WestEd

Colorado Department of Education (CDE): Value Assessment of a Statewide Student Information Solution

Financial Model

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Table of Contents

Executive Summary 1

Introduction 3

Methodology, Considerations, and Limitations 3

Current Reality 6

Cost Models from Other States 9

- Texas 10
- Wisconsin 11
- New Hampshire 11
- South Dakota 11
- California 12
- Applicability to Colorado 12

Total Cost of Ownership 13

- Categories of Cost 15
- Analysis of Models 15
- Breakdown by LEA Category 17
- Procurement Limitation and Waiver Consideration 18

Future Possibilities 18

- Model 1: Mandatory State-Funded Statewide SIS 19
- Model 2: Voluntary Split Cost (State/LEA Sharing) Statewide SIS 21
- Model 3: Voluntary Hybrid Model (State-Funded Core + Optional Local Add-Ons) for State Reporting 22
- Model 4: Other Technical Solutions 24
- Synthesis 26

Recommendation 27

Conclusion 27

Appendix A: State Comparison Rubric – Scores 29

Appendix B: Cost Estimation Methodology 30

Appendix C: Key Assumptions 32

Appendix D: Expanded Methodology and Data Collection Detail 33

Appendix E: State Comparison Rubric – Framework 36

Appendix F: Summary of Reported LEA Costs for SIS 39

Appendix G. Data Sources and References 40

LIST OF BOXES

What is a Student Information System (SIS)? 6

What is the SLDS grant program? 10

What is Ed-Fi? 11

LIST OF TABLES

Table 1. Colorado Baseline Costs, from the 2019 Wyant Value Assessment and 2026 Estimates 7

Table 2. Comparator States, Funding and Implementation Summary 9

Table 3. Vendor and Architecture Narratives Relevant to Colorado 13

Table 4. Comparator Cost and Staffing Signals Used to Seed Colorado's TCO 14

Table 5. Initial, 5-Year, and 10-Year TCO, by Model 16

Table 6. Per-Student Recurring Cost, by LEA Category and Model 17

Table 7. State Comparison Rubric, in Scoring Order 29

Table 8. Key Assumptions Log 32

Table 9. Governance and Control Structure Section Rubric 36

Table 10. Implementation Approach Rubric 37

Table 11. Financial Model Assessment Rubric 37

Table 12. Transferability to Colorado Rubric 38

Table 13. Additional Survey and Interview Themes 39

Executive Summary

This report is the financial companion to the Level of Effort Analysis report produced as part of the assessment of the Colorado student information solution environment. While the Level of Effort Analysis examines the operational burden of what Colorado local education agencies (LEAs) may bear under current and future-state conditions for implementing a statewide student information system (SIS) and other technical solutions, this report examines the financial implications of that burden and the potential future-state options.

Colorado's decision should not be framed as a simple choice between preserving the current environment or mandating a single statewide SIS. The research instead points to four financial models with different cost structures, political demands, and implications for the administrative burden on LEAs. These options are not mutually exclusive—Colorado could begin with one approach and evolve toward a different, permanent structure. Those models are as follows:

1. A **mandatory state-funded statewide SIS**
2. A **voluntary split-cost statewide SIS**, with costs shared between the state and LEAs
3. A **voluntary hybrid model**, in which the state funds the core function while LEAs retain local choice
4. A **technical solutions model**, in which the state modernizes reporting, validation, and interoperability without replacing the local SIS

The Total Cost of Ownership (TCO) estimates drew upon several sources, including conversations with other states, publicly available technology contract records, the 2019 Wyant Value Assessment,[1] and LEA survey and interview data.

Key comparator states included the following:

- **South Dakota** remains the clearest state-funded statewide SIS comparator. The state pays the core costs of the SIS for participating public LEAs. The executed 2025 contract amendment provides Colorado with a live pricing stack for licensing, hosting, support, training access, customization, and conversion.
- **New Hampshire** is the strongest hybrid comparator. The state implemented iNHDEX through Alma for statewide reporting while still allowing LEAs to retain local SIS choice; Alma SIS adoption is optional, but the reporting tool is statewide. Public records and

[1] Wyant Data Systems. September 2019. *Value Assessment of a Statewide Student Information System: Results and Recommendations*. Prepared for the Colorado Department of Education.

conversation evidence show both the original contract and the later amendment, as well as LEA-facing implementation and per-student pricing signals.

- **Texas, Wisconsin, and California** are the most useful comparators for Colorado if the state's near-term objective is to reduce the LEA reporting burden while preserving local control. In those states, the real transition was not to a single statewide SIS. It was to a stronger statewide data architecture and a more consistent standards model.

The 2019 Wyant Value Assessment provides the initial statewide baseline signal, but it is not a full TCO analysis. It captures contract and license costs directionally, not the migration, change-management, and state support costs that would determine whether a statewide move actually lowers total cost over five to ten years. WestEd's analysis builds on the 2019 Wyant Value Assessment to generate full TCO estimates.

The TCO results are asymmetric across scenarios. A mandatory statewide SIS produces the lowest cost at roughly $62.8M over five years and $122.9M over ten years, compared with $69.4M and $149.9M under the status quo. A voluntary hybrid model only begins to show clear 5-year savings when adoption approaches approximately 55% and becomes meaningfully more attractive at 75% uptake by LEAs. An **application programming interface** (API)/reporting-layer model is closer to cost-neutral than cost-saving in the short run, but it carries much lower migration disruption and preserves local SIS choice.

LEA survey and interview data further support that Colorado's SIS cost problem is not limited to software licensing. LEAs consistently described state reporting as a substantial staff-time obligation, often concentrated in one or two highly specialized roles, with training cycles that can take a year or longer. These responses provide qualitative support for the inclusion of hidden local labor, training, documentation, vendor support, and turnover risk in the TCO.

Based on the current evidence, the most grounded recommendation for the next phase of WestEd's analysis is to carry forward two detailed financial models:

- A **voluntary hybrid or state-funded core model** that reduces burden but preserves local control where feasible; and
- An **enhanced statewide data-layer/API model** that modernizes Colorado's existing reporting environment.

A mandatory statewide SIS should remain in the analysis as a reference model—it provides an upper-bound test of scale benefits. It should not be treated as a recommendation for Colorado, given the state's strong local-control tradition and the political complexity of a mandatory statewide procurement.[2]

[2] Colorado Taxpayer's Bill of Rights (TABOR). https://content.leg.colorado.gov/agencies/legislative-council-staff/tabor

Introduction

The Colorado Department of Education (CDE) engaged WestEd to conduct a value assessment of a possible statewide student information solution. The assessment examined the current reporting burden for Colorado's local education agencies (LEAs)[3], explored future options to reduce that burden, and analyzed the financial implications of each option. This report examines those implications and is intended primarily for CDE leadership, state legislators, and other policymakers.

The financial model report draws on several evidence streams to examine the cost implications. First, it uses the 2019 Wyant Value Assessment to establish baseline costs for Colorado. It then considers learnings from other states, which were taken from conversations or public records. Finally, it includes the LEA survey and interview data captured in the Level of Effort Analysis. Together, this information is applied to a cost-estimation methodology to construct the total cost of ownership (TCO). Once the TCO estimates are determined, we describe how the financial models would affect LEAs and the advantages and disadvantages to them.

This analysis is practical rather than theoretical. Colorado needs a decision-ready understanding of which states are comparable, which cost signals are strong enough to inform the TCO, and which future financial models are likely to be politically and operationally viable in a local-control environment.

Methodology, Considerations, and Limitations

WestEd's analysis employed a mixed-methods approach to estimate the financial impact of available options to reduce the reporting burden. The methodology was based on WestEd's proposed TCO framework and the report structure, which includes analysis of the current situation, cross-state financial models, future scenarios, and differences by LEA category. In practice, the work combines quantitative cost modeling with comparative policy and

[3] LEAs include public districts, Board of Cooperative Educational Services (BOCES), and Charter School Institute (CSI).

implementation analysis, ensuring that Colorado's decision is informed not only by costs but also by governance, rollout risks, staffing burdens, and transferability to a local-control context.

1

The first step was to **establish a baseline for Colorado**. The cost model was created using four main sources: the 2019 Wyant Value Assessment, direct LEA survey and interview data, CDE expenditure data, and vendor contract analysis. Baseline costs were grouped into six key categories: software licensing, hosting and infrastructure, support staff, training, data management, and integration. To reflect Colorado's cost structure, the methodology divided LEAs into three groups—Category 1: Rural, Category 2: Urban/Suburban, and Category 3: Denver Metro—and estimated the cost as an enrollment-weighted average of per-student costs across all LEAs. This baseline method intentionally built on the 2019 Wyant Value Assessment, which used LEA surveys, financial surveys, cross-state survey work, and Colorado focus groups to document cost variation, operational challenges, and implementation concerns.

