



Academic Return on Investment (A-ROI)

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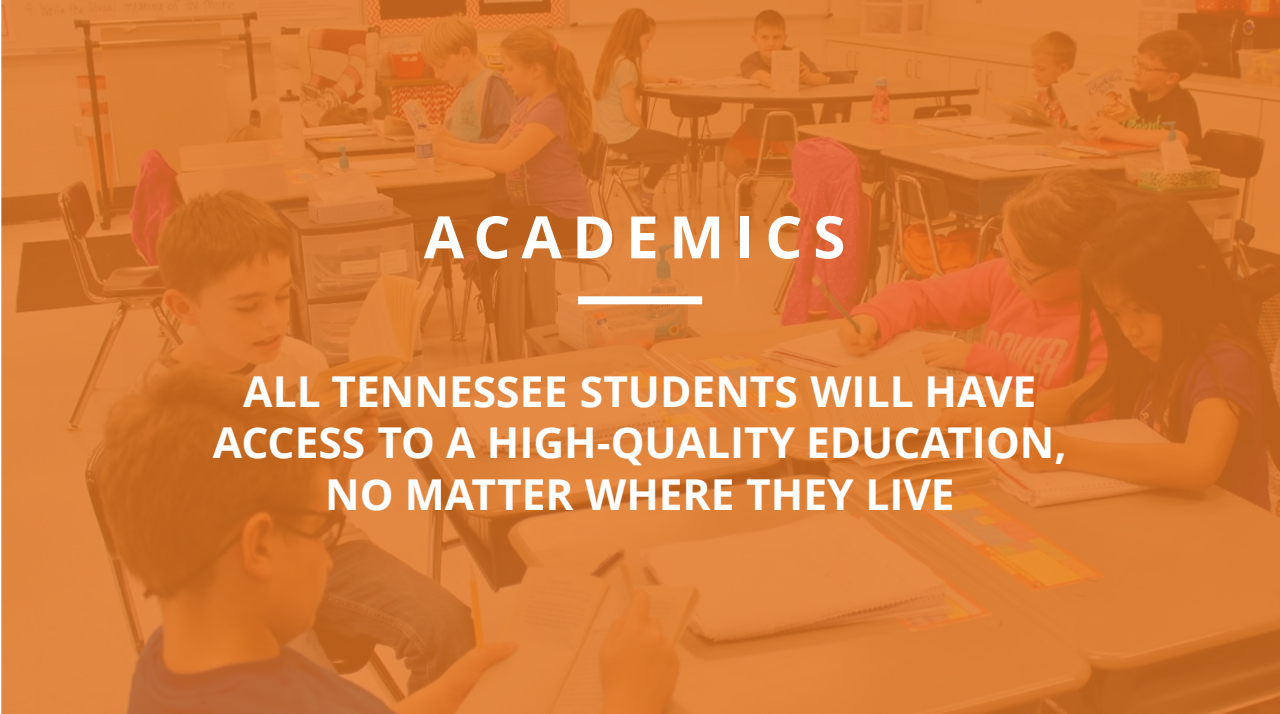
Dec. 7, 2022





