

District Guide: Financing to Scale Blended Learning



Districts looking to implement blended learning often ask, “What does it cost?” We like to take a step back and frame the discussion around “What does it cost to scale?” This question is universally important, but to provide a comprehensive answer, it’s necessary to explore why smart financing is key to scaling blended learning. We believe most districts can implement and scale blended learning with careful financial planning and by making reasonable cost trade-offs over time.

Frequently we see innovative districts secure short-term funding for a blended learning pilot. But without proper financial planning, districts often struggle to turn a successful pilot into a scalable high-quality solution. Another common pitfall we see is the treatment of blended learning as a standalone education program instead of integrated into the costs associated with day-to-day instruction. Assessing cost trade-offs within the ongoing instructional budget will allow blended learning to be both scalable and sustainable. Districts that think through the longer term cost trade-offs up front have a much greater chance of implementing a sustainable and scalable model to serve all students in their district.

The Learning Accelerator created this guide to help encourage educators to approach financial planning for blended learning with a focus on developing a multi-year plan. This guide will help districts:

- Consider financial planning steps focused on scaling, not just piloting
- Understand key cost drivers associated with implementing high-quality blended learning
- Assess potential funding sources and trade-offs
- Review existing resources to help you get started

We recognize that several very good case studies, as well as financing guidelines, are already available. Our guide builds on information presented in the [Blended Learning Implementation Guide 3.0](#) section on Funding the Shift. We also build upon the Determining Costs and Funding sections in the [Paying for Personalized Learning A How-To Guide](#) by Education Elements. Lastly, we leverage data from districts implementing blended learning through [Afton Partners](#) to improve our insights into cost drivers and funding sources.

This guide includes insights and data from the aforementioned organizations as well as other partners to help highlight the steps and information to plan for scale. This guide is best suited for district level

planning across multiple schools. The guide also includes a sample worksheet to help with financial planning. Lastly, in the near future, we hope to highlight districts that have completed multi-year financial plans to support high-quality implementation.

We [welcome your feedback](#) on this guide and any of the included resources. Let us know what information is helpful, what needs further clarification, what's missing, and what needs to be updated, so that we can continue to improve our resources.

Financial Planning Steps

Financial planning is not a new activity. All districts do annual planning as part of a recurring budget process. However, developing a plan to successfully scale blended learning requires additional steps, including:

STEP 1 / Understanding Costs

Estimate the cost to scale blended learning models up front

STEP 2 / Funding Sources, Priorities, and Trade-offs

Identify financial sources, prioritize against other initiatives, and identify decisions that can be made today to help offset implementation costs

STEP 3 / A Multi-Year Budget

Create a budget that serves as a first-year plan, multi-year target, and sets clear expectations for funding

STEP 4 / Plan for Contingency

Develop contingency scenarios in case you do not achieve funding targets and cost reduction measures

STEP 5 / Monitor and Improve

Establish a process for revisiting and updating projections to improve the annual budget cycle

The ultimate goal of this financial planning guide is to help districts create a multi-year budget that captures the costs and key trade-offs needed to scale blended learning to ensure equitable access to high-quality instruction.

ASK YOURSELF:

Are you willing to make financial trade-offs today to sustain blended learning implementation costs over time?

STEP 1 / Understanding Costs

So what does it cost to implement blended learning? Unfortunately there is no simple answer. The instructional model, pace of scale, local human capital costs, as well as local market conditions will impact costs. However, we can establish some common cost areas and look at the range of average costs from other implementations to inform a smart financial plan. The costs to implement blended learning can be segmented into the following areas:

- A. **Human Capital and Project Management:** Costs include professional development and instructional coaching, staff stipends and substitutes, staff time and external resources (professional services) to help with strategy, design, and implementation activities
- B. **Infrastructure:** Costs associated with building out, upgrading, and maintaining a robust wireless network, network monitoring, and Internet connectivity (school and home)
- C. **Devices:** Costs associated with securing devices (lease or purchase), device accessories for instruction, device security, and support and maintenance for devices
- D. **Education Software:** Costs for software programs including licensing digital content, learning management systems, assessments, data systems, and software support
- E. **Classroom Upgrades:** Costs associated with upgrading the physical classroom to support instructional devices (for example electrical upgrades and furniture)
- F. **Communications:** Costs including staff and tools used to communicate the initiative to staff and external stakeholders
- G. **Evaluation Resources:** Costs associated with staff and tools used to track the success of the program

The following sections include cost information, considerations, and common pitfalls for each key area identified above.