2

The second step in the analysis was **comparing cost models from other states**. The method included a formal rubric framework for state comparison (see Appendix E) that examined governance, control, implementation, the financial setup, and how easily it could be adapted to Colorado. States were reviewed using common questions about local versus central authority, mandatory versus voluntary participation, funding at the start and over time, whether the rollout was phased due to budget constraints, and factors that affected implementation costs. This work expanded the cross-state evidence through conversations with other states, including California, New Hampshire, South Dakota, Texas, and Wisconsin, and review of public records in Arkansas, Arizona, New Hampshire, North Carolina, South Dakota, and Texas (see Appendix G). Each state demonstrated different ways to balance local SIS choices, state reporting needs, and ongoing support responsibilities.

3

The third step was **developing a TCO for various models**. The methodology included four models: the status quo; voluntary statewide SIS adoption; mandatory statewide SIS adoption; and alternative technical solutions, such as enhanced API connections, shared services, or an improved Data Pipeline. For each model, the TCO distinguished between one-time implementation costs and recurring annual costs. One-time costs included procurement, data migration, configuration, initial training, infrastructure, and change management. Recurring annual costs included licensing, hosting, technical support, continuous training, and maintenance or upgrades. Public records provided pricing benchmarks where available, while insights from conversations with other states helped estimate staffing levels, training requirements, vendor coordination, and rollout complexity. The goal was to compare not only total costs but also the cost-sharing between the state and LEAs under different participation and funding arrangements.

4

The final step was **adjustment and sensitivity tests**. The methodology incorporated Colorado-specific factors such as geography, LEA size variation, local-control expectations, existing Data Pipeline infrastructure, and staff capacity differences, especially for smaller rural systems. It then evaluated the variables most likely to influence the outcome: adoption rate, per-student licensing, implementation timeline, state versus LEA cost sharing, and training costs per user. Outputs included funding model comparisons, break-even analyses, and risk-adjusted cost ranges.

A key consideration was that other states' experiences are informative but not directly transferable to Colorado. Transferability is constrained by factors like scale, governance, and funding context. Colorado's local-control tradition, existing Data Pipeline investments, and variation in LEA size mean that state examples cannot be copied outright. States can offer benchmarks for prices and structures but cannot offer a plug-and-play estimate for Colorado.

Additional considerations and limitations include the following:

- Limited financial information was collected from Colorado LEAs. This creates a constraint in understanding the dynamics of cost and modeling those scenarios reliably across the variation in the LEA context. The most reliable costs were available in the 2019 Wyant Value Assessment.
- The 2019 Wyant Value Assessment is useful for baseline directional cost comparisons, especially by LEA category, but it explicitly excludes migration costs, implementation costs, and CDE's long-term operating burden.
- The five comparator states are not all examples of the same thing. South Dakota is a true statewide SIS comparator; New Hampshire is a hybrid reporting layer plus an optional SIS comparator; California, Texas, and Wisconsin are closer to statewide reporting and interoperability models than to a statewide SIS.
- Several public records provide strong directional cost signals, but exact annual operating costs are still uneven across states. New Hampshire and South Dakota provide the strongest current pricing evidence; Texas and Wisconsin provide stronger staffing and governance signals than license-price transparency.
- Some assertions in the supplemental project materials, especially those supplied by vendors or in vendor conversations, should be treated as informed inputs rather than independently verified facts. Those statements are still useful for model design, but they should not be treated as final procurement assumptions without validation.
- Although the LEA survey and interview data should not be treated as statistically representative, the responses were highly consistent in identifying the same cost drivers: staff time, peak reporting windows, reliance on specialized local knowledge, uneven documentation, and training burden. These findings are used as qualitative validation of the TCO categories rather than as direct cost inputs.

Current Reality

Colorado is a local-control state, meaning that its laws and governance requirements operate on the premise that local government jurisdictions, such as LEAs, have the foremost right and responsibility to make choices about schooling before the state. In Colorado, this is established most notably by TABOR, which imposes a strong local-control culture.

Under this structure, LEAs maintain a local SIS and submit state reporting through the Data Pipeline. That structure works, but it shifts a large share of the reporting burden to LEAs. The burden is not simply software licensing—it includes extraction, validation, reconciliation, resubmission cycles, staff time, and local integration work. CDE staff must also ensure data quality and alignment across LEAs, which requires ongoing reconciliation work with individual LEAs. Details about the state-reporting process and the non-monetary burden it has on LEAs can be found in the Level of Effort Analysis report, while the monetary implications will be the focus of this report.

What is a Student Information System (SIS)?

A student information system, or SIS, is a software application used to collect, store, manage, and provide access to student data. It typically contains information such as courses, grades, transcripts, schedules, attendance, and student contact information, accessible to LEA administrators, teachers, and support staff. Beyond managing student records, many LEAs rely on their SIS for family communication, online registration, teacher grade books, food service and meal account management, transportation, and human resources (HR) or payroll functions.

In Colorado, there are at least five vendors providing SISs to LEAs. Infinite Campus is the most widely used system (45% of LEAs), followed by Alma (26%) and PowerSchool (21%). The SIS relationship is long-term, with most LEAs holding on to their SIS for 10 or more years (56%), but about 20 percent have changed their SIS in the last 3 years.

The reporting burden exists within a broader fiscal environment that compounds the pressure on LEAs and the state. Colorado is facing financial strain on the state budget due to decreasing tax revenue. Unlike other sectors, public education operates with little to no margin between operating revenue and operating expenditure. Therefore, when tax revenues are constrained by economic or other financial circumstances, the likelihood of revenue volatility increases. This is compounded by declining enrollment. Student counts are the primary mechanism through

which funding is allocated to schools. When the state's student enrollment figures dropped from 910,280 to 870,793 over a seven-year period, this represented reduction in the funding base for LEAs.

The 2019 Wyant Value Assessment provides the baseline for this analysis; those figures, adjusted for inflation, inform the 2026 cost estimates in Table 1. These data show that Category 1: Rural LEAs carry the highest relative financial burden under the current decentralized model. Category 3: Denver Metro LEAs may still benefit from statewide alignment, but their short-run economics are more complicated given the interfaces, customizations, and process investments already in place, which may raise transition costs.

Table 1. Colorado Baseline Costs, from the 2019 Wyant Value Assessment and 2026 Estimates

Metric	2019 Value	2026 Value[4]	Implications for Current Analysis
Total PK–12 public school Colorado student count	910,280	870,793	Provides the statewide denominator for model sizing
Survey-based LEA student count	447,201	NA	Indicates the subset from which anecdotal cost evidence is collected
Average LEA per-pupil cost	$10.64	$13.77	Directional baseline for current-state contract/license cost
Illustrative statewide cost	$9,689,004	$12,534,761	Directionally useful but not full TCO
Illustrative statewide cost at national average	$5,261,418	$6,806,749	Shows possible economy-of-scale upside only
Potential annual savings gap	$4,427,586	$5,728,012	Illustrative gap only; does not account for migration, support, or implementation costs
Category 1: Rural LEA per-pupil cost	$18.22	$23.57	Strongest evidence of disproportionate financial burden
Category 2: Urban/Suburb per-pupil cost	$6.08	$7.87	Intermediate cost structure
Category 3: Denver Metro per-pupil cost	$7.63	$9.87	Lower than rural LEAs, but often more integrations and customization

[4] Values were inflated using the Denver Metro Area consumer price index (CPI) changes between 2019 and 2026 (March). Colorado commonly using the CPI values published by the U.S. Bureau of Labor Statistics to inflate costs statewide based on the Denver Metro Area figures. Raw data retrieved from the U.S. Bureau of Labor Statistics.

Colorado has considered a **statewide SIS** on multiple occasions, most recently through the 2019 Wyant Value Assessment and the current WestEd assessment. The statewide SIS would serve two functions. For LEAs, it could replace their local SIS as the system of record for day-to-day student data management. For CDE, it would serve as the primary source for state data collection, replacing the current Data Pipeline submission process. This could be mandated, requiring all Colorado LEAs to adopt the SIS, or voluntary, where LEAs could choose to opt in.

A statewide SIS has fiscal implications. By purchasing on behalf of LEAs, CDE could negotiate a lower per-license cost and more features or modules than individual LEAs would achieve independently. However, Colorado's real financial question is not simply whether statewide buying power lowers the SIS licensing price—it is whether statewide or shared-state approaches reduce the TCO once implementation, migration, staffing, governance, and training are accounted for.

A more modern alternative to a statewide SIS is an **application programming interface, or API**. An API is a mechanism that allows two or more computer systems to communicate and exchange data automatically. Think of an API as a waiter in a restaurant. A waiter would take the order, communicate the request to the kitchen, and deliver the prepared food back to you. Similarly, an API is that critical link between the request for data, the system that has that data, and the response with the returned data. In an education data context, an API connection between a local SIS and a state data system could allow student data to flow automatically from the LEA to the state on a frequent basis, rather than through periodic file extractions and submissions.