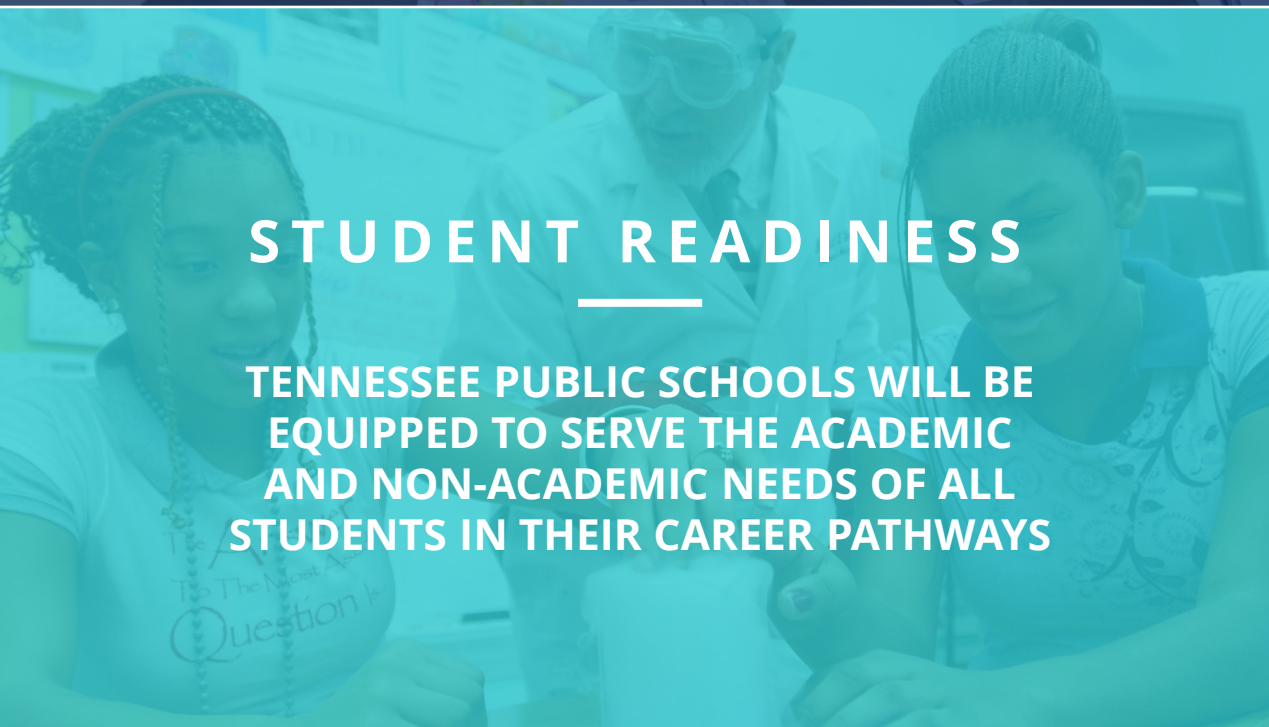
BEST FOR ALL

We will set all students on a path to success.



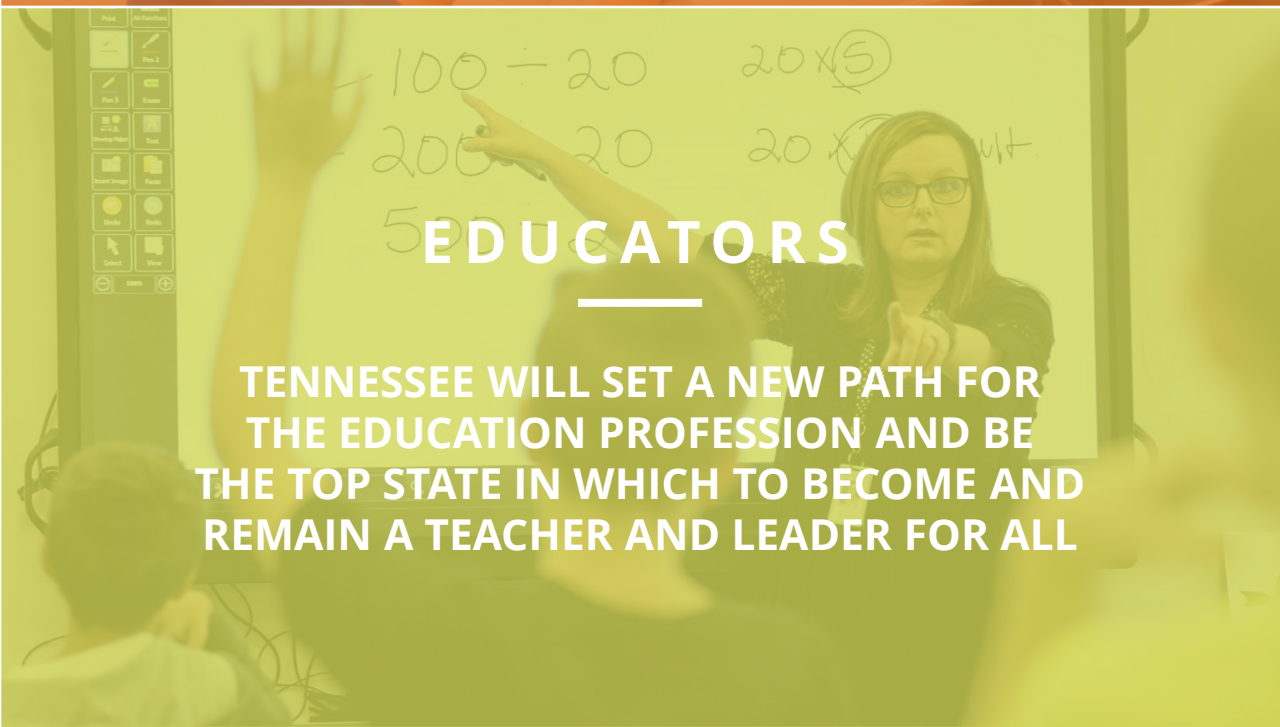
ACADEMICS

ALL TENNESSEE STUDENTS WILL HAVE ACCESS TO A HIGH-QUALITY EDUCATION, NO MATTER WHERE THEY LIVE



STUDENT READINESS

TENNESSEE PUBLIC SCHOOLS WILL BE EQUIPPED TO SERVE THE ACADEMIC AND NON-ACADEMIC NEEDS OF ALL STUDENTS IN THEIR CAREER PATHWAYS



EDUCATORS

TENNESSEE WILL SET A NEW PATH FOR THE EDUCATION PROFESSION AND BE THE TOP STATE IN WHICH TO BECOME AND REMAIN A TEACHER AND LEADER FOR ALL



Agenda

- A-ROI Overview
- A-ROI System Steps
- Resources and Contacts



A-ROI Overview





Return on Investment Definition

Return on investment describes the expected gains (returns) per unit of cost (investment) of a variety of potential actions.



