Leadership and Management, Communication, Technology Systems, Strategic Data Use, Driver Hiring and Qualification</i>
V. System Performance	<i>Route Coverage, On-time Status, Vehicle Tracking, Staff Attendance</i>
VI. Resource Stewardship	<i>Cost Structure and Allocations, Financial Analysis</i>

Key Findings (1 of 3)

- **Unassigned Trips:** A total of 5,334 trips are completed daily. Currently, 1,051 trips (20 percent) are not assigned to a vehicle, requiring daily problem solving to ensure full trip coverage among available drivers.
- **Bell Times:** The majority of morning trips are assigned to schools with bell times that start at 7:45 AM or earlier. The current distribution of trips by bell time is not well balanced nor aligned in the AM and PM. This misalignment and lack of balance results in inefficiency, with disproportionate needs during the first service tier.
- **Service Levels:** The average student's stop is located 0.24 miles from their home, even though district policy permits stop locations up to 1.5-2.0 miles from a student's home. Service for students with disabilities is not sufficiently or strategically differentiated.
- **Seat Utilization:** 41 percent of seats are unoccupied on the typical trip. Across all vehicle types there exists opportunity for enhanced seat and trip utilization.
- **Boundary Exceptions:** Every day, the district transports more than twenty-two thousand students who live within their school's walk boundary, accounting for 26 percent of all riders.

Key Findings (2 of 3)

- **Staffing:** Transportation is understaffed in its driver and bus aide ranks. The department also lacks analytical and technical capacity.
- **Driver Hiring and Qualification:** The process to hire and qualify drivers is long and inefficient, taking 10-16 weeks in many instances, resulting in a large percentage of drivers dropping out along the way. Candidates must pay up front for multiple steps in the process and make their own appointments to go to varying locations to complete key steps.
- **Communication:** Families express that their biggest pain point is unsatisfactory responsiveness and communication, with extreme challenges getting through and getting useful information when they contact Transportation.
- **Modal and Vendor Mix:** The district has a monolithic supply that is currently centered almost exclusively on the provision of yellow bus service. PGCPs is experimenting with the use of smaller vehicles and outsourced service providers, but has not yet exploited this opportunity to its fullest. Other modes—such as active transport, public transit, and carpooling—are not strategically supported in a way that might meaningfully reduce the need for bus service.

Key Findings (3 of 3)

- **Process Implementation:** Multiple key operational processes require wholesale revision. A formalized process for tracking ridership or recording non-riders does not exist. There is limited management and attention to pre-check procedures and on-time departures from lots. The practice for addressing “no call/no show” drivers appeared unreliable. DOT staff cited extreme challenges related to receiving data from Enrollment and Special Education far behind deadlines.
- **Technology:** Staff report that Transfinder and Zonar tablets have many performance issues. GPS tracking is functional 95 percent of the time; however, there is no established procedure for ensuring accurate GPS tracking of trips in real-time. Transfinder is also unable to associate a vehicle with multiple trips at once, so doubled trips are not tracked in the StopFinder parent app. The planned transition to a new SIS poses substantial technical and operational risk with regard to annual BOY routing configuration.
- **Strategic Data Use:** Transportation does not have a developed system and practice for using data to set goals for performance management. Data is often difficult to access in a useful manner. Manual entry into spreadsheets and databases is common, resulting in data accuracy issues and delays. Interviewees frequently expressed skepticism about how members of other employee groups and teams were held accountable for results and communicated a lack of understanding of how their work impacted other colleagues or organizational workflows overall.

January 2024 PGCPs Transportation Audit Recommendations

1. Align and balance school **bell times**
2. Strategically differentiate **service levels** and consolidate stops
3. Audit **walk boundary** safety zones
4. **Diversify** modal and vendor mix
5. Expand **alternative supply** options
6. Implement a codified **opt-out** practice
7. Strengthen organizational capabilities through **strategic staffing**
8. Adopt user-centered design to enhance **customer service**
9. **Streamline technology**, providing support and accountability for use
10. **Manage performance** and enforce accountability
11. Ensure **reliable GPS** tracking is linked to assigned trips
12. Revise **operational processes** for efficiency and clarity

