STEP 4
PURCHASING
What are some best practices for ordering devices and other education technology?

Despite the much-needed recent investment of federal dollars in expanding the digital learning capabilities of Mississippi students, districts will inevitably still find themselves in the position of having to order additional products and services related to their one-to-one initiatives in the future. **Districts should not count on the state and federal government taking such an active fiscal and logistical role in the future.** The following strategies and best practices can help districts ensure they order the best products at the best price as their new devices age:

1. **Create and distribute a Request for Proposal (RFP) to education technology vendors.**

   Crafting an RFP is an excellent method for communicating a district’s technology needs and expectations to vendors in a way that allows the district to comprehensively evaluate vendor options. Expectations often center on vendor prices, but districts should not neglect specifying vendor services, such as training and technical support, that the district needs. Whatever the requirements, a district needs to make these as clear as possible in their RFP, as this will attract higher-quality vendors and weed out those unable to meet their specifications. (For those unfamiliar with the process of writing an ed-tech RFP, this toolkit provided by K-12 Blueprint is a good resource to get started.)

2. **Evaluate and select vendors with an eye towards service.**

   Whether a district issues a formal RFP, it must still assess options before selecting a vendor. Rob Waldron, CEO of the ed-tech publishing company Curriculum Associates, advises districts to **prioritize vendors who will provide services, such as initial training and ongoing technical support.** In addition to discussing these services and their costs in depth with the vendor, districts can further evaluate the quality of services by requesting the renewal rates of the vendor’s contracts with similar districts or by requesting references from the same districts.

3. **Ask for every available discount and be prepared to haggle.**

   In preparing this implementation guide, we reached out to numerous ed-tech vendors to get an idea of prices of popular products. Few vendors offered a set cost for these products; rather, they operate on a case-by-case basis with prospective buyers, with the intention of working with individual districts to arrive at a given cost for a product. Our main takeaway: this pricing model leaves room for negotiations. Districts should recognize this as an opportunity to demand discounts, especially related to bulk purchasing, and to obtain services, such as initial training and technical support, at a lower cost than would be available elsewhere. With a growing list of ed-tech vendors in the market, districts should leverage the abundance of options to demand the best deal possible, and be prepared to look elsewhere if their needs are not met.
Take advantage of the federal E-rate program to receive discounts on purchases related to expanding internet access.

The E-rate program provides discounts to individual schools and libraries for telecommunications and internet access and has a specific focus on providing affordable internet to schools in need. Generally, most public elementary and secondary schools (in addition to not-for-profit private schools with endowments of less than $50 million) will qualify for 20%-90% discounts, depending on the percentage of students eligible for free or reduced-price lunch. Eligible services under E-rate include everything from routers and modems to wireless controller systems and firewall services. Particularly relevant for school districts with large populations of students who lack internet access at home is a provision within the American Rescue Plan Act which will reimburse school districts for 100% of purchases related to home connectivity (e.g., hotspots) until 2030 (to see a complete list of eligible services, take a look at the 2021 Eligible Services List and begin with Appendix B on page 7). In order to apply, a district needs to file an FCC Form 471, which will indicate which services and equipment the district is purchasing as well as the vendors who will be providing these. For more information about E-rate eligibility and the application process, visit the MDE web page on E-rate as well as the website for the Universal Service Administrative Company, which administers E-rate funding.

Can districts save money by relying on students to use their personal devices?

Some districts transitioning into one-to-one have embraced a “Bring Your Own Device,” or BYOD, model in which students can opt to utilize personal devices rather than receive a one-to-one device from the school. The obvious appeal of BYOD is that a district could potentially save money by not having to provide as many one-to-one devices. However, any district considering a BYOD model should recognize that projecting these savings may not be as easy as it seems: while administering a comprehensive needs assessment to students and families to gauge participation in BYOD may help a district estimate the number of devices it will need to provide, this would have to be accomplished well before devices are purchased by the school in order to ensure any subsequent savings. Additionally, the number of students participating in BYOD may fluctuate on a year-to-year basis, making it difficult to maintain an adequate number of devices for students not participating in BYOD.

There are also logistical concerns for districts to consider if BYOD is on the table. In particular, implementing device security measures on personal devices is generally more difficult than on district-owned devices. Districts will also have to ensure that their one-to-one policies are designed to cover student-owned devices. For more information on adopting a BYOD model, see this BYOD toolkit created by K-12 Blueprint.
Selecting devices for a one-to-one initiative is central to a program’s eventual success, but it does not have to be the daunting task that it appears. With a few key considerations, researching and ultimately selecting a device (or multiple devices) can be a very straightforward process. First, districts should consider what type of device would best meet the needs of its students, taking into account learning goals and objectives, student grade levels, and how various academic departments will utilize this technology. Most devices fall into one of three main categories:

**Tablets**

Tablets are often chosen for elementary students; however, some upper schools also utilize tablets with a keyboard add-on. Tablets are easily transportable, require less student training as they mirror smartphones that many students already have, are cheaper than laptops, and utilize a touchscreen that offers better functionality for many applications. However, tablets also are generally more breakable than the alternatives, quite expensive to repair, and require an additional purchase if a keyboard or mouse is needed.

**Laptops**

Laptops are typically chosen for middle and high school students. They are easily transportable; lightweight, thin, and versatile; and, given the wide variety of options available, are easily customizable when it comes to touchscreens, keyboards, mouse, etc. However, given the array of options available, this also means that there is a lot of disparity in the quality of laptops — the more expensive options tend to be lighter and faster, while the more affordable options tend to be bulkier and slower.