General Definition for Academic Return on Investment

Ensuring alignment of school system resources to strategic priorities so that every school succeeds for every student.





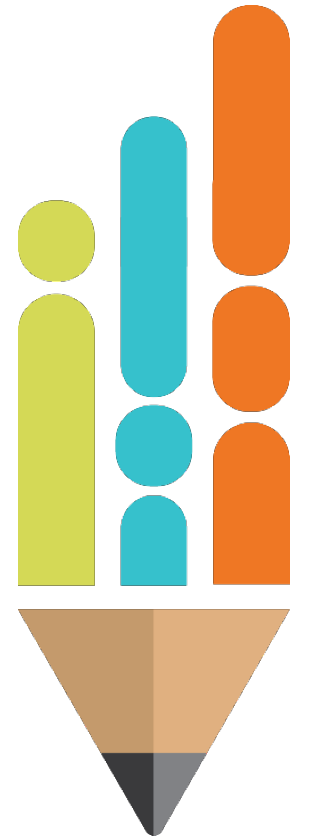
A Consolidated Definition

A-ROI is a conscious and collaborative process, by which, system resources (educational investments) are identified and weighed in cost and effectiveness for stronger alignment to strategic goals for maximum outcomes.



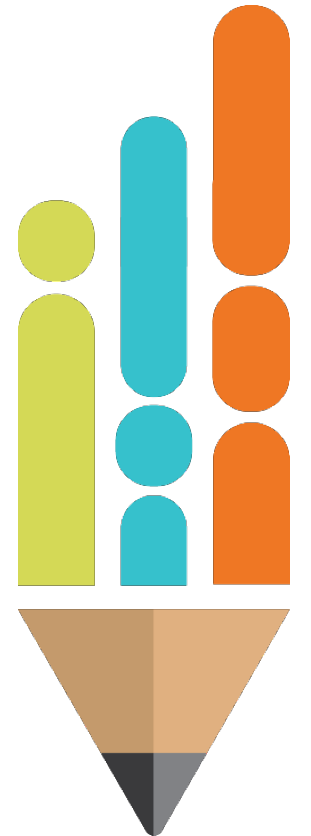
System Strategy A-ROI: Five Key Steps

- **Identify the core need**
 - What fundamental student performance need are we focusing on, and what's our theory of change for addressing it?
- **Consider a broad range of investment options**
 - What are the investments we currently make to address this need, and what else could we do? What does the evidence state?
- **Define ROI metrics and gather data**
 - What are the relative returns (costs weighed against benefits) to the set of current/potential options?
- **Weigh investment options**
 - What other factors do we need to consider, in order to select from among the options?
- **Make investment decisions**
 - How can we free resources to do what we want to do?



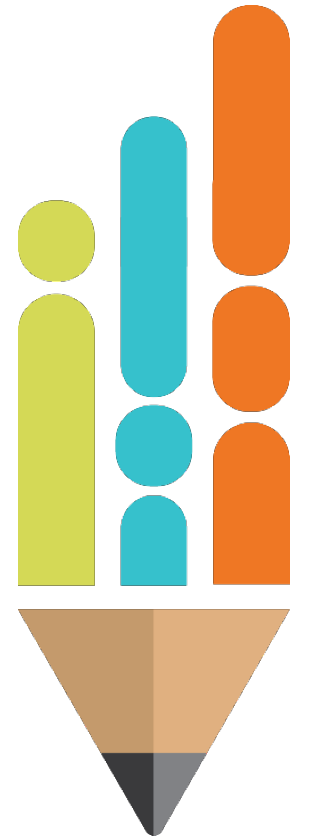
General Budgeting Categories

- **Personnel:**
 - Salaries and fringe.
 - Retention investments – increased pay for extra duties, etc.
- **Professional Development:**
 - Meeting LEA planning and school improvement initiatives
 - PD that weaves within all other PDs
- **Equipment, supplies, and materials:**
 - Consider the expenditures and complementary.
- **Infrastructure and Capital Gains**



The Formula (Scale for Weighing):