A. Human Capital and Project Management

COST CATEGORY	FREQUENCY	AVERAGE COST RANGE
Up Front PD and Support Services	One-Time	\$2,000 - \$4,000 per teacher and admin
	Professional development and instructional coaches (internal and external), staff stipends, and substitutes	
Ongoing Professional Development	Periodic	\$1,000 - \$3,000 per teacher and admin per year
	Professional development and instructional coaches (internal and external), staff stipends, and substitutes	
Internal Staff for Planning and Managing Implementation	Existing Resources	Varies based on size of team and salaries
	Staff time and salaries to help with strategy, design, and implementation activities	
Up Front Professional Services	One-Time	\$25,000 - \$100,000 per school
	External staff and tools to help with strategy, design, and implementation activities	

Considerations:

- Staff comfort with chosen instructional model and use of technology/data
- Annual change in staff assignments and turnover
- Areas where district and schools need to engage professional services

Common Pitfalls:

- Not repurposing existing instructional PD funds for blended learning
- Not thinking through the costs associated with assessing different implementation approaches and creating and maintaining an implementation plan
- Not assessing staff capacity to support implementation, identify areas where professional services may be needed, and provide ongoing PD
- Not reducing the current workload of planning and implementation staff

B. Infrastructure

COST CATEGORY	FREQUENCY	AVERAGE COST RANGE
Network Upgrade	One-Time	Basic - \$1,500 - \$2,000 per classroom
		Build out, upgrade, and maintain a robust wireless network
Network Maintenance and Upgrades	Periodic	Varies based on in-house vs. contracted services
		Maintenance and upgrade cycles
IT Network Monitoring	Recurring	Varies based on in-house vs. contracted services
		Staff and software to monitor the network
Internet Connectivity (School and Home)	Recurring	\$1,200 - \$7,500 per month (school)
		\$360 per year per qualified student (home)
		Adequate connectivity at home and school

Considerations:

- The construction of the school building, distance to existing fiber connections, and local labor costs impact the cost of a network upgrade
- Maintenance, upgrades, and monitoring can be handled internally or outsourced to a vendor, assess both options
- Internet connectivity rates vary based on local Internet Service Provider competition
- Additional information on [adequate connectivity at school](#)

Common Pitfalls:

- Not understanding your needs before getting quotes from multiple vendors
- Not understanding data privacy and network monitoring
- Not assessing the cost of after-school and at-home access for high-need students

C. Devices

COST CATEGORY	FREQUENCY	AVERAGE COST RANGE
Devices	Periodic	\$275 - \$800 per device every 3 years
	Purchasing or leasing devices for students and staff	
Device Accessories	Periodic	\$25 per device every 3 years
	Device accessories for instruction	
Device Support and Maintenance	Recurring	Varies based on in-house vs. contracted services, \$50 - \$75 per student annually
	Staff to support and maintain devices	

Considerations:

- Comparing lease vs. purchase options and impacts to device refresh cycles
- Number of devices needed for different instructional models (for example 1:1 vs. station rotation)
- Cost to support BYOD vs. district-owned devices
- Support structures at the district and school levels
- Additional information on [purchasing or leasing devices](#)

Common Pitfalls:

- Not understanding the pros/cons of different device types (usable life, content and software restrictions, hardware performance, etc.)
- Not including device security, device support, device refresh, and accessories in cost estimates
- Not taking advantage of bulk purchasing and shared support, including collaborating with other schools and districts

D. Education Software

COST CATEGORY	FREQUENCY	AVERAGE COST RANGE
Digital Content, LMS, Systems Integration, Etc.	Recurring	\$15 - \$100 per student Integration \$5,000 - \$40,000 per school
		Licensing digital content, software programs, learning management systems, student data systems, etc.
Software Support	Recurring	Varies based on in-house vs. contracted services, may be bundled into licensing
		Staff and systems to support one-time setup and ongoing software stack support

