Bus IQ maximizer

A NEW CATEGORY OF SOFTWARE

# Transportation Savings Analytics

A method for finding, pricing, and capturing the savings hidden in a district's own operating data.

**Tabitha Martin, MBA** Founder, Bus IQ Maximizer

# Summary

Transportation is one of the largest costs a district can control,[1] and most departments can already name several ways to spend less. The hard part is knowing which change is worth the most, how it impacts service, and whether the change made last year actually paid off. Without a way to answer those, the safe move is to do nothing, and the money stays where it is.

The driver shortage only raises the stakes.[2] A department short on drivers has to cover the day with the people it has, and it makes that call under pressure, without a clear read on what's operationally achievable or what each option truly costs. Saving money and running short-handed look like different problems, but both come down to the same thing: seeing what a change actually does, and what the options are.

Bus IQ Maximizer is built for that. It reads the operating data a district already produces, prices every opportunity it finds at the district's own rates, lets a department model any change or constraint before committing, and tracks what actually gets captured after. It is a new category, transportation savings analytics, and it works beside the systems a district already runs rather than replacing them.

Every district's achievable savings sit in different places and scale with its size, so the focus is the method that finds those savings and prices them on the district's own rates. This paper covers what that method is, how a savings number is built and why it holds up a year later, and the range of where the money hides.

**FIND**

Read the feeds together and surface every opportunity, priced at the district's rates.

**MODEL**

Test any change or constraint before committing to it, with the service impact attached.

**VALIDATE**

Show the assumptions, the rates and the standards check behind every figure.

**CAPTURE**

Lock the approved value and track what actually lands against it through the year.

1 Costs for transporting public school students rose 33% between 2008 and 2018, to an average of $1,152 per student transported. Bellwether, *Splitting the Bill: How Do States Fund School Transportation?*, March 2024, citing National Center for Education Statistics. In fiscal 2022, student transportation was among the largest year-over-year expenditure increases in U.S. public schools, at 14.5%. NCES, Common Core of Data, FY 2022.

2 Transportation staff was the non-teaching position U.S. public schools found hardest to fill entering the 2024–25 school year, with 90% reporting difficulty and roughly 40% of transportation vacancies still unfilled when school began. National Center for Education Statistics, School Pulse Panel, October 2024. In the *2025 State of School Transportation Report*, 81% of district respondents called driver shortages a problem and 46% a major problem; 26% said their district had responded by cutting or shortening bus routes. Associated Press and NORC Center for Public Affairs Research.

# What Every District Already Knows, And Cannot Act On

A department can be sure the savings are there and still have no way to rank them. Ranking a list means comparing every item the same way, and there is no common yardstick for that, so one idea looks about as good as the next. The lower risk option means leaving everything alone until a budget cut forces a decision or cuts another job instead.

It is not for lack of information. Routing, telematics, and fuel and fleet records already hold the answer between them. But each system keeps its own piece, and connecting them, across every route, every run, and every day of the year, is more than anyone can do by hand at that scale.

# A New Kind of Tool

Districts have had two kinds of help with this for decades. A routing platform can suggest better routes. A study, from a consultant or an internal review, looks over the operation and data and reports back. Both are useful, and both stop short of the same thing.

What neither is built to do is keep going: read the whole operation continuously, rank every opportunity against every other, and come back a year later to confirm what actually held. Savings don't sit still, they shift with fuel, wages, ridership, and the road, so finding them once isn't the same as capturing them. That takes something that runs continuously.

Here is the question that matters: what actually ran, versus what was planned. Every day, buses fall behind. Stops run long once the weather turns. Runs that looked efficient on paper aren't. That gap between the plan and the day is where the savings hide, and Bus IQ Maximizer is built to find them there. It tracks what ran against the plan, prices the gap at the district's own rates, and keeps measuring after each change. That is why it is a category of its own: transportation savings analytics.

Maximizer is designed to elevate the outputs of current systems and engagements. A change a routing vendor or a consultant proposes can be entered and priced on the district's own rates, net of what is already committed, so outside work is measured the same way as everything else. That is the real answer to "we already have a routing system": Maximizer doesn't compete with it, it puts a number on it you can track.

# The Opportunities, Ranked and Priced

Maximizer works in a loop: find, model, validate, capture. It starts by reading the feeds together and surfacing opportunities across the whole transportation operation and pricing each one. The categories below are where the money tends to hide; how much sits in each is the district's own and scales with its size. The below is illustrative, to show the shape of opportunities.