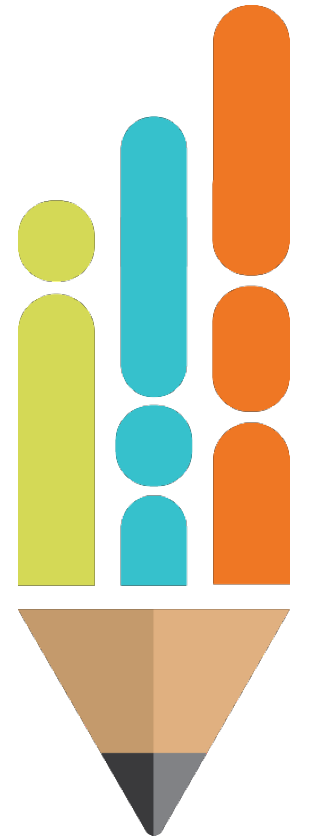
$$\mathbf{A-ROI} = \frac{(\text{Increase in Student Learning}) \times (\text{Number of Students Helped})}{\$ \text{ Spent}}$$



A-ROI: Get Started by Identifying the Team

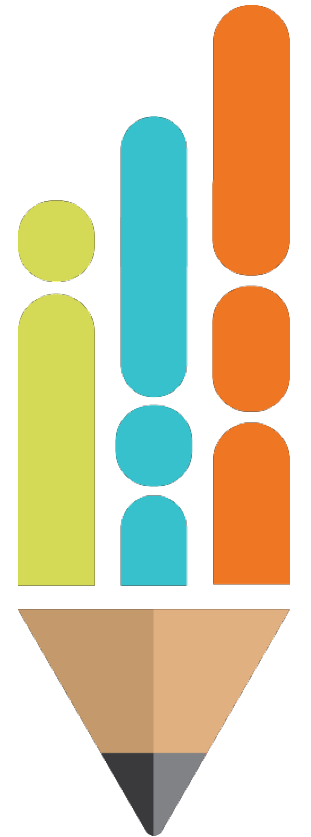
Suggested members include:

- Data Analyst
- Academic Supervisor
- Fiscal Director/fiscal professional
- Program or Lead teacher
- School board member and/or other community stakeholders (consider their skills)
- Team leader and Communicator



A-ROI: Questions to Consider...

- What is our system's spending culture?
- Do we commit to traditional expenditures from year to year?
- Are the school board and school system's spending culture truly devoted to student-centered decisions?
- What does the culture value?



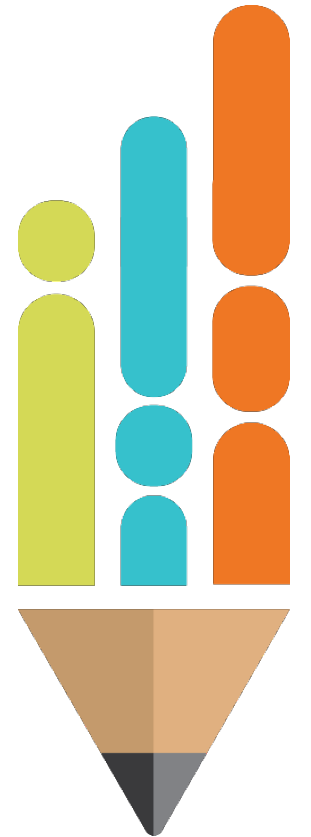
A-ROI System Steps



A-ROI: Identify the Core Need

Step 1

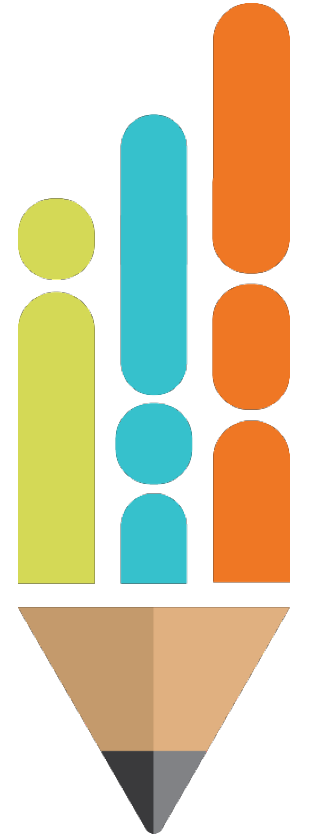
- **Identify a Program and Performance Target:**
 - Start with one program.
 - What is the need?
 - What is our theory of action?



