Infradapt

Outsourced IT for Businesses

A C-Level Executive's Guide To Technology Expenditures

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Did You Know?

EdTech spending is expected to increase by $2.4 billion in 2021. According to K-12 data aggregators:

- 56% of K-12 entities are reporting an increase in their IT budgets
- Top priorities include cyber security, IT governance, infrastructure flexibility, and budget control
- Open Source technologies can reduce the budget of technology initiatives by 20-55% in comparison to proprietary alternatives

The Balance of Cost & Value

Technology is one of the unavoidable costs that every administrator must tackle. From small purchases to organization-wide transitions, any investment made into the modern K-12 network should be done at the right time, with the right technologies, and with a concrete plan for deployment and adoption. This brings about the questions every financial officer begins to ask: When? What? How?

The short answer is that there is no "one-size-fits-all" solution. There are core guiding principles set forth by industry best practice that can help determine the balance of cost and value when considering a network infrastructure overhaul.

When is it time for a change?

It is important to remember that IT decisions impact all levels of the organization. Often times it can remain unclear as to whether or not a change is required. Things like downtime, network delays or interruptions, or workflow deficiencies could be key indicators that it is time for a change.

Generally speaking, software and hardware solutions have a shelf life of anywhere from 3-5 years. Right around that time, the risks of inadequate computing power, poor user experience, security breaches, etc. become increasingly more likely. It is important for municipal leaders to not find their team on the path to "What if?" What if the operating systems won't get any further security patches? What if the server fails? These are all very real concerns that could result in hard dollar financial implications. The good news is that they are all avoidable.

Proactively identifying soft costs and putting a value on administrative risk is the best way to determine when it is time for a change. Are there recurring inefficiencies that result in downtime? Is the environment secure according to industry standard? Did the administration extract the most value possible from the solution? These are just a few of the many questions that come about as the financial analysis progresses.

These quantifiable metrics are all core components of the decision making process. Over time, they will begin to reveal when it makes sense to make a change to the environment.

What is it that the administration is investing in?

Any investment in technology is not only a financial decision - it is an operational choice that will determine the ability of a charter school to serve its students for years to come. For this reason, administrators must distill the benefits that technology brings to daily operations to determine the best path forward with new solutions.

Identify the likes and dislikes of the current solution in place. Outline areas of improvement that can be accomplished with the adoption of a new system. Most of all, do not be afraid to stray from the status quo. Technology is constantly evolving and improving the means through which local government entities operate. It's financially beneficial to stay ahead of the curve.

“ Understanding which solutions is the best fit for an environment depends on many factors…

The two main development approaches for financial leaders to know are *open source* and *proprietary*.”

How should a transition be approached?

Prior to adopting any new or updated technologies, whether it be a new software platform or upgraded network infrastructure, it is necessary to understand how all facets of the organization will interface with the proposed solution. For software migrations, it is recommended to conduct a Gap analysis which is a process that assesses the differences in performance between a business’ information systems or software applications to determine whether operational requirements are being met and, if not, what steps should be taken to ensure they are met successfully. For infrastructure or security upgrades, a network risk and security assessment should be conducted to identify any areas of concern and the proper infrastructure upgrade path.

Only after an in-depth understanding of workflows are defined, does it make sense to explore the potential of emerging solutions and how it will affect the organization as a whole. All the while, factors of compliance, organization wide adoption, and security protocol should also be considered.

The Right Technologies

There are countless options in the world of technology to solve most business challenges. The last thing any executive wants to do is pay for features and widgets that provide no material value. Understanding which solution is the best fit for an environment depends on many factors such as licensing models, technical capacity, total cost of ownership (TCO), etc.

Technologies can often be categorized based on the methodologies used to develop the platform and bring it to market. The two main development approaches for financial leaders to know are *open source* and *proprietary*.

Examining the advantages and disadvantages of these philosophies, as it relates to the business challenges an administration is seeking to solve, is of utmost importance when finding the most financially optimized fit for an organization.

Proprietary Technology

Proprietary technology refers to platforms and solutions that are solely owned by the individual or publisher who developed it. Such solutions are synonymous with common big name brands that privately develop and test their products before release. These technologies cannot be easily modified or changed by the end user, or integrated with other 3rd party platforms.

Proprietary solutions sometimes introduce artificial licensing models to drive corporate revenue goals. This practice locks down feature sets that the solution would otherwise be capable of. These features are then made available for those who pay for the ability to access those features. The end result is a higher TCO with more “plug-and-play” framework that allows for easier implementation. While typically the more costly option, this can be beneficial to charter schools with less technical administrative horsepower.

Open Source Technology

Open Source technology refers to platforms and solutions in which the source code that is used to create the program is freely available for the public to view, edit, and redistribute. This fosters open collaboration through a community seeking to constantly develop the platforms to enhance features, security, and interoperability.

"The main goal of this process is to ensure… that the hardware is fully realized throughout its useful lifespan"

While technologies developed with this philosophy are often free from licensing costs and more flexible in terms of design and solution capacity, they can incur increased maintenance expenses. Open source solutions are not always the best fit, but can often provide alternatives at a lower TCO, and negligible difference in performance, when compared to "industry leading" proprietary solutions.

Procurement Best Practice

The fact of the matter is, public sector procurement isn't easy. Through bid processes and interviews, administrators are posed with numerous options to solve the same challenge through the implementation of different tools. There can sometimes be hundreds of features that come bundled with the latest technologies right out of the box, but often times administrations may only leverage five or ten of them.