**EXHIBIT A** ILLUSTRATIVE DISTRICT PROFILE

| OPPORTUNITY | EVIDENCE | CONF. | RISK | EST. ANNUAL HARD SAVINGS |
|---|---|---|---|---|
| **Extend the High-School Walk Zone to 1.5 Miles**<br>Policy & Eligibility<br>~450 high-school riders now walk. 7 routes retired, no ride-time change for other riders. | Validated | High | High | $393,120 |
| **Re-Bid A Bus-Service Contractor to The Market Rate**<br>Contracts & Labor<br>No rider affected. Contract rate only, 48 routes, same service. | Validated | High | Medium | $345,600 |
| **Combine Under-Filled Elementary Routes**<br>Route Consolidation<br>~900 riders, +18 min on merged runs. 18 routes become 9, longest ride 58 min, within the 60-min cap. | Modeled | Low | High | $521,640 |
| **Move A School to an Earlier Bell Tier**<br>Bell Schedule<br>~20 riders change stop or bus, school on an earlier bell. 12 buses freed by re-sequencing runs. | Modeled | Medium | Medium | $135,120 |
| **Tighten The Spare Ratio to the District Standard**<br>Fleet Right-Sizing<br>No rider affected. 3 surplus buses sold, spare ratio brought to 12%. | Validated | High | Low | $33,780<br>+ $118,200 one-time |
| **Consolidate Close-Set Stops**<br>Route Efficiency<br>~1,140 riders, −4 min, shorter rides. 382 stops merged on 28 routes, reduces demand for 4 buses and 4 drivers. | Modeled | Medium | High | $180,034 |
| **Cut Over-Limit Idling by Driver Coaching**<br>Fuel & Idling<br>No rider affected. Driver coaching on 66 routes, no service change. | Measured | High | Low | $11,499 |

Two things the list makes plain. The opportunities differ in kind, not just size, a policy change, a contract, a fleet decision, a coaching fix, each with its own risk and its own path to approval. What each is worth is the district's own, and scales with it. And every row carries its own confidence and risk, so a reader sees not just what a change is worth but how sure the number is and what it costs to act.

Notice too that the cleanest wins, the rate re-bid, the spare-ratio right-sizing, the idle coaching, move real money without touching a single rider.

# How One Number is Built

A line in a table isn't enough to act on. The moment a savings number reaches a business office or a board, it gets questioned, what it assumes, what it costs in service, how sure it is. Every opportunity in Maximizer opens into that full answer. Below is one consolidation finding, laid out the way they all are, and its hard-savings figure is only one of two kinds of savings value it carries.

**EXHIBIT B** ONE FINDING, IN FULL

## Consolidate 382 Close-Set Stops Across 28 Routes

ROUTE EFFICIENCY · 28 ROUTES · EVIDENCE: MODELED

| WHAT'S HAPPENING | THE CHANGE | WHAT IT'S WORTH |
|---|---|---|
| On 28 routes, 382 pairs of stops sit within a quarter mile of each other, and their stopping and idling adds 108 minutes a day. Merging each pair into a single stop shortens the runs. | Merging the close-set stops shortens the runs. Re-tiered, the same 28 routes fit on 4 fewer district-owned buses, and 4 driver positions come off the roster. | $180,000 a year in hard savings, plus $528,000 in one-time capital avoided, at no upfront cost. |

The savings come in two kinds, and Maximizer keeps them apart on purpose. One is money the district stops spending each year, its hard savings. The other is a one-time purchase it avoids making, cost avoidance. Adding them together would misstate what comes off the budget, so each is counted and shown on its own.

HARD SAVINGS · PER YEAR · SPENDING THAT STOPS

| | | |
|---|---|---|
| Carrying cost of 4 buses no longer run, insurance, upkeep, ops | 4 buses × $11,260 | $45,040 |
| Idle hours at merged stops | 1.8 engine-hr/day × $7.05 × 180 days | $2,284 |
| Driver demand reduces by 4 positions | 4 × 6.4hr/day × 180 × $28.80 | $132,710 |
| **Hard Savings** | | **$180,034** |

COST AVOIDANCE · ONE-TIME · SPEND AVOIDED

| | | |
|---|---|---|
| Four buses not replaced at end of life | 4 buses × $132,000 | $528,000 |
| **Cost Avoidance** | | **$528,000** |

**EXHIBIT C** CONFIDENCE, RISK, AND THE SERVICE CHECK

| CONFIDENCE | **Medium** |
|---|---|

- Modeled, priced from planning assumptions
- Counted from stop geometry against the spacing standard, not yet seen in service
- Priced on the loaded driver wage
- Bus and driver reductions modeled from re-tiering, not from route time alone
- Attributed to 28 named routes

| RISK | **High** |
|---|---|

- Needs a board vote
- About 1,140 riders change a stop or bus
- Requires a service change
- Shortens the longest ride by 4 minutes

**SERVICE STANDARDS CHECK**

The longest ride stays at 45 minutes, within the district's 60-minute ride cap.