The financial implications of using an API for the reporting layer are more complicated. CDE wouldn't purchase a system. Rather, CDE—either internally or with a vendor–partner—would work with the local SIS vendors to implement and maintain an API connection between the local SIS and the state system. If Colorado adopts a data standard, CDE could leverage the API work being done in other states. That would make it easier for local SIS vendors but also give CDE access to free support, code, and training on the API technology, which is new to CDE.

The 2019 Wyant Value Assessment cautions against treating its numbers as a complete reflection of statewide financial impact. The reported figures are largely contract and license comparisons. They do not include LEA migration work, change management, CDE support staffing, or long-term state operating needs. That means the study is best used as a baseline rather than as proof that a statewide SIS would automatically save money.

Cost Models from Other States

The comparator states represent a range of approaches, from statewide SIS implementations to API-based reporting layers, all operating under varying degrees of local control. Those are not interchangeable examples, and this analysis clearly distinguishes between them. When evaluated against the state comparison rubric (see Appendix E), the state that scored highest in terms of being comparable to Colorado is Texas, followed by Wisconsin, New Hampshire, South Dakota, and California (see Appendix A). Table 2 summarizes the funding and implementation approach for each comparator state. Details about the reporting process from these states can be found in the Level of Effort Analysis report.

Table 2. Comparator States, Funding and Implementation Summary

State	Governance/ Participation	Initial Funding	Ongoing Funding	Colorado Implication
TX	Local-control state; no statewide SIS; mandatory state reporting architecture	SLDS + Dell grant support + legislative and IT funding	State-funded platform; LEAs continue to pay local SIS and some regional support/training costs	Best comparator for data-pipeline modernization rather than one common SIS.
WI	Local SIS choice from certified vendors; Ed-Fi/API reporting model	Legislative appropriations + Dell support + SLDS grant inputs	Legislative appropriations sustain WISEdata/WISEdash; LEAs pay local SIS only	Strong API/district-dashboard comparator for Colorado.
NH	Statewide reporting solution with local SIS choice; Alma SIS optional	FY19 SLDS grant and statewide procurement	State supports iNHDEX/core systems; LEAs adopting Alma SIS pay ongoing per-student costs; state subsidized implementation for some adopters	Best hybrid comparator.
SD	Statewide SIS; originally opt-in; now effectively universal except two LEAs	Governor- and legislature-backed initial statewide investment	General fund appropriation pays core licensing, support, and hosting; LEAs pay add-ons/customization	Best statewide-SIS benchmark for pricing and state-funded core structure.

State	Governance/ Participation	Initial Funding	Ongoing Funding	Colorado Implication
CA	Local SIS choice; mandatory CALPADS reporting layer	Initial SLDS-era build funded over multiple years	Mixed state and federal support, plus county-office service model and district vendor customization costs	Strong example of a local-control state modernizing the state layer.

What is the SLDS grant program?

The Statewide Longitudinal Data Systems (SLDS) Grant Program is a federal grant program administered by the National Center for Education Statistics (NCES) within the U.S. Department of Education. Its purpose is to help states design, develop, implement, and expand longitudinal data systems that can track student records over time—from early learning through the workforce. States have used SLDS funding for a wide range of data infrastructure work, including supporting the technology needed to collect and manage student data at the state level.

Texas

Texas is the strongest comparator for a local-control, API-first modernization path. The state did not move LEAs to one statewide SIS. Instead, it modernized the Texas Student Data System (TSDS) by adopting current Ed-Fi standards, an operational data store, and API-based data loading. The work was financially supported by the Michael and Susan Dell Foundation, and a federal SLDS grant. Ongoing maintenance is state supported, while LEAs continue to pay for local SIS and support costs. The Texas lesson for Colorado is that meaningful reporting burden reduction can come from changing the state reporting layer rather than the SIS market.

Texas also provides an important caution. The move from flat-file submissions to API-based workflows was technically feasible, but the first year of the recent upgrade was described as “very bumpy.” Vendor readiness, timing, parallel operations, and production support all mattered more than the conceptual architecture. That means Colorado should treat implementation support and vendor engagement as first-order budget categories in any API strategy.

What is Ed-Fi?

Ed-Fi is an open-source data standard and technology framework designed to support the exchange of education data between systems. It provides a common data standard and a deployable technology stack, including an Operational Data Store (ODS) and API that systems can connect to in order to exchange data in a consistent format. Ed-Fi is maintained by the Ed-Fi Alliance, a Michael and Susan Dell Foundation initiative.

Wisconsin

Wisconsin is a strong architectural comparator for Colorado because they both preserve local choice while making state-submitted architecture mandatory. Wisconsin considered implementing a statewide SIS but ultimately decided to pursue the Ed-Fi API. Wisconsin's WISEdata focuses on data standards, vendor readiness, and repeatable validation. Wisconsin adds a particularly useful district-facing dimension because its WISEdash environment is designed to return value to LEAs, not just to collect compliance data.

New Hampshire

New Hampshire is the strongest hybrid comparator because it solved the statewide reporting problem without mandating one SIS for all LEAs. The state replaced an aging, home-grown tool that had significant technical debt and security issues. It procured a state reporting solution, which it calls iNHDEX, through Alma. LEAs that use the Alma SIS receive a more seamless experience in iNHDEX, but non-Alma LEAs still participate through the statewide portal. iNHDEX was phased in over several years, and LEAs retained local control over their SIS products.

This is especially relevant to Colorado because it shows how a state can reduce burden, improve data quality, and still preserve local choice. The public contract and amendment history also show the financial reality of a hybrid build: it can begin with a comparatively modest public award, but the total cost expands as implementation matures and the state broadens its scope.

South Dakota

South Dakota is the clearest direct comparator for a state-funded core statewide SIS. Implemented around 2000, all but two LEAs have now opted into the statewide SIS. The LEAs use a local version of Infinite Campus that essentially syncs in real time with the state version of Infinite Campus. The Department of Education can assess and use the data from the state version. South Dakota's model is straightforward: the state pays for the core product, hosting,

support, and any transitional costs under the current contract structure, while LEAs bear the cost of add-ons and customization.

For Colorado, South Dakota's greatest value is that the current contract provides live pricing for a real statewide core model. It also demonstrates that the statewide SIS can materially reduce data movement and the need for separate reporting-file exchanges. The caution concerns governance and vendor dependence: once the state purchases a statewide SIS, it also bears the political and operational consequences when LEAs seek new functionality or when the vendor fails to meet contract requirements and expectations.

California

California is not a statewide SIS comparator in the narrow sense, but it is a powerful comparator for state-layer modernization. CALPADS has become a high-value statewide reporting and accountability platform while LEAs continue to use many local SIS products. The key California lesson is that architecture matters: moving validations, simplifying the backend, and reducing processing time changed LEA experience even without replacing local systems. California's support model is also instructive. A strong state layer still requires sustained funding, a real service and training function, and the capacity to respond to frequent policy change.

Applicability to Colorado

Colorado is most comparable to other local-control states on governance and LEA choice. It is less comparable when the question is whether the state can mandate one common platform. That does not make a statewide SIS impossible, but it does mean that transferability depends heavily on model type.

- **Most transferable for a local-control modernization path**: Texas, Wisconsin, Arizona, and California.
- **Most transferable for a hybrid funding model path**: New Hampshire, supplemented by some lessons from South Dakota.
- **Most transferable for a full common-platform reference case**: South Dakota as a recent implementation benchmark.

Colorado-specific factors reinforce these conclusions. The state already has a statewide data infrastructure through the Data Pipeline, a strong local-control tradition, wide variation in LEA size, and likely sensitivity to state appropriations risk. Those factors make it especially important that the next phase compares not just one statewide-SIS future, but multiple statewide burden-reduction futures.

Relatedly, Table 3 summarizes the vendor and architecture narratives most relevant to Colorado's decision.

Table 3. Vendor and Architecture Narratives Relevant to Colorado

Vendor	Role in the Market	Relevant Evidence	Colorado Implication
Alma	Hybrid reporting-layer and optional cloud SIS	New Hampshire iNHDEX implementation; conversation with Alma indicates ability to support state reporting without mandating Alma SIS	Best benchmark for a hybrid Colorado model that preserves local choice.
Infinite Campus	Common SIS/state-edition platform	South Dakota statewide implementation and executed contract; North Carolina rollout as large-state benchmark	Best benchmark for a common-platform procurement and for state-funded core plus add-on models.
PowerSchool	Large incumbent SIS and adjacent platform vendor	Public state contracts and current market presence; also, parent company for Naviance	Important in vendor scanning and migration-risk assessment, even where the comparator state is not a clean statewide SIS example.
Naviance	College and career readiness platform PowerSchool product	Arkansas contract and state-funded local-choice model	Not a direct core SIS comparator, but useful for understanding state-paid local-choice platform design.
Ed-Fi API ecosystem	Open standard/ interoperability architecture	Arizona, Texas, Wisconsin, and other public records	Most useful as an architectural alternative rather than a software procurement line item.

The state comparator evidence points toward multiple viable paths rather than a single statewide SIS. The following TCO analysis tests those paths against Colorado's specific cost conditions, using the state signals above to anchor assumptions.