Considerations:

- Number of software packages
- Integration between software tools
- Support structures at the district and school level

Common Pitfalls:

- Not having an [inventory of software used in schools](#), understanding frequency of use, and not having a standard approach for assessing software
- Supporting too many software tools and not taking advantage of bulk licensing once you find a good tool
- Assuming free software is really free ... it still requires training, support, and integration costs
- Not looking into leveraging Open Education Resources (OER)

E. Classroom Upgrades

COST CATEGORY	FREQUENCY	AVERAGE COST RANGE
Building Infrastructure and Furniture	One-Time	Basic \$500 per classroom Complex varies based on building
	Upgrading the physical classroom to support instructional devices (electrical outlets, furniture, etc.)	

Considerations:

- Building age, construction materials, and layout

Common Pitfalls:

- Not upgrading classrooms to ensure technology can be used seamlessly

F. Communications

COST CATEGORY	FREQUENCY	AVERAGE COST RANGE
Resources to Communicate to Stakeholders	Recurring	\$0 - \$5000 per school
	Staff and tools used to communicate the initiative to staff and external stakeholders	

Considerations:

- Existing communication tools, stakeholder reach, and staff capacity
- Additional information on communications planning for blended learning

Common Pitfalls:

- Not prioritizing communications to stakeholders, being reactive instead of proactive
- Not communicating impact and benefits of blended learning to stakeholders

G. Evaluation Resources

COST CATEGORY	FREQUENCY	AVERAGE COST RANGE
Resources to Measure Success	Periodic	Varies based on measures chosen and existing tools to track data
	Staff and tools used to track the success of the program	

Considerations:

- Existing measurement tools, new vs. existing measures, and staff capacity
- Additional information on blended learning measurement

Common Pitfalls:

- Not measuring impact to understand if the implementation is working or needs to be adjusted

Additional Information

The cost ranges from each category reflect data from several districts that have or are in the middle of scaling blended learning across grades and schools. Districts will need to work with local vendors to get more precise cost estimates based on local market conditions. See **Appendix A** for a summary of the cost categories, frequency, and average cost ranges to help provide estimates for each category.

While the largest costs will vary by district, based on the chosen instructional model and existing technology investments, most districts report the following three biggest cost drivers for implementing blended learning:

- **Devices:** purchasing new devices for students and staff
- **Infrastructure:** upgrading district and school networks
- **Human Capital and Project Management:** professional development and staff time to support implementation

In addition to the biggest costs, districts have identified the following as key decisions impacting cost planning and scaling:

INSTRUCTIONAL MODELS	INFRASTRUCTURE
<ul style="list-style-type: none"> • Different blended learning models require different software and device ratios • Models have different staffing considerations, including typical student-to-teacher ratios and the use of paraprofessionals to assist with instruction 	<ul style="list-style-type: none"> • Investing in a robust network up front may save time and money as you scale • Exploring pricing from multiple Internet service providers can save money • Consider municipal-wide connectivity services since many offices need Internet access and bigger contracts can improve rates
DEVICES	PROFESSIONAL SERVICES
<ul style="list-style-type: none"> • Explore device leasing/financing strategies and total cost of ownership • Devices for cloud-based software are much cheaper and can save \$100s per unit but do require robust Internet connectivity • Ensure devices can be used for assessment purposes 	<ul style="list-style-type: none"> • More complex instructional models may require more professional development • Leveraging experienced teacher leaders to provide professional development can save on longer-term costs • Real-time instructional coaching is one of the highest returns on professional development

See Appendix B for resources supporting cost considerations and some of the key decisions highlighted

Each district will have some unique cost considerations, but having an understanding of the key costs up front will help ensure districts have the tools to create a feasible multi-year plan for scaling blended learning.