A-ROI: Range of Investment Options

Step 2

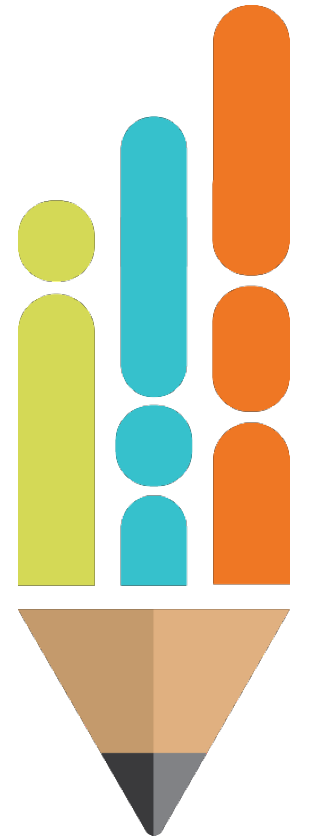
- **Identify current strategies (investment options) that are actively supporting the program:**
 - Identify all current strategies and program resources.
 - Collect current available data related to the program.
 - Align current available data to each strategy.
 - Identify new strategies or investments.



A-ROI: Range of Investment Options

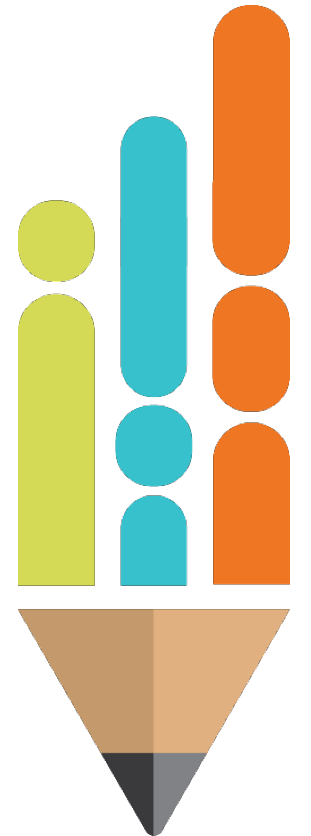
Step 2

- Be creative and be open to **new strategies** and new ways of supporting the program:
 - Review the identified root causes of the need.
 - Are there strategies already employed under other programs in the LEA?
 - Review ESSA evidence (Do your research!)
 - Ideas from natural collaborations with other LEAs and state-sponsored events.
 - Past strategies that are no longer employed.



The Formula (Scale for Weighing)

$$\text{A-ROI} = \frac{\text{(Increase in Student Learning)} \times \text{(Number of Students Helped)}}{\$ \text{ Spent}}$$

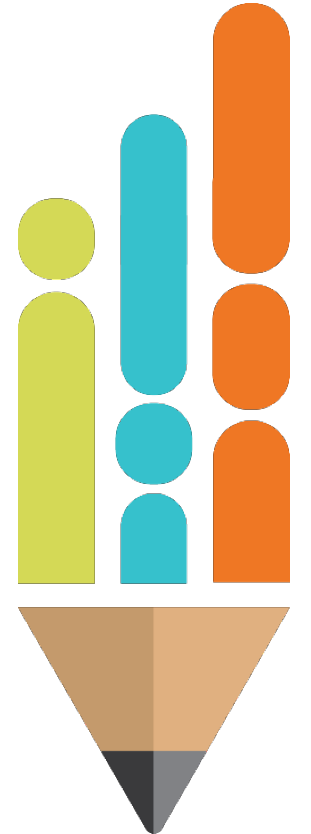


A-ROI: Define ROI Metrics and Gather Data

Step 3

Effectiveness and Impact of a Strategy

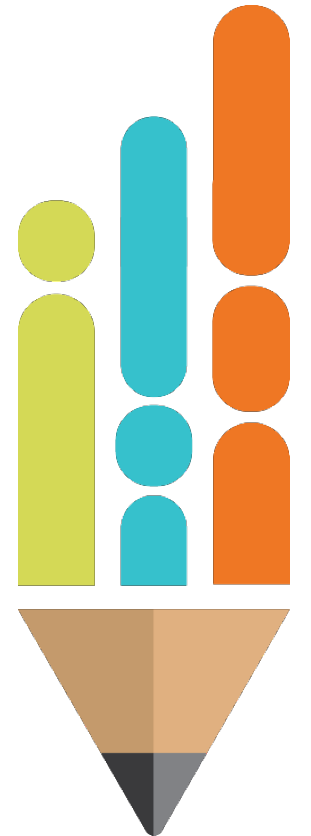
- When gathering and applying data to weigh a strategy, consider the following:
 - Is the data valid for this strategy?
 - If exploring data for a new strategy, can fidelity be replicated in your LEA?