Total Cost of Ownership

For this analysis, the total cost of ownership (TCO) includes both one-time implementation costs and recurring annual operating expenses. The TCO separates procurement, migration,

configuration, training, infrastructure transition, and change management from ongoing licensing, hosting, technical support, training, and maintenance. It also incorporates a hidden-local-burden factor into the Colorado baseline because the 2019 Wyant Value Assessment explicitly excluded migration, CDE support, and much of the local labor involved in validation, reconciliation, and repeated submissions.

Drawing on the comparator state evidence presented above, Table 4 summarizes the cost and staffing signals used to inform the TCO analysis. Eight usable signals emerged across six comparator states. New Hampshire offers the cleanest public procurement benchmarks for a hybrid/core build; North Carolina provides a lower-bound recurring suite price; South Dakota confirms that centralized training remains a real state cost; and Texas, Arizona, and California are more useful as implementation and architecture signals than as direct recurring price anchors. Those signals were combined with the Colorado baseline and key assumptions (Appendix C) to generate the TCO.

Table 4. Comparator Cost and Staffing Signals Used to Seed Colorado's TCO

Signal Source	Observed Figure	Type of Signal	How it Helps Colorado
California Interview	~ $13–14M initial over 5 years; ~ $3.5M county–office support; ~ $6.3M federal support; ~ $1.8M state support	State-layer build and annual operating support	Useful for staffing and support estimates in a reporting-layer model.
New Hampshire Public Award	$2,489,900 original public award	Initial statewide reporting-layer procurement	Useful lower-bound public benchmark for a smaller hybrid implementation.
New Hampshire Public Amendment	$6,619,900 amended ceiling	Scope growth/price limitation change	Shows that implementation expands over time even in a smaller state.
New Hampshire Interview	~ $500k state implementation; ~ $400k hosting; ~ $50k training; ~ $9/student Alma SIS	Operational and district adoption signal	Useful for hybrid model assumptions and district incentive design.
North Carolina Pricing	$1.50 per ADM for NCED Connect suite	Recurring annual benchmark	Good lower-bound recurring-cost analog for statewide licensed suite pricing.
South Dakota Contract	$2.00 state license + $3.00 district license + $1.00 hosting + support rates and $100,000 annual resource fee	Live statewide SIS pricing stack	Best current benchmark for a state-funded core/common-platform model.

Signal Source	Observed Figure	Type of Signal	How it Helps Colorado
Texas Interview	Approx. 22–23 FTE in TSDS support structure plus 20 regional Education Service Centers (ESAs)	State staffing and regional support model	Shows that a standards/API model still needs real operating capacity.
Wisconsin Interview	10-person support team + supervisor; 5,000–6,000 tickets/year	Support and training signal	Useful for estimating partner support and help-desk needs in an API model.

Categories of Cost

The types of costs in the TCO were identified from various sources, such as state comparisons, LEA survey and interview data, and resource codes in CDE's financial system. These cost categories were as follows:

- Compensation for personnel responsible for or working on these systems.
- Software and vendor cost, covering updates and new features.
- Technology infrastructure, including hardware, data storage, and related components.
- Audit, compliance, and monitoring costs associated with data accuracy and state reporting requirements.

Maintaining the existing decentralized environment carries its own transition and continuity costs. LEA surveys and interviews suggested that, even without a statewide system change, LEAs incur recurring costs when specialized staff leave, when documentation is incomplete or outdated, when collections change, and when LEAs must purchase vendor support, consultant help, or additional training to keep pace with reporting requirements. These costs are often not captured in SIS license figures but still affect the overall cost of operating the current decentralized structure.

Analysis of Models

With the TCO framework established and the assumptions documented in Appendix C, the analysis turns to whether a statewide SIS would reduce the overall cost burden relative to the current decentralized structure. Table 5 presents the cost comparison across the options over five- and ten-year horizons. Each model carries a different balance of cost, disruption, and political feasibility.

Table 5. Initial, 5-Year, and 10-Year TCO, by Model

Model	Initial / Year 1 recurring	5-Year TCO	10-Year TCO	Read-through
Status quo	$0.0M initial; $13.1M recurring	$69.4M	$149.9M	Keeps current local contracts and modeled hidden burden.
Voluntary hybrid – 25%	$6.4M initial; $12.3M recurring	$71.9M	$147.7M	Useful lower-bound voluntary case; still above status quo at 5 years.
Voluntary hybrid – 50%	$7.8M initial; $11.7M recurring	$69.7M	$141.4M	Near break-even over 5 years; stronger over 10 years.
Voluntary hybrid – 75%	$9.2M initial; $11.0M recurring	$67.5M	$135.1M	Begins to show clear savings if adoption is broad.
Mandatory statewide SIS	$11.0M initial; $9.8M recurring	$62.8M	$122.9M	Lowest modeled TCO, but highest migration and governance burden.
API/reporting layer	$5.8M initial; $12.5M recurring	$72.3M	$149.3M	Lower-disruption modernization path; closer to cost-neutral than cost-saving.

The **mandatory statewide SIS model** generates the lowest TCO, with $11.0M in one-time implementation costs, $9.8M in Year 1 recurring costs, $62.8M over five years, and $122.9M over ten years. Relative to the status quo, the mandatory SIS model reduces the cost burden over five years by 9.6% and 18.1% over ten years. The important caution is that these savings do not appear automatically. They depend on the state absorbing transition cost, on effective migration and change management, and on the assumption that a common platform materially reduces local duplicate effort. Said another way, high-quality and efficient implementation increases the likelihood of realizing these identified cost reductions.

The **voluntary hybrid model** is more politically plausible in a local-control environment but more sensitive to adoption costs. If 25% of LEAs adopt the statewide SIS, the TCO remains above the status quo at $71.9M over five years. At 50% adoption, it reaches a near break-even at $69.7M, and at 75% adoption it becomes a clearer improvement at $67.5M over five years and $135.1M over ten years.

The **API/reporting-layer model** is not a short-run savings story in the analysis ($72.3M over five years), but it is close to cost-neutral over ten years ($149.3M versus $149.9M under the status quo), and it carries much lower migration disruption. This means it is less vulnerable to differences in transition quality than the hybrid model.

The central financial implication is therefore not that one option is universally cheaper. The mandatory statewide SIS model shows the strongest long-run cost reduction; the voluntary hybrid model becomes financially credible only when adoption is broad enough; and the

API/reporting-layer model should be understood primarily as a burden-reduction and modernization strategy rather than as an immediate cost-cutting strategy.

Breakdown by LEA Category

The financial objective is not only statewide savings in the aggregate—Colorado also needs to consider that the costs and benefits of any model are not evenly distributed across LEA categories. **Error! Reference source not found.** presents the category-level recurring cost comparison across the different options. A model that lowers the burden on the smallest LEAs but increases it on the largest LEAs may still be justified, but only if the state is explicit about how costs, support, and flexibility are shared.

Table 6. Per-Student Recurring Cost, by LEA Category and Model

LEA Category	Status Quo	Voluntary Hybrid SIS	Mandatory Statewide SIS	API/ Reporting Layer	Primary Financial Implication
Category 1: Rural	$26.42	$15.69	$11.79	$23.48	Largest upside under common or hybrid models; strongest equity case for state support.
Category 2: Urban/Suburban	$7.90	$9.61	$10.18	$8.26	Mixed economics: hybrid and API models are easier to stage than a full common platform move.
Category 3: Denver Metro	$9.54	$10.25	$10.93	$9.92	Migration complexity and sunk integrations remain the largest caution in centralized models.

In the TCO analysis, Category 1 LEAs are the clearest economic beneficiaries of stronger statewide services, because their recurring cost burden is much higher than that of other LEAs. Category 2 and Category 3 LEAs show a more mixed result. The financial case depends less on raw license savings and more on whether statewide alignment actually offsets the costs of local integration, migration, and change management.

LEA survey and interview responses reinforce the category-level cost logic. Category 1 LEAs more often described thin staffing, one-person dependency, limited IT capacity, and reliance on external support. Category 2 and Category 3 more often described internal teams, cross-training, and specialized staff but also more complex integrations, distributed reporting responsibilities, and larger sunk investments in local processes. This pattern supports differentiated assumptions for adoption, cost-sharing, and implementation by LEA category.

Procurement Limitation and Waiver Consideration

Colorado's procurement requirements dictate when contracts expire and must be rebid. For a statewide SIS or any solution that relies on a vendor, this poses meaningful financial risk: if a rebid results in a new vendor being selected, LEAs that adopted the system would face a second transition with the same operational and financial disruption as the first.

These transition costs are not limited to data migration and vendor implementation. The LEA survey and interview data suggested that staff onboarding for reporting roles is a significant effort. Several LEAs estimated that a new lead would need at least a year in that role before becoming fully effective. When an SIS changes, retraining is required for everyone who uses the system, including teachers, administrative staff, and guardians. Some LEAs have invested heavily in their SIS, including custom integrations and workflows that would have to be redesigned or rebuilt for a new system. Procurement churn and the possible system transition are therefore meaningful cost drivers in any path that would require recurring rebids, platform changes, or large-scale retraining.