STEP 2 / Funding Sources, Priorities, and Trade-offs

Now that you have a general understanding of the costs associated with planning for and implementing blended learning, it is time to focus on how to pay for it. The first question to ask: “Is blended learning a district priority?” It is difficult to focus on scaling blended learning if implementation is treated like a typical standalone district program. To scale blended learning, districts need to identify additional funds and/or make funding trade-offs. Funding sources, or ways to both reallocate funds and identify new funds, can be broken into two major categories: internal funding sources and external funding sources. Internal funding sources focus on reallocating resources to cover the cost of implementation and creating a path towards sustainability. External funding sources are existing and potentially new funds from various grants and programs that can be leveraged for blended learning. Districts typically use a combination of internal and external funding to pilot and scale high-quality blended learning.

INTERNAL SOURCES

Resources reallocation

- > Instructional resources
- > People
- > Other

EXTERNAL SOURCES

Federal funding

- > E-Rate, Title 1 and 2, etc.

State and local funding or grants

Bonds

Philanthropic funding

See Appendix C for examples of external funding resources

Most districts are familiar with the external funding sources and can reference examples of how other districts have leveraged external funding sources for implementing blended learning. Districts have leveraged a variety of internal funding sources to help offset costs, including the following:

	INTERNAL SOURCE	OPPORTUNITY
INSTRUCTIONAL RESOURCES	Digital Content	reduce spending on textbooks, worksheets, copies, and paper
	Poor Performing Programs	decommission poor performing programs and reallocate funds to blended instruction
	Software Inventory	assess license usage and get rid of unused software and licenses
	Device Inventory	inventory existing technology and consolidate use for instruction
	Device Age	understand the cost of maintaining old devices, which are often more expensive to upkeep compared to purchasing new ones
	SPED Inclusion	assess the potential for SPED inclusion, reducing the cost of pull-out services
PEOPLE	Staff Mix	leverage larger class sizes and lower cost instructional support resources
	Staff Reallocation	lessen the need for substitutes and elective teachers, break away from fixed staff allocation models (unplanned smaller classes), use existing positions differently
	Human Capital	leverage strategic staff retention, flexible student and teacher groupings
	Reallocate PD	use existing instructional professional development funds
OTHER	Enrollment	improve enrollment projections to minimize budget disruptions
	Engagement	assess the potential for a decrease in dropouts / increase in enrollment
	Operations	benchmark operational costs against other districts to identify opportunities to cut costs

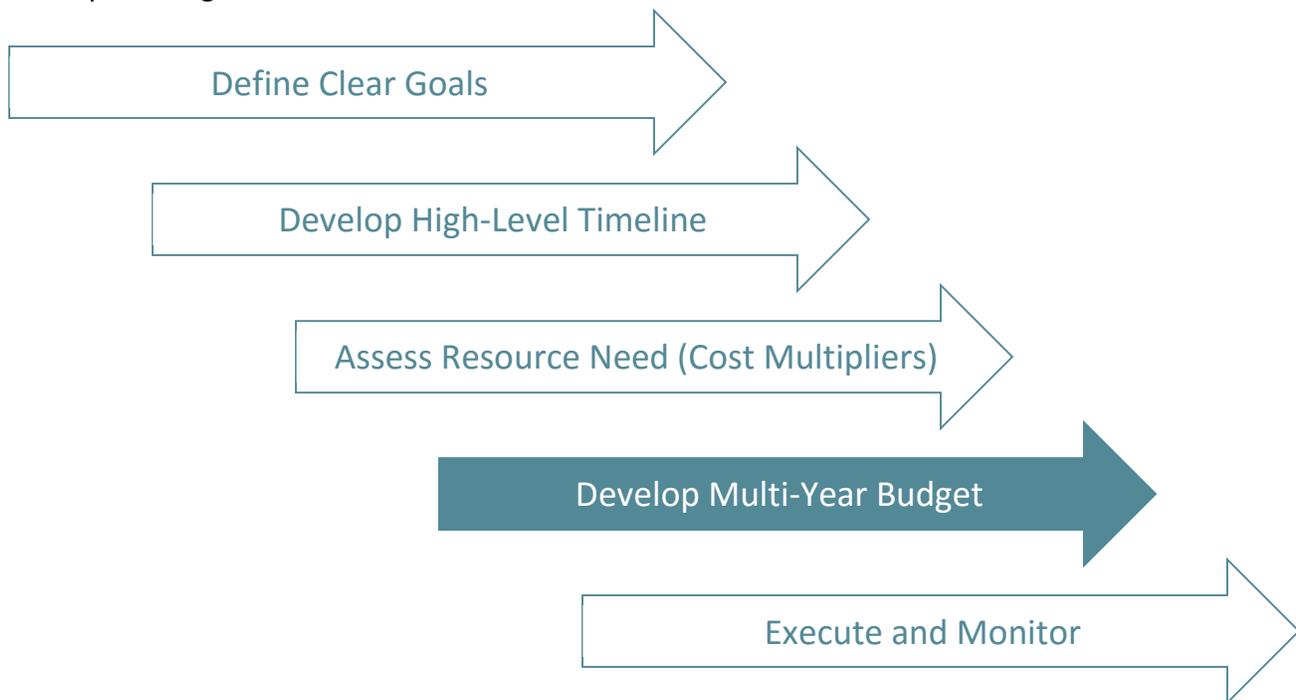
In addition to looking at internal and external funding sources, many districts already have blended learning pilots in schools. Districts should assess how current blended learning implementations are paid for to see if similar system-wide trade-offs can help with scaling models across schools. The mix between internal funding trade-offs and external funding varies widely by district. Districts should assess a variety of approaches and look to incorporate incremental changes as they plan for scale. Many districts work to implement new staff models, invest in robust infrastructure, offset the cost of digital content and software with textbook funds, and shift instructional professional development to support blended learning. While this guide does not contain specific recommendations on which internal trade-offs districts should adopt, the key message is to explore all options to help ensure you can get to a sustainable cost neutral state in three-to-five years in your multi-year budget.