**Chromebooks**

Chromebooks are often chosen as an alternative to traditional laptops. They are much cheaper than most laptops, have a longer battery life than most traditional laptops, and many avoid unnecessary functions. However, they do not run a full operating system as they only support Google Chrome and are less versatile and powerful than the average laptop.
Once districts have determined their preferred device type(s), they will need to select individual products. Here, districts should consider technical specifications of device models as well as their price, availability, and longevity:

**Random Access Memory**, or RAM, is a metric that describes a given device's ability to access data and run multiple programs without slowing down. RAM is measured in gigabytes (GB), with 4GB or 8GB generally being sufficient for school work. Importantly, RAM is separate from a device's storage capacity. (One way to conceptualize RAM and storage, according to Kingston Technology, is to think of RAM as a desk, and storage as a filing cabinet: Not much can fit on a desk, so the things you need for quick and easy access would be on the desk, with other, less pertinent or consistently needed items stored in the filing cabinet.)

The internal storage on a device, also measured in GB, refers to its capacity to save documents, data, and applications. For use in a school setting, generally 128GB-256GB of storage will be sufficient, even though some products may offer as much as 1 Terabyte (TB) of storage. Depending on the device, there may also be the option of choosing between a solid state drive (SSD) and a hard disk drive (HDD). There is not a huge difference in overall functionality, but SSDs do offer faster speeds and are smaller, though HDDs are considered a better deal on a cost per capacity basis.

The processor, or CPU, of a device delivers the processing power and instructions that the computer needs to operate functionally. The more updated and powerful a computer’s processor is, the quicker it can complete tasks. The impact of a processor is similar to RAM, but while RAM can be thought of as a desk, a processor can be thought of as inviting a coworker to aid in your workload: RAM keeps everything on the table for you to access, but processing power allows you to utilize what is on the table.

Generation refers to how new the product is, whether the whole computer or a component, such as its processor. When new generations are issued, they may denote real advancements in technology or even come with new features and capabilities that make prior generations of the same device incompatible or antiquated. If districts are deciding between two generations of a device or processor, it may be helpful to read reviews on whether the latest technology is worth the additional cost.

The size of a device's screen, measured in inches (and almost always denoted in a device description), will primarily affect the device's portability, with larger screens usually resulting in a bulkier device.

While purchasing an extended warranty may increase the price in the short term, districts should recognize that the need for replacements and repairs is inevitable. In all likelihood, purchasing a warranty will be a cost-effective move over time. However, districts should take a close look at what types of damage a particular coverage plan includes, as this may vary among providers.

Devices typically last between three and five years, but this will vary among individual products. When selecting a device, districts should research a product's longevity and factor this into longer-term budgetary considerations.
How should a district determine which learning management system to use?

A learning management system (LMS) can aid in the streamlining of virtual learning by organizing and making available individual lessons, classwork, homework, grading, and more in one, easy-to-use platform. There are many LMS products on the market, and they vary in functionality, customization, and price. Districts should consider how they want to utilize an LMS. Will it be primarily for tracking student progress? Will students’ homework be submitted through the system? Will they integrate their curriculum into the LMS? These choices require varying degrees of access within an LMS, so districts should determine a clear vision for what they want to achieve before working with LMS providers to customize and purchase the best option.

Though they will vary in functionality, customization, and price, a review of leading LMS providers finds that most offer data analytics, professional development, personalized learning, a corresponding mobile app, and compatibility with student information systems (SISs)* as core features of their LMS. Where these products begin to differ is whether they offer standalone SIS capability (rather than simply being compatible with a separate SIS) and if they are cloud-based.

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<th>LMS</th>
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(An important note about purchasing any product to utilize as an SIS: Districts will need to ensure that the reporting functionality aligns with MDE’s reporting requirements. In addition to asking a sales representative directly about this, districts should also inquire if other districts in Mississippi are using this product.)

Definitions
- **Data Analysis**: Offers tools for analyzing LMS data
- **Professional Development**: Offers professional development to maximize LMS utility
- **Mobile App**: Allows students and teachers to access LMS via a mobile app
- **Personalized Learning**: Allows for differentiation in instruction
- **Standalone SIS Capability**: Can operate as a standalone SIS
- **SIS Compatibility**: Can sync with external SISs
- **Cloud-Based**: Data is stored and managed on the internet rather than on a local server

* Not to be confused with an LMS, an SIS is designed to specifically track and manage student information, such as attendance, discipline, and transcripts.
How should a district determine which security software to use?

As with learning management systems, there are a number of security systems on the market for K-12 schools. While we will refer to this general category of services as “device security,” it is important to note that this category includes everything from website and application filters to mechanisms for actively monitoring online activity by students. Not every company will provide identical services nor will they always refer to these services with the same terms. As such, before seeking out device security providers, districts should have a clear vision of precisely what services they are seeking, with measures to ensure CIPA compliance being the bare minimum.

A review of leading providers of what we refer to as “device security” finds that most offer website and application filtering as well as live monitoring of online activity that provides real-time data and analytics to approved school personnel. These are the primary requirements for CIPA compliance. Additionally, some providers offer variations of mental health monitoring, including early potential violence detection, as well as teacher-facing tools for classroom management:

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<th>Filtering</th>
<th>Live Monitoring</th>
<th>Mental Health Monitoring</th>
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Definitions:
- **Filtering**: Offers CIPA-compliant website and application filtering
- **Live Monitoring**: Offers CIPA-compliant monitoring of students’ online activity
- **Mental Health Monitoring**: Offers tools to detect potential mental health issues
- **Classroom Use**: Offers teacher-facing tools for classroom management