To avoid the churn, CDE could pursue options to extend the contract end date or address the requirement to rebid. For example, CDE could seek a waiver to extend the contract deadline beyond the standard procurement cycle. Another option available to some states is a sole-source designation, which may have minimal requirements to rebid. Either path would likely need CDE to coordinate with Colorado's procurement office prior to contract solicitation.

Future Possibilities

The central question for Colorado is not whether greater statewide coordination around SIS could create value. The evidence assembled in the 2019 Wyant Value Assessment suggests that it could. The more consequential question is what form that coordination should take in a state where local control remains a powerful organizing principle, where LEA conditions differ sharply across geography and size, and where the current SIS landscape reflects both meaningful local investment and fragmentation.

Colorado's environment is not one in which a single financial model can be judged in the abstract. The state's operating conditions shape what is financially viable and what is not: high variation in local capacity, substantial disparities in per-pupil SIS costs, persistent reporting and validation burden, and uneven appetite for statewide standardization. Each model must be assessed against those conditions rather than on its theoretical merits alone.

Model 1: Mandatory State-Funded Statewide SIS

Analysis

A fully state-funded model offers the clearest path to a more coherent statewide architecture. Under this approach, Colorado would procure, fund, and support a statewide SIS platform, with the state assuming primary responsibility for the core software, statewide customizations, and at least a portion of the training and support structure. The strongest case for this model is not simply that it may lower software prices—it is that it creates the greatest opportunity to convert a decentralized collection of locally optimized systems into more coherent public infrastructure. Several of Colorado's most persistent reporting challenges point in this direction: duplicative interfaces, uneven access to modules and support, recurring validation burden, weak interoperability between systems, inconsistent student transfer processes, and the labor associated with manual state-facing processes such as assigning students a unique state ID and handling special education data. A fully state-funded model offers the most direct means of addressing those burdens by allowing the state to align procurement, governance, support, and technical priorities within a single framework.

At the same time, this is also the model that most directly collides with Colorado's political and organizational realities. The 2019 Wyant Value Assessment found that many LEAs preferred a state-funded model in principle but also viewed it as the least realistic in practice. In WestEd's work, participants from LEAs believed that a statewide SIS would meaningfully reduce the burden (68%), but they did not find this option feasible (38%). They noted that SIS transitions are difficult, require multiple years of sustained financial commitment, and affect local control. That gap matters. A state-funded system would require the legislature and CDE to accept a large and continuing role in what has historically been a locally managed domain. It would also require LEAs to trust that the state can deliver not only a lower-cost solution, but a better one. In other words, this model offers the highest possible upside, but also the greatest implementation challenge.

LEA survey and interview data suggest that a mandatory state-funded model would be most valuable where the current environment relies on one or two specialized staff members and local IT capacity is thin. However, the same data show that larger LEAs have built substantial local staffing, integration, and training structures around their current SIS environments. That evidence supports treating the mandatory statewide SIS as the highest-upside but highest-transition-risk scenario.

Differences Across LEAs

A state-funded model would not affect all LEAs equally—and that asymmetry matters for both the financial case and the political one.

Category 1: Rural LEAs, especially outlying towns or remote areas, would likely benefit the most. The evidence in the 2019 Wyant Value Assessment is clear: these LEAs have the highest per-pupil SIS costs and often have the least access to staffing, validation tools, interfaces, and specialized supports that larger systems can maintain. For them, a state-funded model could do more than just reduce costs—it could expand access to functionality and supports that larger LEAs already consider standard operational infrastructure.

Category 2: Urban/Suburban LEAs would also see meaningful gains, though the case is somewhat different. These LEAs stand to benefit from lower cost, stronger support, and more consistent statewide processes, but they are less structurally disadvantaged than the smallest rural systems.

The more varied response would likely come from **Category 3: Denver Metro LEAs**. These LEAs have made significant investments in customizations, interfaces, staffing structures, and routines for their SIS environments. The main concern is not just licensing costs. It is the risk of losing the return on prior investments, reworking mature local processes, and facing migration and retraining expenses in exchange for a statewide SIS whose value might be clearer to smaller LEAs than to larger ones. In Colorado, the same model that may seem like fair access to a smaller LEA might feel like disruption and stranded investment to a large metropolitan LEA.

Advantages and Disadvantages

The main advantages of a state-funded model are coherence, equity, and negotiating power. This model provides the best opportunity to reduce statewide fragmentation, the strongest method for equalizing access to essential SIS functions, and the greatest procurement leverage with vendors. It also offers the most feasible path toward common integrations, fewer custom state-specific solutions, and a more disciplined statewide governance structure for change management, training, and support.

Its weaknesses are equally clear. The model demands the largest state commitment, the highest level of support from both the executive and legislative branches, and the most disciplined statewide change-management effort. Its greatest weakness is implementation risk. If procurement is weak, the migration is rushed, or LEAs believe they are being asked to give up an effective local SIS in favor of an unproven statewide promise, political resistance could be significant. In Colorado, this is the model with the highest potential, but also the highest hurdle for success.

Model 2: Voluntary Split Cost (State/LEA Sharing) Statewide SIS

Analysis

A split-cost model assumes the state covers core infrastructure, statewide integration, and at least part of licensing, while LEAs cover local training, optional functionality, and local implementation work. It is a way to share costs without implying that all LEAs receive the same value from day one. Under this structure, the state centrally procures and supports a statewide SIS platform while sharing ongoing costs with LEAs—preserving the benefits of statewide coordination while lowering the state's fiscal burden and reducing the perception of full state control over local systems. A split-cost model can be framed less as centralization for its own sake and more as a jointly financed efficiency strategy.

This model also aligns closely with the 2019 Wyant Value Assessment's conclusion that many Colorado interest holders view split funding or centrally procured options as more realistic than a wholly state-funded system. In many respects, it is the model most consistent with the state's political temperament, acknowledging that the state may need to play a stronger coordinating role while stopping short of full state financing. It may therefore offer a more viable way to move from conceptual support to actual adoption.

The main challenge is that split-cost models rely heavily on participation incentives. If the local share is too high, smaller LEAs may still struggle to join. If the state share is too low, the model might not reach the widespread adoption needed to achieve full economies of scale. If large LEAs opt out, the state could still gain some pricing benefits, but the system-level coherence that makes statewide platforms most effective would be lost. This means that a split-cost model cannot be judged solely by whether it reduces state spending. Instead, it must be evaluated on whether it sufficiently influences LEA behavior to drive meaningful participation. In Colorado, that is the central design question.

LEA survey and interview data suggest that a uniform LEA cost share could underperform. Smaller LEAs may need a larger state subsidy because they lack the staffing depth to absorb the costs of migration, training, and documentation. Larger LEAs may require a different incentive structure: lower licensing costs alone may not be persuasive unless the model also reduces reporting, integration, and validation burden.

Differences Across LEAs

For **Category 1: Rural LEAs**, even partial state support could offer significant practical benefits. Since their current per-pupil SIS costs are the highest of the three categories, these LEAs do not need a fully subsidized system to see value, but they do require a low enough cost share to make participation substantially easier than the current situation. The model's appeal relies on two conditions: it must cost less than current arrangements and provide access to stronger functionality and support than they could sustain independently. These LEAs might need a

more generous state share because they are less able to absorb the initial costs, including data migration and staff training.

Category 2: Urban/Suburban LEAs might be the clearest fit for this model. They are large enough to need functionality and stability, but typically lack the scale to fully benefit from highly customized local arrangements. A split-cost system could give them better value, especially if it offers stronger support, shared integrations, and some relief from the current reporting burden.

Category 3: Denver Metro LEAs would remain the most cautious. Their local investments are more extensive, their systems are more deeply integrated, and their purchasing power, given enrollment size, is strong. While they might see that a split-cost model allows more local control over optional features and pace, a lower price alone is unlikely to be sufficient. The model should offer meaningful relief from state reporting, integration, and customizations to be truly appealing.

Advantages and Disadvantages

The primary benefit of a split-cost model is its practicality. It offers Colorado a more achievable alternative to a fully state-funded approach while preserving the advantages of centralized procurement, shared support, and gradual implementation—important qualities in a state where migration timing and local readiness vary across LEA categories. Because LEAs retain a financial stake in the platform, this model may also be easier to justify in a state that values local ownership and discretion.

The primary weakness is that it might create the same unevenness it aims to reduce. If the cost-sharing formula is not carefully designed, LEAs with the greatest needs may still find participation difficult, while LEAs with the greatest capacity might decide they do not need to participate. The outcome would be a middle ground that is more financially manageable but less functional. In Colorado, a split-cost model is appealing precisely because it is more realistic. However, realism alone does not ensure enough participation to transform the system.