REMEMBER:

Piecing together funds to support a pilot is one thing, but assessing longer-term funding sources for expansion and sustainability is crucial for long-term success. Too many district get stuck in the pilot stage.

STEP 3 / A Multi-year Budget

After solidifying your understanding of what it will cost and how to pay for it, it is time to piece together a multi-year budget for implementing blended learning to achieve two main goals: scale and sustainability. You want to ensure all students have access to blended learning. Most districts focus on phasing in the work over three-to-five years with a goal of achieving a sustainable annual cost through a combination of funding sources. To build out a multi-year budget, you first need to see where it fits into the broader district financial planning process to ensure you have the information you need to develop a solid financial plan. We recommend completing the following steps before completing a multi-year budget:



This guide does not dive into the importance of strong district strategic planning; the illustrative strategic process graphic is meant to highlight where financial planning fits in. A good financial plan will incorporate where and when you will leverage funding sources and trade-offs. Leveraging the high-level timeline and resource needs, you can develop multipliers for the different cost drivers identified in [Step 1](#) of this guide.

A list of key cost multipliers:

- Number of teachers and administrators (staff) that will require professional development each year
- Staff you can dedicate to planning and implementation support each year
- Whether or not you need external professional services to help with implementation
- The bandwidth and overall network required for your instructional model(s)
- The number of devices based on the students and staff that will be leveraging the model as it scales
- The software stack and licensing fees based on student and staff that will be using the software as the model scales
- The age of your building(s) and classrooms, whether or not there is sufficient space and access to electricity, etc.
- Existing communications and evaluation resources

A great multi-year budget will include the up-front investments to provide a strong foundation for blended learning, including a strong network and adequate staff time for planning, and recurring costs to ensure year-to-year expenses and funding sources are clearly identified. We created a sample worksheet in [Appendix E](#) that you can use to develop a multi-year implementation budget. Creating a multi-year budget early on will help districts make better decisions around what it takes to scale blended learning and make smarter investments today to be better prepared for tomorrow.

STEP 4 / Plan for Contingency

Now that you have a multi-year financial plan, it is time to consider contingencies. Many districts already set aside contingency funding during the annual budget cycle. We recommend setting aside contingency funds specifically to support blended learning implementation to ensure you can accommodate the unknown. Contingency is typically a percent of the overall initiative budget, and we recommend adjusting that percentage based on the general comfort level or “confidence” in the resource needs and overall financial plan. The more unknowns, the higher the contingency percentage. Contingency funding for district-wide initiatives typically range from 5%-20%, with the higher percentage representing a lower confidence in the current cost estimates.