A-ROI: Define ROI Metrics and Gather Data (Effectiveness and Impact of a Strategy)

Sources of data for weighing strategies (i.e., investment options):

- Teacher effectiveness data
- Math and ELA Benchmark Data
- Report Card Data
- Graduation rates data
- Non-cognitive data (e.g., attendance, disciplinary data)
- Early Post-Secondary Opportunities (opportunities and outcomes)
- Qualitative data (e.g., surveys, PLC notes, focus groups minutes)



Four Places to Find Effective Data

$$\text{A-ROI} = \frac{(\text{Increase in Student Learning}) \times (\text{Number of Students Helped})}{\$ \text{Spent}}$$

- **Natural or Engineered Controlled Tests**

- Example: compare co-teaching courses against courses that are individually taught by pre- and post test data.

- **Evidence Pockets:**

- Use current data sources to isolate new variables.
- Example, use available reading data to find teachers that are successful. Then interview and observe their methods.

- **Common Formative Assessments:**

- Example: LEA and state made assessments, benchmark assessments, etc.

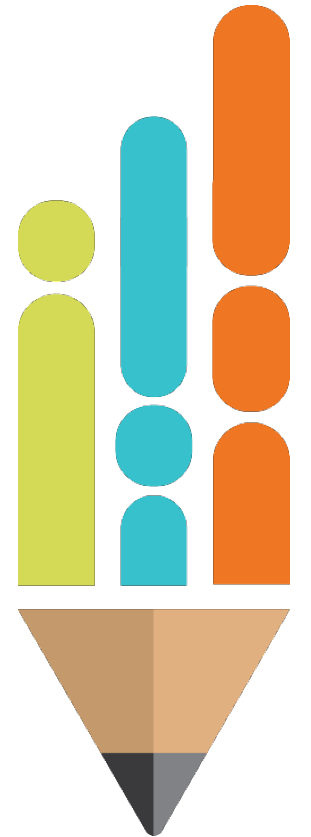
- **ESSA evidence research/educational research**

- May provide data ideas.

- **Never assume success of a strategy - test it.**

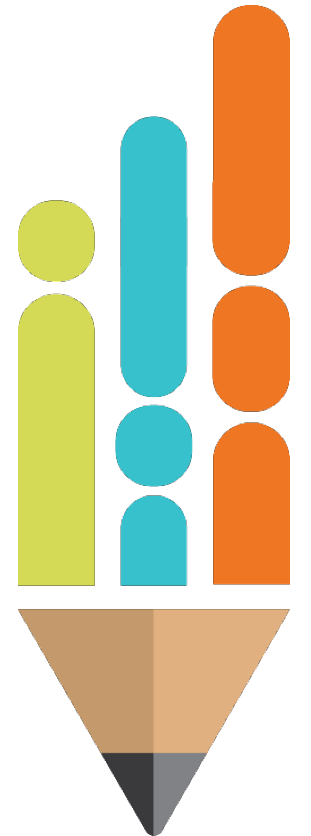
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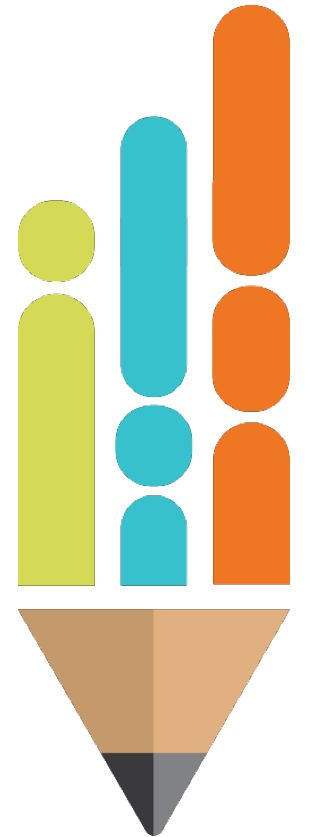
A-ROI: Define ROI Metrics and Gather Data

- **How many students are impacted or expected to be impacted by the strategy?**
 - Student subgroups impacted directly by the strategy.
 - Student subgroups impacted indirectly by the strategy.



The Formula (Scale for Weighing)

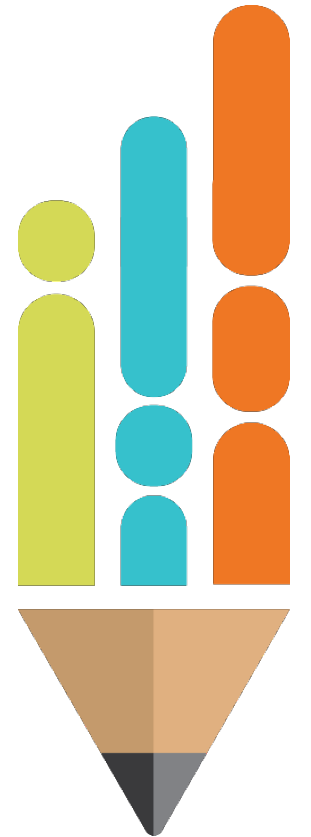
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A-ROI: Budgetary Data Collection