January 2024 PGCPS Opportunity Analysis

Opportunity	Operational Efficiency	Max Annual Savings*
#1. Bell Time Alignment and Pairing	<ul style="list-style-type: none"> Shift bell times later at enough schools to impact 300-400 trips Eliminate up to 119 buses 	\$16.9 million
#2. Service Level Differentiation and Targeted Stop Consolidation	<ul style="list-style-type: none"> Increase average stop distance from 0.24 miles to 0.46 miles Removal of 22 percent of stops Eliminate up to 69 buses 	\$9.8 million
#3. Walk Zone Audits and Modeshifting	<ul style="list-style-type: none"> Audit exceptions for 22,000 students residing in school walk boundaries Eliminate up to 282 buses 	\$40 million
#4. Diversify Modal and Vendor Mix	<ul style="list-style-type: none"> Switch more than 1,100 trips from buses to lower-cost vans or sedans 	\$13 million

* Estimated savings are not necessarily additive. Each opportunity measures the theoretical possible savings from the respective strategy when executed in isolation on the current system.

Recommendations (1 of 4)

REC 1. Align and Balance School Bell Times

- *To streamline operations and enhance efficiency, aligning and balancing bell times is needed.*

REC 2. Strategically Differentiate Service Levels and Consolidate Stops

- *The district should strategically differentiate service levels by consolidating stops in a targeted and student-specific manner (for instance, with consideration of grade level, school program, accommodation status, neighborhood, etc.) in order to increase operational efficiency and personalize service.*

REC 3. Audit Walk Boundary Safety Zones

- *The district should implement a formalized approach to auditing system-level safety zones and student-level walk boundary exceptions in order to ensure a consistent and equitable exemption process, identify instances where it is reasonable to enforce standard transportation eligibility criteria, and pinpoint areas where strategic investments in pedestrian infrastructure and/or adjustments to service design could resolve perceived safety issues.*

Recommendations (2 of 4)

REC 4. Diversify Modal and Vendor Mix

- *PGCPS should build upon nascent efforts to diversify its modal mix by increasing the use of smaller vehicles for low-density trips, thereby diminishing the demand for CDL drivers.*

REC 5. Expand Alternative Supply Options

- *PGCPS should enact an intentional strategy around promoting and supporting low-cost alternative modes of transportation for students within the district where such options make sense—delivering equivalent or better service.*

REC 6. Implement a Codified Opt-Out Practice

- **The district needs to implement a formalized process for recording ridership, daily student non-riders (chronic “no shows”), or intermittent riders. PGCPS should also actively promote an “opt-out” option and consider providing appropriate incentivizes.**

Recommendations (3 of 4)

REC 7. Strengthen Organizational Capabilities Through Strategic Staffing

- *PGCPS needs to strengthen its data and analytic capacity by providing additional training and data support for routers and supervisors, while also hiring dedicated data analysts. On the driver side, the streamlining of administrative processes and the process of qualification and hiring is critical to maximize the conversion of recruits into qualified drivers.*

REC 8. Adopt User-Centered Design to Enhance Customer Service

- *The district should design systems, tools, and processes based on the needs of students and families in order to enhance customer service, rebuild trust, and improve student transportation outcomes.*

REC 9. Streamline Technology, Providing Support & Accountability for Use

- *PGCPS has invested a great deal in hardware and software systems that can work well—albeit with some limitations—when properly configured, when infrastructure is adequate, and when users are trained, supported and held accountable for using tools with fidelity. 4MATIV recommends evaluating some system changes for implementation in FY26, but in the near term focusing on getting better use of systems already in place to enhance service delivery.*

Recommendations (4 of 4)

REC 10. Manage Performance and Enforce Accountability

- *PGCPS staff lack systematic methods of reviewing reliable performance data tied to defined KPIs. The district should define key measures that are most tied to service that schools, students and families experience, and drive towards achieving them. The district also needs to instill accountability across the department and get top-level support for improving process compliance across other functional departments like Enrollment and Special Education, the lack of which currently produces many downstream challenges for transportation.*

REC 11. Ensure Reliable GPS Tracking is Linked to Assigned Trips

- *As a top priority KPI, the district should prioritize measuring the tracking accuracy of routes and trips in real time. PGCPS must ensure GPS data flows through to correct vehicle-trip assignments, and that accurate and timely vehicle location information is available to families and schools.*

REC 12. Revise Operational Processes for Efficiency and Clarity

- *4MATIV recommends wholesale revision and redefinition of some key operational processes, tied to technology and data systems improvements recommended above, but also that which can be implemented to great effect irrespective of any changes in existing district technology systems. 4MATIV also recommends additional gap analyses to uncover other processes that may need revision and formal documentation.*



4MATIV