STEP 5 / Monitor and Improve

A multi-year budget is not a static document. As costs become clearer and implementation plans change, you need to ensure the budget is updated. A multi-year budget, if updated and monitored frequently, can be used as a decision-making tool when key choices arise. The multi-year budget should be reviewed at least quarterly, to address issues and support a clear path forward. As new decisions arise, take into account the short-term and longer-term financial impacts to sustainability and scaling.

As part of the monitor and improve effort, some districts purchase financial planning and spending software to provide more analytics and insights. We are not sure all districts need to invest in new software to help assess trade-offs and monitor spending, but if that is a challenge in today's world, it may be a worthwhile investment. There are also some free online tools that help with this (see [Appendix D](#) for more information). Remember, the multi-year budget is like any other goal tracking document, it should be monitored and updated frequently.

Conclusion and Call to Action

The Learning Accelerator is excited about sharing this resource to help districts finance blended learning at scale. We realize financial planning is already in your DNA and we hope this resource provides some valuable tips and data to help improve your capacity to create a great financial plan to reach a scalable and sustainable blended learning program.

The Learning Accelerator will continue to develop and share resources to help guide educators through this work. In closing, we will leave you with some advice from other districts implementing blended learning:

- Tie your investment to an improvement in student outcomes.
- Do not layer blended learning implementation costs on top of your existing costs.
- Find ways up-front to offset costs in the short- and longer-term to achieve sustainability.
- Stakeholder buy-in and professional development are keys to success.
- Do not assume staff can plan for this work in addition to current responsibilities.
- Assess your team's capacity to complete the work and hire professional services where needed.
- Do not make patchwork upgrades to your network, smart investments made today will be more efficient in the long run.
- Incorporate device refreshes into your multi-year budget.
- Evaluate existing professional development and programs to decommission ineffective practices.
- Use high-quality Open Education Resources.
- Work with other districts to leverage bulk purchasing.
- Shift from fixed staff allocation formulas; do not assume class size is a key driver of educational outcomes.
- Explore leasing devices to encourage good device refresh habits.

In the end, it is all about providing equitable high-quality learning environments for all of our students. The investments and shifts in spending to support blended learning should be tied to an expectation of improved student learning over time. Best of luck as you work to create a multi-year budget to ensure you have the finances to scale blended learning.

Appendix

Appendix A / Cost Drivers at a Glance

Appendix B / Cost Driver Resources

Appendix C / Funding Source Resources

Appendix D / Financial Planning Resources

Appendix E / Financing to Scale Blended Learning Sample Worksheet

Appendix F / Financing to Scale Blended Learning Overview Presentation

Appendix A / Cost Drivers at a Glance

AREA	COST CATEGORY	FREQUENCY	AVERAGE COST RANGE
Human Capital and Project Management	Up front PD and Support Services	One-Time	\$2,000 - \$4,000 per teacher and admin
	Ongoing Professional Development	Periodic	\$1,000 - \$3,000 per teacher and admin per year
	Internal Staff for Planning and Managing Implementation	Existing Resources	Varies based on size of team and salaries
	Up Front Professional Services	One-Time	\$25,000 - \$100,000 per school
Infrastructure	Network Upgrade	One-Time	Basic - \$1,500 - \$2,000 per classroom
	Network Maintenance and Upgrades	Periodic	Varies based on in-house vs. contracted services
	IT Network Monitoring	Recurring	Varies based on in-house vs. contracted services
	Internet Connectivity (School and Home)	Recurring	\$1,200 - \$7,500 per month (school) \$360 per year per qualified student (home)
Devices	Devices	Periodic	\$275 - \$800 per device every 3 years
	Device Accessories	Periodic	\$25 per device every 3 years
	Device Support and Maintenance	Recurring	Varies based on in-house vs. contracted services, \$50 - \$75 per student annually
Education Software	Digital Content, LMS, Etc.	Recurring	\$15 - \$100 per student Integration \$5,000 - \$40,000 per school
	Software Support	Recurring	Varies based on in-house vs. contracted services, may be bundled into licensing
Classroom Upgrades	Building Infrastructure and Furniture	One-Time	Basic \$500 per classroom Complex varies based on building, etc.
Communications	Resources to Communicate to Stakeholders	Recurring	\$0 - \$5000 per school
Evaluation Resources	Resources to Measure Success	Periodic	Varies based on measures chosen and existing tools