Model 3: Voluntary Hybrid Model (State-Funded Core + Optional Local Add-Ons) for State Reporting

Analysis

This model is well supported by the evidence. A hybrid approach can mean either a statewide reporting system with optional SIS adoption or a statewide product with optional local add-ons. New Hampshire and South Dakota both demonstrate variants of this logic.

A hybrid model may be the strongest long-term fit for Colorado because it addresses the state's central tension: the desire for greater statewide coherence without fully abandoning local discretion. Under this approach, the state would fund a common set of functions while allowing LEAs to opt in or purchase optional add-ons, modules, or expanded functionality beyond the core. This model attempts to separate what CDE needs most, which can be state-funded, from what it may still be reasonable to leave to local control.

In effect, this is as much a governance design as a financing model—and that distinction matters in Colorado. Many of the state's most persistent SIS-related challenges are not linked to every possible feature of the platform. Instead, they revolve around a clearer set of statewide concerns: reporting workflows, validation cycles, student transfers, state ID processes, cross-system interoperability, and the inconsistent availability of core functions such as online registration and integrated tools. A hybrid model enables Colorado to prioritize the components that most directly reduce reporting burdens, while LEAs retain discretion over features and local improvements that are less critical to statewide requirements.

But that strength is also its administrative challenge. A hybrid model only works if there is clear discipline around what belongs in the core and what belongs outside it. Without that discipline, the model risks becoming a layered compromise that gradually reproduces fragmentation under a different label.

LEA survey and interview data suggest that the state-funded core should not be defined narrowly as a software license. The core should include reporting workflow support, common validation tools, collection calendars, shared documentation, training assets, vendor coordination, and technical standards that reduce repeated local problem-solving. Optional local add-ons can preserve local discretion, but the core must address the recurring burdens LEAs actually named.

Differences Across LEAs

The model can be calibrated by category, with Colorado offering different levels of state support, adoption paths, and flexibility depending on LEA size and capacity. This may be the model that most credibly balances what smaller LEAs need and what larger LEAs are willing to accept, but that balance depends entirely on design. If the core is too thin, smaller LEAs remain underserved. If it is too expensive, larger LEAs may view the model as a form of full centralization in disguise.

Category 1: Rural LEAs would benefit most if the state-funded core includes the functions they are least able to afford on their own: reporting workflow support, reliable validation tools, online registration, stronger system integrations, and better training. For them, the model's success depends less on optional features than on whether the state-funded baseline is strong enough to ensure meaningful functional equity.

Category 2: Urban/Suburban LEAs may be the strongest practical users of the hybrid structure because it gives them both a stable base and room to tailor specific features to local operating needs.

Category 3: Denver Metro LEAs may be the most politically comfortable with the hybrid model because it does not require total standardization. They could retain selected customizations or local functionality while reducing the duplication embedded in current state reporting workflows.

Advantages and Disadvantages

The main strength of the voluntary hybrid model is that it better balances coherence and flexibility than any other alternative. It creates room for statewide standardization, where Colorado has the strongest public interest, while preserving sufficient local discretion to make the model more politically and operationally viable. The model is also consistent with cross-state evidence, in which hybridization is often a practical response to state-specific conditions.

Its weakness is administrative complexity. Hybrid systems require disciplined governance, clear funding rules, and a strong theory of what the state is trying to standardize. The model can also create entry and sustainability problems if early adopters and later adopters face materially different terms, particularly if there is insufficient flexibility in state appropriations to allow LEAs to join over time. A hybrid model can be elegant in theory but unstable in practice if participation rules, upgrade paths, and future entry points are not carefully designed from the outset.

Model 4: Other Technical Solutions

Analysis

The technical solution model focuses on Colorado's existing Data Pipeline and asks how much reporting burden can be eliminated through better standards, APIs, vendor certification, earlier validation, and stronger LEA-facing dashboards. Texas and Wisconsin are the strongest comparators, with Arizona and California reinforcing the same pattern.

For Colorado, this model is not a residual category but a serious alternative pathway. WestEd's Level of Effort Analysis makes clear that some of the most substantial reporting burdens are not financial. The burden lies in the workflow, validation, file transfer, and interoperability problems. That distinction matters. It suggests that Colorado may be able to achieve a meaningful share of the public value associated with a statewide SIS through a different technical architecture—one built less around a single common platform and more around stronger interoperability, better automated data exchange, and modernization of the state's reporting environment.

This is where a Colorado-specific technical strategy becomes most relevant. The model assumes that the state's reporting infrastructure can be modernized and enhanced to support better validation and automation, more transactional data exchange, and greater interoperability. That approach can address the reporting burdens identified by LEAs. It also aligns with lessons from states such as Wisconsin, which improved data exchange and rule enforcement through standards-based architectures and APIs rather than through a single statewide SIS adoption.

In Colorado, this path may be the most politically viable near-term option because it respects the basic structure of local control while still addressing the areas where fragmentation is most costly. It could include state-required technical standards that local SIS vendors must meet in order to serve Colorado LEAs, deeper state–vendor collaboration on state reporting changes, and a procurement-support component for LEAs seeking better pricing—without giving the state direct operational responsibility for the entire platform. This approach does not eliminate local SIS variation, but it may reduce the reporting burden.

LEA survey and interview responses provide Colorado-specific support for a reporting-layer modernization strategy. When asked about a possible implementation of an API solution, participants from Colorado's LEAs were overwhelmingly enthusiastic. Most participants were supportive of CDE pursuing an API option (74%), which is 20 percentage points higher than a statewide SIS. Participants viewed this option as both feasible (86%) and likely to meaningfully reduce the burden (75%). LEA staff described the burden as residing upstream from submission: knowing which codes apply, reconciling local records, preparing Excel files, correcting errors, aligning school-level entry practices, and interpreting collection changes. This suggests that APIs, earlier validation, vendor certification, shared dashboards, and clearer operational guidance could reduce the burden even if LEAs retain local SIS choice.

Differences Across LEAs

The technical solution model may be the least disruptive for large LEAs because it preserves local SIS autonomy. Small LEAs can still benefit, but only if the state pairs the architecture with meaningful training, partner support, and vendor discipline; otherwise, the burden simply shifts rather than disappears.

Category 1: Rural LEAs might feel more conflicted. While improved interoperability and clearer validation would support them, they would still manage their local SIS environment independently and might not achieve the same level of functionality as a stronger statewide platform. A technical modernization strategy can meaningfully reduce friction but may do less to address the root disparities in local capacity.

Category 2: Urban/Suburban LEAs would likely fall in the middle: able to benefit from a lower-disruption solution but still wanting more support and common functionality than a pure interoperability strategy might provide on its own.

Category 3: Denver Metro LEAs may find it most appealing because it allows them to retain current investments while lowering reporting burdens. A more interoperable state architecture can resolve many of the most persistent issues without forcing a complete overhaul of systems they have spent years setting up and integrating.

Advantages and Disadvantages

The main strength of a technical solution model is that it tackles some of Colorado's most persistent operational challenges without forcing the state to resolve the full statewide-SIS issue right away. It lowers organizational risk, honors local control, and can be phased in more convincingly than a statewide SIS. It also aligns with evidence suggesting that Colorado's most critical problems are in reporting workflows, system integrations, and state-local data exchange rather than in every aspect of local SIS use.

Its limitation is equally clear. This model enhances the operation of a decentralized system, but it does not completely address the inequities embedded within that system. Smaller LEAs still have less local capacity, and the state continues to work within a landscape of uneven tools, staffing, and vendor arrangements. A technical-solution model might be practical for addressing reporting burden, but it is not the strongest long-term option for creating equity among LEAs.

Synthesis

Taken together, these models indicate that the core Colorado tradeoff is not merely between centralized and local approaches. Instead, it hinges on whether the state views SIS modernization primarily as a procurement, governance, or interoperability challenge. The evidence suggests that Colorado would likely realize the most functional equity and cost savings through a stronger statewide role, especially for smaller and more rural LEAs that currently face higher per-pupil costs and have limited technical capacity. The same evidence also shows that any model that underestimates migration costs, organizational change, previous local investments, and the politics of local control is unlikely to succeed on its own terms.

Therefore, the most reliable approach in Colorado is likely to evaluate the funding model and technical architecture together rather than separately. A mandatory state-funded statewide SIS model offers the greatest consistency but encounters the highest political hurdles. A voluntary split-cost model is more feasible but vulnerable to inconsistent participation. A voluntary hybrid model may best suit Colorado's governance culture, but only if the boundary between the statewide core and local add-ons is carefully defined. A technical modernization strategy may be the most practical path for reducing reporting burden, but it does less to address the deeper functional inequalities across LEAs—particularly for the smallest and most resource-constrained systems. Ultimately, the policy decision is less about choosing a financial model and more about determining which combination of coherence, local discretion, and implementation effort Colorado is willing to sustain.

Recommendation

The evidence supports a staged recommendation rather than a single immediate procurement conclusion. Colorado should carry forward two models for the next phase of WestEd's analysis.