Seats run 89% full, at or above the district's 80% utilization standard.

The district doesn't have to take the number on faith. Everything behind it, the assumptions, the rates, the service impact, is shown, so it can confirm the figure against its own operation before acting. That's the difference between a figure a model asserts and one a district can stand behind.

ON THE RECORD

Money like this normally surfaces only when a district pays for consulting or a state auditor goes looking. A 2025 state performance audit of one district found its three route tiers running at 45.1%, 56.2%, and 62.5% of seated capacity.[3] A separate consulting analysis of a district of more than 30,000 students identified approximately 50,000 driver hours as partially or fully recoverable.[4] Each was found once, by hand in the data. Maximizer runs the same search every night.

3 Ohio Auditor of State, *Bedford City School District Performance Audit*, May 2025, Recommendation 8, pp. 43–45. The audit concluded the district could eliminate three routes on each of its three tiers.

4 Forvis Mazars, "A Data-Driven Approach to School Transportation Budgets," September 2025, appendix case study.

# Bring Maximizer Any Goal, or Constraint

Not every question starts with an opportunity. More often a district starts with a number it has to hit or a change it has to absorb, and that's what the scenario builder is for. Give it the outcome, find $200,000 in savings this year, absorb a 3% budget cut, cover service on five fewer drivers, and it returns real options, each with its value and service impact attached, and stress-tests them against the futures a district can't control, all without crossing the limits the district sets.

And it doesn't hand back a single answer. It returns strategies that trade genuinely different things: one that takes every dollar whatever the disruption, one that keeps only measured and validated figures, and one that refuses to move a single rider or call a single board vote. The district picks the trade-off it can live with, the cost of each in front of it, instead of guessing under a deadline.

# From Estimate to Realized

Most savings stories stop at the estimate. A number gets presented, the change gets made, and a year later no one has checked whether it held. Maximizer keeps going. When a change is approved, its value locks at that day's figure and rates, so it can't drift as fuel or wages move. Then the actual results come back through the same feeds that found the opportunity, and what's realized is tracked against what was expected.

A district isn't trusting a projection, it's watching the real number land against it as the year runs. The savings claimed in the spring can be answered for in the fall. And what a department is left with is a single, current view of every change: what was estimated, what was approved, what was implemented, and what's been captured, in one place.

| ESTIMATED | APPROVED | IMPLEMENTED | CAPTURED |
|---|---|---|---|
| Priced at the district's rates, with the assumptions and the service impact shown. | Value locks at that day's figure and rates. It cannot drift as fuel or wages move. | The change goes live, and the feeds that found it begin measuring it. | What actually landed, tracked against what was expected, through the year. |

# Where the Method Comes From

### FINDING MONEY IN DATA

Maximizer stands on two kinds of experience, and it needs both. The first is knowing where savings hide. That comes from more than twenty years of finding money in operational data: consolidation and restructuring analysis in banking beginning in 2004, then telematics, where the work was managing operational data and surfacing opportunities to optimize operations, and then a Fortune 500 operating budget, where that analysis uncovered more than $50 million in savings. The same pattern showed up everywhere: organizations sitting on data they couldn't turn into decisions. Those are the methods Maximizer now runs on a district's transportation data.

### PUBLIC TRANSPORTATION SOFTWARE

The second is a different discipline entirely: software for critical public transportation infrastructure. The team behind Maximizer has spent 17 years building and running the systems that keep transportation operating at statewide scale, where downtime isn't an option. One strand finds the money in the data; the other knows transportation and the software that runs it. Maximizer is where the two meet.

# Prove it on Your Own Data in 30 Days

Every district's savings are its own, and the only way to know yours is to look. That's what the 30-day validation is for: a month on your data, at your rates, with the findings in front of you the whole way. No commitment, no rip-and-replace, just your own numbers, finally visible. If the savings are there, you'll see exactly where. If they're not, you'll know that too. Either way, you'll know something about your operation you don't today.

Bus IQ maximizer

BUS-IQ.COM
INFO@BUS-IQ.COM