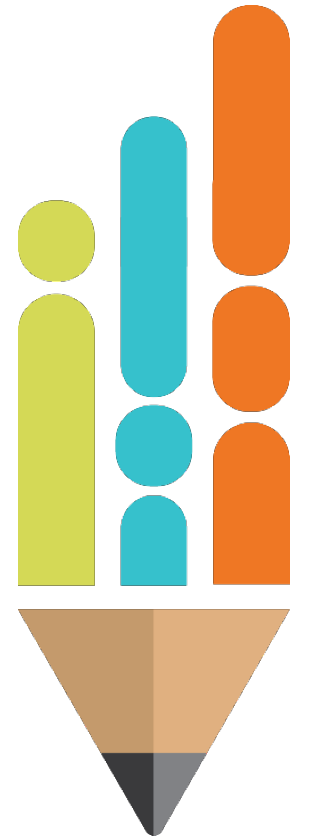
▪ How much does the strategy cost?

- Unthread budgets and budget cost lines to apply the total cost of a strategy.
- Per pupil cost will be beneficial.



The Formula (Scale for Weighing)

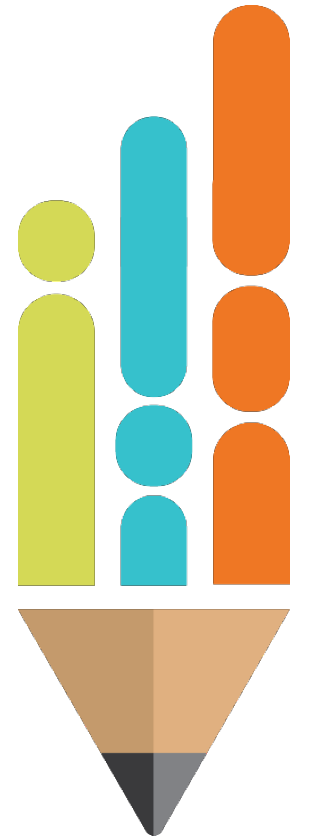
$$\text{A-ROI} = \frac{(\text{Increase in Student Learning}) \times (\text{Number of Students Helped})}{\$ \text{ Spent}}$$



Weigh Investment Options

Step 4

- As the ROI is calculated for each strategy and is ranked in order from highest to lowest A-ROI, consider the following:
 - If precise numbers are not available for the formula, the ROI team can discern the likeliness of strategy effectiveness by agreeing on the strategy as a high, medium, or low returner.
 - Consider unintended consequences, conflicts, or costs of ranked strategies.
 - Consider the interactivity and symmetry of the strategies.
 - Consistency of the alignment of identified strategies with the overall theory of action.



Example

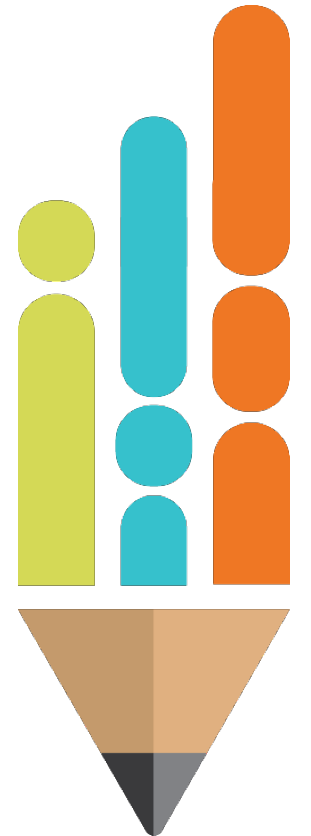
$$\text{A-ROI} = \frac{(\text{Increase in Student Learning}) \times (\text{Number of Students Helped})}{\$ \text{ Spent}}$$

Strategy #1: Push-in model

- An Educational Assistant (EA) serves 5 classrooms per day, helping a total of 15 students.
 - The educational assistant costs \$20,000 per year
 - 15 students impacted
 - Increase in student learning is held at a **constant** (100%)
 - **0.075%** = $100\% \times 15 / 20,000.00$ (**Note:** A-ROI was multiplied by 100 for percentage conversion)

Strategy #2 Pull-out model

- The same EA could serve 5 students per period through a pull-out strategy.
 - EA costs \$20,000 per year
 - 25 students are impacted
 - Increase in student learning is at a **constant** (100%)
 - **0.125%** = $100\% \times 25 / 20,000$ (**Note:** A-ROI was multiplied by 100 for percentage conversion)