- **The voluntary hybrid model** should be carried forward as the initial implementation option. It reflects the closest alignment between political feasibility, burden reduction, and transferability from the comparator states.
- **An other technical solutions model**, such as the API/reporting layer scenario, should be carried forward as a co-primary option. This path is closely aligned with Colorado's local-control environment and need for modernization within CDE's infrastructure.

The **mandatory statewide SIS model** should be retained as a reference. It can be used to bound the upside of economies of scale and the downside of migration and governance burden but should not be treated as a recommendation.

Conclusion

This analysis examined Colorado's current cost environment, drew on information from other states, and created a TCO for four options across five- and ten-year horizons. The findings are consistent: the current structure carries a cost burden that is unevenly distributed across LEAs, with smaller and rural LEAs bearing the highest relative cost. A mandatory statewide SIS produces the lowest TCO but carries the highest political and implementation risk. A voluntary hybrid or state-funded core model offers the strongest balance of burden reduction and political feasibility. A technical solutions approach is the least disruptive path but does less to address the deeper functional inequalities across LEA categories.

What this analysis cannot offer is actual Colorado-specific cost data, updated migration burden estimates, or a clearer picture of what CDE can sustain operationally. The Final Recommendations Report will synthesize this financial analysis alongside the findings of the Level of Effort Analysis to produce recommendations for CDE leadership and state



policymakers. The strength of those recommendations will depend on the depth of LEA engagement and feedback, as well as the policy conversations that follow.

The decision Colorado faces is consequential but navigable. The evidence points toward paths that are financially grounded, politically realistic, and responsive to the full range of LEA conditions. The next step is to choose among them with clarity about what is required and what can be delivered.

Appendix A: State Comparison Rubric – Scores

The rubric below is not a final decision scorecard. It is a directional screening tool, built on current evidence, that uses a structured scoring approach to identify which states are most useful for Colorado. The scores reflect the degree to which each state's governance structure, implementation approach, financial model, and overall context are transferable to Colorado. Higher scores indicate greater transferability, not better outcomes—a state can score highly as a comparator without being a recommended path for Colorado. The full rubric criteria and scoring methodology are documented in Appendix E.

Table 7. State Comparison Rubric, in Scoring Order

State	Score	Most Useful for Colorado	Main Caution
Texas	63.3	API-first reporting modernization in a local-control environment	Mandatory reporting architecture still leaves substantial local vendor and support burden.
Wisconsin	58.3	Ed-Fi/API model with LEA-facing dashboards	Requires sustained state support, vendor certification discipline, and partner training.
Arizona	55.0	Certified-vendor, API-first reporting architecture	Current project materials are thinner on direct cost and staffing detail.
South Dakota	53.3	State-funded core SIS with hybrid model (state-funded core + optional local add-ons)	Would require stronger statewide appropriations and change-management capacity in Colorado.
California	51.7	Statewide reporting layer without replacing local SIS in a local-control environment	Scale and CALPADS complexity make it more cautionary than directly transferable.
New Hampshire	50.0	Hybrid reporting layer with optional local SIS adoption	Small-state context understates Colorado's scaling challenge.

Appendix B: Cost Estimation Methodology

Step 1 – Establish Baseline Current Costs

The baseline for Colorado draws on four data sources: the 2019 Wyant Value Assessment, WestEd's Level of Effort Analysis, existing CDE expenditure data, and vendor contract analysis. The most reliable current statewide baseline signal remains the 2019 Wyant Value Assessment, which found an average reported per-pupil cost of $10.64 and especially high costs in smaller rural LEAs. That baseline is treated as a directional current-state burden rather than a final TCO, because it excludes migration and CDE support costs.

The relevant current-state categories to preserve in the model are software licensing, hosting or infrastructure, support personnel, training, data management labor, and integration costs. The supplemental comparator work further identifies a deliberate category for the hidden local support burden, including vendor troubleshooting, manual reconciliation, and labor from repeated submissions.

Step 2 – Model Scenarios

The scenario set includes four scenarios: status quo; voluntary hybrid statewide SIS adoption; mandatory statewide SIS; and alternative technical solutions centered on standards, APIs, or shared state services. The comparator-state evidence confirms that these four scenarios are materially different in both economics and governance and were therefore not collapsed into a single category.

The voluntary hybrid scenario does not assume even statewide uptake. Adoption assumptions vary by LEA category because the evidence suggests that rural LEAs may have a stronger incentive to opt in early, while larger LEAs may hold back due to sunk investments and migration complexity. The mandatory statewide SIS scenario is retained as a reference case because it provides the strongest upper-bound test of scale savings and the most direct lower-bound test of political feasibility.

Step 3 – Develop TCO Model Components

The TCO components are informed by comparator state evidence. One-time costs are modeled as separate lines for procurement, migration, configuration and state customization, initial training, infrastructure transition, and change management. South Dakota and New Hampshire

show that migration costs are not uniform across LEAs; they vary by size, vendor, and implementation path. Texas and Wisconsin show that even in an API-first architecture, vendor readiness and support design are real cost drivers. California shows that backend modernization and application-layer validation can be major operating benefits, but only after serious technical work.

Recurring annual costs are modeled separately for licensing, hosting, technical support and help desk, ongoing training, and maintenance or upgrades. South Dakota's current contract offers the clearest live statewide-common-platform benchmark; New Hampshire provides hybrid implementation and local-adoption signals; North Carolina provides a public recurring-price benchmark; Texas and Wisconsin provide state staffing and support-team analogs; and California provides a reminder that policy-driven change generates recurring annual cost whether or not the state owns a common SIS.

Appendix C: Key Assumptions

Table 8. Key Assumptions Log

Area	Initial Assumption for Modeling	Why it Matters
Colorado baseline	2019 Wyant Value Assessment is directional current-state burden, not full TCO.	Avoids overstating the likelihood of guaranteed statewide savings.
Rural LEAs	Small/rural LEAs are likely to see the highest relative benefit from stronger state support, training, and more extensive technology solutioning.	Affects adoption and equity assumptions.
Large LEAs	Large LEAs face the greatest migration and customization burden.	Affects scenario sequencing and political feasibility.
Hybrid adoption	Optional or incentive-driven uptake will not be uniform across LEA categories.	Avoids unrealistic statewide adoption assumptions.
API models	State staffing requirements remain material even without a statewide SIS.	Prevents under-budgeting for support, vendor coordination, and governance.
Relationship to Level of Effort Analysis Report	The Financial Modeling Report uses the established context of the current burden findings, LEA category definitions, and future-state options documented in the Level of Effort Analysis report. Financial models are assessed against those findings rather than independently re-establishing the current-state baseline.	Prevents duplication or contradiction between the two reports and clarifies that they are complementary deliverables within the same assessment.
Vendor pricing	The figures are directional and not binding price estimates for Colorado.	Avoids the expectation that any single financial figure will be required for Colorado to pursue an option.
ADM calculation	Uses Colorado's ADM calculation as a basis for per-student cost figures.	Prevents misinterpretation given the variation in ADM calculations across the state.
Timeline for contracts referenced	Contracts collected from the comparison states are likely more than one year old, which requires price adjustments to reflect current conditions.	Prevents assumptions about possible costs to Colorado for adoption of any scenario.
Staff turnover and onboarding	New reporting leads often require exposure to a full reporting cycle before becoming fully effective.	Prevents underestimating transition, training, and continuity costs.
Document volatility	LEA documentation is often partial, outdated, or difficult to maintain because collections change.	Supports recurring state training, knowledge-management, and help-desk costs.
External support costs	Some LEAs purchase vendor help, consultant support, or paid training for maintaining capacity.	Prevents treating SIS license costs as the full cost of operating the current system.

Appendix D: Expanded Methodology and Data Collection Detail

This study used a triangulated design that combined document review, financial analysis, structured state comparison, and scenario-based cost modeling. The quantitative strand focused on baseline expenditure estimation and future-state TCO modeling. The qualitative strand focused on governance, implementation, training, support, and burden factors influencing the practicality of a statewide SIS model in Colorado. These strands were combined so that cost estimates could be interpreted in an operational context rather than as standalone pricing figures.

1. Colorado current-state data collection.

   Colorado baseline information was assembled from four sources: 2019 Wyant Value Assessment findings, direct LEA cost and burden collection, CDE expenditure records, and vendor/public contract analysis. The methodology also included a structured LEA cost survey instrument capturing contract type, annual license cost, staffing, infrastructure, training and support, and hidden costs such as integration work, data-quality remediation, and reporting development. This structure was intended to capture both visible budget costs and the labor burden that often sits outside formal software contracts.

2. LEA stratification.

   To avoid masking major differences across Colorado, LEAs are analyzed by category rather than as a single statewide average. The model groups LEAs into Category 1: Rural, Category 2: Urban/Suburban, and Category 3: Denver Metro. Sampling targets and expected per-student ranges were defined separately for each category, allowing the model to test whether a statewide solution would create disproportionate benefits or burdens for smaller systems relative to larger ones.