Appendix B / Cost Driver Resources

Reference resources to assist with cost driver estimates:

- **Overall:** [Paying for Personalized Learning A How-To Guide by Education Elements](#)
- **Overall:** [Blended Learning Implementation Guide](#) (pgs 16-21)
- **Technology:** [CoSN Smart IT](#)
- **Device:** [DLN Guide to Edtech Procurement](#)
- **Infrastructure:** [Education Superhighway Network Essentials](#)
- **Network Upgrade and Maintenance:** [Analysis of Costs to Upgrade and Maintain Robust Local Area Networks for all K-12 Public Schools](#)
- **Network Monitoring:** [What are the popular pricing models for managed services providers?](#)
- **Artifact:** [Cost Drivers Spreadsheet Example](#) (One-time, Periodic, Recurring)

Appendix C / Funding Source Resources

Federal Funds

Guidance from US Department of Education – Office of Educational Technology on how federal funds can be used for blended learning.

- [Examples of Leveraging ESEA and IDEA Funds for Digital Teaching and Learning](#)
- [E-rate Form 471 Help](#)

State and Local Grants

Many states have dedicated funds to assist schools with building out infrastructure and/or purchasing devices in prep for online instruction and assessments.

- [State Digital Learning Exemplars: Highlights from States Leading Change Through Policies and Funding](#)
- [Top of the class Computer network aids schools in Arkansas](#)

Bonds

Some districts choose to leverage local or state bonds to pay for infrastructure upgrades and devices.

- [Digital Connections Partnership Schools Grant in Massachusetts](#)

Philanthropic Funding

Many districts look to the philanthropic community to help with getting the ball rolling. But, smart grants will ensure districts think through longer-term financing and assess funding sources up front.

- [Foundation Center website](#) to search for philanthropic foundations
- [GrantsAlert website](#) to search for grants

Appendix D / Financial Planning Resources

Reference resources to assist with financial planning and getting started:

- Article: [3 Tips for Building a Financially Sustainable Ed Tech Initiative](#)
- Budgeting Tools: [ERS Budget Hold'em](#)
- Budgeting Tools: [ERS Resource Check](#)
- Budgeting Tools: [Smarter School Spending for Student Success website](#)
- Artifact: [Example from 4 Oakland Schools - Blended Learning in Practice: Four District School Journeys](#)

Sustainable Cost Estimates:

- [The Cost of Online Learning](#). The Thomas B. Fordham Institute

Other Research and Partners

- [Edunomics Labs](#)
- [Afton Partners](#)
- [ERS Strategies](#)

Appendix E / Financing to Scale Blended Learning Sample Worksheet

You can use the [Financing to Scale Blended Learning worksheet](#) to create a high-level cost estimate once you understand your resource needs:

1. Review the cost driver estimates and variables
2. Insert cost variables for each area
3. Estimate costs for years 0-4
4. Insert number of students for the per student estimate
5. Input the best-guess funding sources and amounts
6. Estimate contingency based on what you know / do not know
7. Estimate the gap or annual and total resources needed based on the cost estimate

Appendix F / Financing to Scale Blended Learning Overview Presentation

The Learning Accelerator created a [short summary of the Financing to Scale Blended Learning guide in PowerPoint](#) to provide a high-level overview of the content in this guide.

This is V.1 of the District Guide: Financing to Scale Blended Learning, compiled by TLA Partner Luis Rodriguez, November 2015

For more information, please contact Luis at luis.rodriguez@learningaccelerator.org.

For more information about The Learning Accelerator, please visit www.learningaccelerator.org.