Following these four pillars of procurement best practice will help ensure that an administration is getting the most out of their technology spend from a technical capacity:

- Don't get caught up in brand name or manufacturers
- Research the technical specifications of the solutions being compared
- Get familiar with the short term and long term impact of licensing models
- Always investigate the open source options

Asset Lifecycle Management

Not getting the full value of an asset is any financial steward's nightmare. In the world of technology, software requirements and hardware capacity evolve at a rapid pace. In an effort to extract maximum value and avoid untimely upgrades, administrators must ensure that hardware asset management (HAM) and software asset management (SAM) efforts are properly synced.

Hardware Asset Management & Software Asset Management

Hardware Asset Management is the administration and depreciation of physical components (e.g. desktops, laptops) and computer networks from the procurement stage to the retirement of the asset.

The main goal of this process is to ensure that the financial investment made in such hardware is fully realized throughout its useful lifespan. The stages of this process can be broken down into five phases:

- Specify the need
- Acquire the hardware
- Deploy the solution
- Service the hardware over its useful lifespan
- Retire the hardware and decommission it from service

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About Infradapt

Infradapt is a leading regional technology solutions firm, providing comprehensive IT consulting and outsourcing.

Our customers span many industries from K-12 education and local government to multi-location Fortune-1000 enterprises.

Infradapt's solutions range from basic IT services through multi-tier outsourced support and business continuity solutions.

Infradapt has a strong history in service to the charter school community throughout the Commonwealth with a concentration in designing, integrating, and supporting converged voice and data environments for multi-site organizations.

Recognized nationally for service and engineering excellence, Infradapt is the company experts choose.

PHILADELPHIA
1515 Market Street, Suite 1200
Philadelphia, PA 19102
215-525-7000

LEHIGH VALLEY
1027 Trexlertown Road
Trexlertown, PA 18087

By employing HAM best practice, administrators ensure productivity, efficiency, and interoperability throughout the life of the asset.

Software Asset Management is the practice of actively controlling and automating procurement, usage, and deployment of software licenses. While the core motivations for HAM and SAM are the same, there are special considerations when discussing SAM, such as compliance standards and purchasing policies (i.e. licensing).

It is necessary to understand that the HAM and SAM processes depend on one another to keep the environment secure, compliant, and operational. By aligning these efforts, administrators will ensure the maximum value is extracted from investments throughout their natural lifecycle.

This tends to result in reduced maintenance costs, reduced software spend, time saved, and an overall increased ROI.

An Organization Wide Approach

Technology is no longer a "fund it and forget it" line item on the budget. Executive administration must closely collaborate with IT resources to keep all complexities of the network, and the core business functions it serves, aligned and running smoothly. To accomplish this, charter schools establish technology roadmaps that address the outlook for maintaining and improving network integrity for the foreseeable future.

While there are many aspects to develop on a technology roadmap, the core components that are focused on from a fiscal standpoint are as follows.

Risk Factors – Defining Risk Appetite

Before defining the end goal, it is important to understand the organization's appetite for risk. Risk Appetite is a term commonly used to describe the level of risk an organization is willing to accept while pursuing its objectives. To truly form a risk appetite, an organizational task force of key administrators should come together and ask, "How should our administration pursue its future technology goals and the risks that come along with either pursuing them, or being inactive."

With an agreed upon risk appetite, or mindset for making these changes, the team is ready to consider the value that the latest and greatest technologies bring to an educational environment. Identifying current challenges and future risk factors assist to isolate pertinent objectives. These include:

- Current technical capacity and ongoing challenges
- Preparedness for industry trends
- Available internal and external resources
- Operational objectives

By determining these risk factors, an administration accounts for the state of the network's past, present, and future ability to achieve its mission.

Additional Resources For Your Charter School

Infradapt is committed to the professional development of public sector administrators regarding IT best practice. Guided by industry leading organizations such as NIST, CompTIA, CompTIA ISAO, SANS, etc., our team constantly keeps abreast of breaking news, evolving cyber threats, and best practices to engage the administrative community in meaningful ways.

Below is a link to our library of 2021 library of cyber security training and industry best practice sessions that Infradapt conducted in partnership with PCPCS and more.

Webinar & Resource Link:
Infradapt.com/chartertech

We also encourage administrators to maintain a dialogue with us by mailing chartertech@infradapt.com to be included on any breaking news, special offers, and best practice training articles that we release throughout the year.

Resources – Identifying Internal & External Capacity

Every charter school administrator understands all too well – there are a limited amount of resources available to achieve its mission. Keeping this in mind, available resources must be accounted for before defining goals that are reasonably achievable. The main resources to consider when defining technology goals along a 3 – 5 year plan include:

- Time
- Funding
- Dependencies
- Personnel

While the answers to these questions are unique to every administration, they will prove to be extremely influential on the final determination of reasonable goals.

Goals & Initiatives

Every vision must have a goal. When outlining a technology roadmap, goals are often formed by understanding what the current requirements of the network are, and what they'll look like 5 years from now. By understanding business oriented objectives, leadership can focus on enhancing the capabilities of the school through the implementation of the appropriate technology solutions.

To do this, every administration does not need to recreate the wheel. The first step is assessing where the environment stands along industry leading recommendations from the COSN, NIST, SANS, etc. Only then can the risk appetite and available resources become aligned with goals that will best serve the future of the organization through the most cost effective means possible.

The execution of a technology roadmap is a dynamic process. Don't be afraid to go back to the drawing board if the three core pillars of the strategy need to be reevaluated – taking the time to do this could mean exponential cost savings in the long run.

About the Author – Nate Kline

Nate Kline brings over fourteen years of industry experience to the table. His background includes all the Company's core sales functions, including lead cultivation, presales support and engineering, relationship and account management, technology and business reviews, solution design, and solution presentations. Mr. Kline is experienced with serving public sector agencies and has overseen turnkey private cloud transitions and environment remediation for over 100+ organizations to date.