3. Cross-state comparison protocol.

   Comparison states were evaluated using a rubric covering governance and local control, participation model, rollout strategy, vendor model, data migration approach, initial funding, ongoing funding, sustainability, and transferability to Colorado. Conversations with other states explored whether implementation was centralized or locally controlled, whether participation was mandatory or opt-in, how the initial rollout and ongoing

support were funded, whether budget constraints shaped phasing, and what factors positively or negatively affected implementation. This structure was designed to make unlike states more comparable.

4. State outreach and public-record collection methods.

   This analysis relied heavily on outreach and public records. Conversations with other states covered prompts including system architecture, validation workflows, identity management, training, support, funding, and reporting burden. The comparator set included states operating statewide SIS models, hybrid models, and API-based interoperability models, including South Dakota, New Hampshire, California, Texas, and Wisconsin. Public contracts and amendments, where available, were reviewed to ground recurring cost assumptions in executed terms rather than vendor marketing language alone.

5. Types of analysis used.

   The study employs five primary analytic methods:

   (1) descriptive cost analysis of current Colorado SIS expenditures and labor burden;

   (2) comparative state analysis using the state rubric;

   (3) total cost of ownership analysis, separating one-time and recurring cost components;

   (4) scenario analysis comparing status quo, voluntary statewide SIS, mandatory statewide SIS, and alternative technical solutions; and

   (5) sensitivity analysis testing adoption, pricing, timeline, and cost-sharing assumptions.

   These methods are intended to answer both the financial question—what it will cost—and the policy question—under what governance and adoption conditions a model would actually work in Colorado.

6. Cost model construction rules.

   The TCO model separates procurement, migration, configuration, initial training, infrastructure, and change management from annual licensing, hosting, technical support, ongoing training, and maintenance. Scenario parameters included all-at-once versus phased rollout, required versus voluntary participation, state-funded versus cost-sharing models, and 5-year and 10-year implementation schedules. This structure allows the model to reflect not just the end-state annual cost, but also transition cash flow and the fiscal consequences of adoption speed.

7. Colorado-specific adjustments.

Base costs are adjusted for Colorado-specific realities: geographic dispersion, extreme LEA size variation, local-control expectations, the ability to build on the existing Data Pipeline, and variable staff capacity in smaller rural systems. These adjustments are necessary because a financially efficient statewide model in another state may not be administratively or politically efficient in Colorado.

8. Limitations and use of evidence.

   Cross-state data are used as directional evidence, not as a direct pricing proxy. The 2019 Wyant Value Assessment explicitly cautioned that statewide comparison tables should not be directly extrapolated into Colorado pricing because scope, governance, vendor bundle, and implementation conditions vary substantially by state. For that reason, external contracts and state examples were used to bound assumptions, test ranges, and identify major cost drivers rather than to set a single deterministic price.

Appendix E: State Comparison Rubric – Framework

This rubric provides a structured framework for evaluating comparator state reporting solutions, including a statewide SIS, and their relevance to Colorado.

Section A: Governance & Control Structure

Table 9. Governance and Control Structure Section Rubric

	Consideration	Percentage	Notes
A1.	Local Control Tradition	15%	3=Strong local control like Colorado 2=Moderate 1=Centralized
A2.	Participation Model	10%	3=Voluntary 2=Incentivized 1=Mandatory
A3.	LEA Size Diversity	10%	3=Similar diversity to Colorado 2=Moderate diversity 1=Homogeneous
A4.	Geographic Spread	5%	3=Similar geography to Colorado 2=Moderate similarity 1=Different

Assessment Notes:

- Colorado has LEAs with extreme size variation (Categories 1–3)
- Strong local-control tradition in Colorado requires careful comparison
- Geographic diversity (plains, mountains, urban metro) affects implementation



Section B: Implementation Approach

Table 10. Implementation Approach Rubric

	Consideration	Percentage	Notes
B1.	Rollout Strategy	10%	Document: All-at-once versus Phased; Pilot programs used
B2.	Implementation Timeline	10%	Document years to full
B3.	Vendor Model	5%	Document: Single vendor, Multiple vendors, State-built
B4.	Data Migration Approach	5%	Document: State-managed, LEA-responsible, Hybrid

Data Collection Prompts:

- What was the implementation timeline from decision to full rollout?
- Were LEAs allowed to opt-in over time or was a deadline set?
- How was data migration handled for LEAs with different legacy systems?

Section C: Financial Model Assessment

Table 11. Financial Model Assessment Rubric

	Consideration	Percentage	Notes
C1.	Initial Funding Source	15%	Document: State general fund, Federal grants, LEA cost-share, Special appropriation
C2.	Initial Cost	NA	Document total initial rollout cost and cost per student
C3.	Ongoing Funding Model	15%	Document: State-funded, Split cost, LEA-funded with state subsidy
C4.	Annual Operating Cost	NA	Document annual costs for maintenance, licensing, hosting, support, training
C5	Sustainability Assessment	10%	3=Stable multi-year funding 2=Annual appropriation risk 1=Funding struggles evident

Financial Documentation Requirements:

- Total initial implementation cost
- Cost per student (initial and ongoing)
- Percentage of state versus local funding
- Funding mechanism (dedicated line item, grant, reallocation)
- Evidence of funding sustainability

Section D: Transferability to Colorado

Table 12. Transferability to Colorado Rubric

	Consideration	Percentage	Notes
D1.	Model Applicability	10%	3=Highly applicable to CO 2=Partially applicable with modifications 1=Limited applicability
D2.	Political Feasibility	5%	3=Likely acceptable in CO 2=Would require significant advocacy 1=Unlikely acceptable
D3.	Technical Comparability	5%	3=Similar technical environment 2=Some differences 1=Significantly different

Colorado-Specific Considerations:

- Colorado's TABOR constraints on state spending
- Education Data Advisory Committee role
- Existing State Data Pipeline integration requirements
- Colorado's local control legislative history

Appendix F: Summary of Reported LEA Costs for SIS

Software and Vendor Costs: Substantial costs are associated with purchasing, licensing, and maintaining Student Information Systems (SIS), including necessary upgrades, customization, and reporting modules. Some LEAs purchase specialized software platforms (such as ENRICH or other third-party casework systems) to manage complex data collections, especially for special education and postsecondary and workforce readiness requirements, with some finding these systems difficult to use or non-compliant.

Training and Professional Development: LEAs incur costs for training and professional development related to new and constantly changing collections, including registration fees, travel/mileage, lodging, and substitute coverage for staff.

Technology and Infrastructure: Costs include paying for SIS vendor support for updates and troubleshooting, hardware replacements, secure devices, network/security tools, and data storage/management systems.

Audit, Compliance, and Opportunity Costs: Costs include printing audit documentation, responding to audits, and correcting findings, with errors that can lead to funding adjustments or missed reimbursement opportunities. Additionally, time spent on reporting is time taken away from local initiatives, instructional leadership, and student-focused duties, creating significant opportunity costs.

Table 13. Additional Survey and Interview Themes

Interview theme	Directional Finding from LEA Responses	Example Evidence
Vendor/external support	Some LEAs rely on vendor support, consultants, fee-based training, external IT, or post-retirement transition help.	Interviews from Meeker, Centennial BOCES, Clear Creek, Mountain BOCES, Jeffco, Eagle.
Staff time	Reporting commonly consumes 50%–100% of a named lead's time during the year or peak windows.	Interviews from Pueblo, Estes Park, St. Vrain, Littleton, District 49, Jeffco, Poudre, Thompson.
Training burden	Many LEAs describe a full-year or longer learning curve.	Interviews from Pueblo, Meeker, Estes Park, St. Vrain, Littleton, Valley, Jeffco, Montrose, Eagle, Thompson.
Documentation risk	Many LEAs report no documentation, partial documentation, obsolete documentation, or documentation that is hard to keep current.	Interviews from Pueblo, Meeker, Estes Park, St. Vrain, Clear Creek, Mountain BOCES, District 49, Valley, Jeffco.
LEA size variation	Small LEAs show thin staffing and one-person risk; larger LEAs show distributed complexity and sunk process investment.	Interviews from Mountain BOCES, Clear Creek, Meeker, Jeffco, St. Vrain, Poudre.

Appendix G. Data Sources and References

The following public records were reviewed and are available at the links provided:

- Arizona AzEDS overview
- Arkansas contract packet
- Arkansas CCR tools page
- California CALPADS background
- New Hampshire iNHDEX page
- New Hampshire Alma partner page
- New Hampshire award announcement
- New Hampshire Governor and Council agenda
- New Hampshire supporting amendment document
- North Carolina NCSIS FAQ and timeline
- North Carolina NCED Connect pricing
- South Dakota SIMS page
- South Dakota Desk Guide 2025
- South Dakota legislative attachment
- Texas TSDS upgrade project
- Texas TEA 2024 TSDS upgrade letter
- Texas Legislative Appropriations Request 2024-25
- Wisconsin WISEdata
- Wisconsin certified vendors