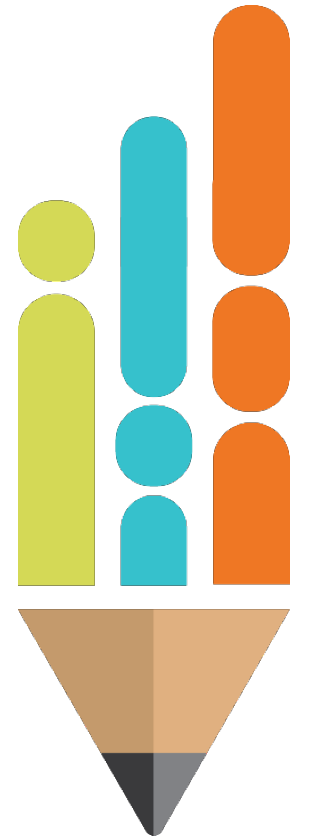
Additional Example

Strategy #1: LynnXL math on-line program strategy:

- Cost: 6,000.00/year
- Students impacted: 120
- Student learning data (correlative): 20% increase in math scores.
- A-ROI = **.40%** = $20\% \times 120 / 6,000$ (multiplied by 100)

Strategy #2: HenryMathforFun

- Cost: 5,500/year
- Students impacted: 240
- Student learning data: (ESSA evidence 10%, overall increase in math)
- A-ROI = **.44%** = $10\% \times 240 / 5,500$ (multiplied by 100)





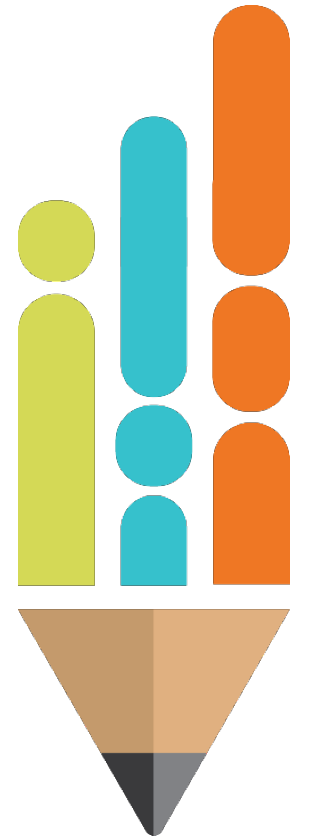
Return on Investment

Area How did you spend your money?	Alignment to Goals/Focus What SIP goal did this support? What was the reason for this support?	Actual Cost	Data Sources and Results What data did you use to support the SIP goals? What were the results? Is there any proof that any implementation's impact on data? If programs/practices were purchased, what is the evidence-based tier?	Reflections Based on SIP goals and for data collected, what are the implications for future planning? Did this work? Why or why not? Is this still a viable purchase?
Personnel				
Supplies and Materials				
Professional Development				
Programs				
Equipment				
Contracted Services				

Make Investment Decisions

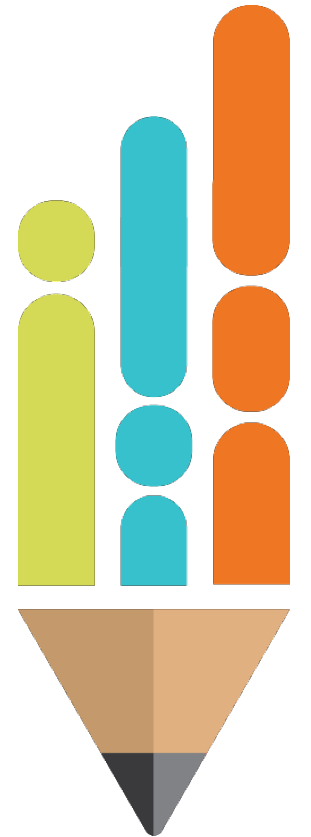
Step 5

- **Develop a Program Plan of Action:**
 - Consider overall savings of identified program strategies.
 - Consider unintended consequences, conflicts, or costs of ranked strategies.
 - Consider the interactivity and symmetry of the strategies.
 - Consistency of the alignment of identified strategies with the overall theory of action.



Going Forward

- Conduct new A-ROI on all programs.
- Continue to review and update program costs.
- Programs that are **expensive** are prime targets.
- Create clear rules/processes to guide the “where, how, and why” of the flow of dollars in the LEA and school budgets.



Resources and Contacts



Resources

- [Academic ROI: What Does the Most Good?](#)
- [ERIC: an online library of education research and information and a platform to research various topics on the A-ROI process](#)
- [Spending Money Wisely: Getting the Most from School District Budgets](#)
- [Return on Investment in Education: A “System-Strategy” Approach – Frank and Hovey, 2014](#)
- [Issues around Using Academic Return on Investment \(A-ROI\) for Informing and Improving Decisions. Part I: Validity](#)
- [What Works Clearinghouse](#)
- [Non-Regulatory Guidance: Using Evidence to Strengthen Education Investments](#)





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