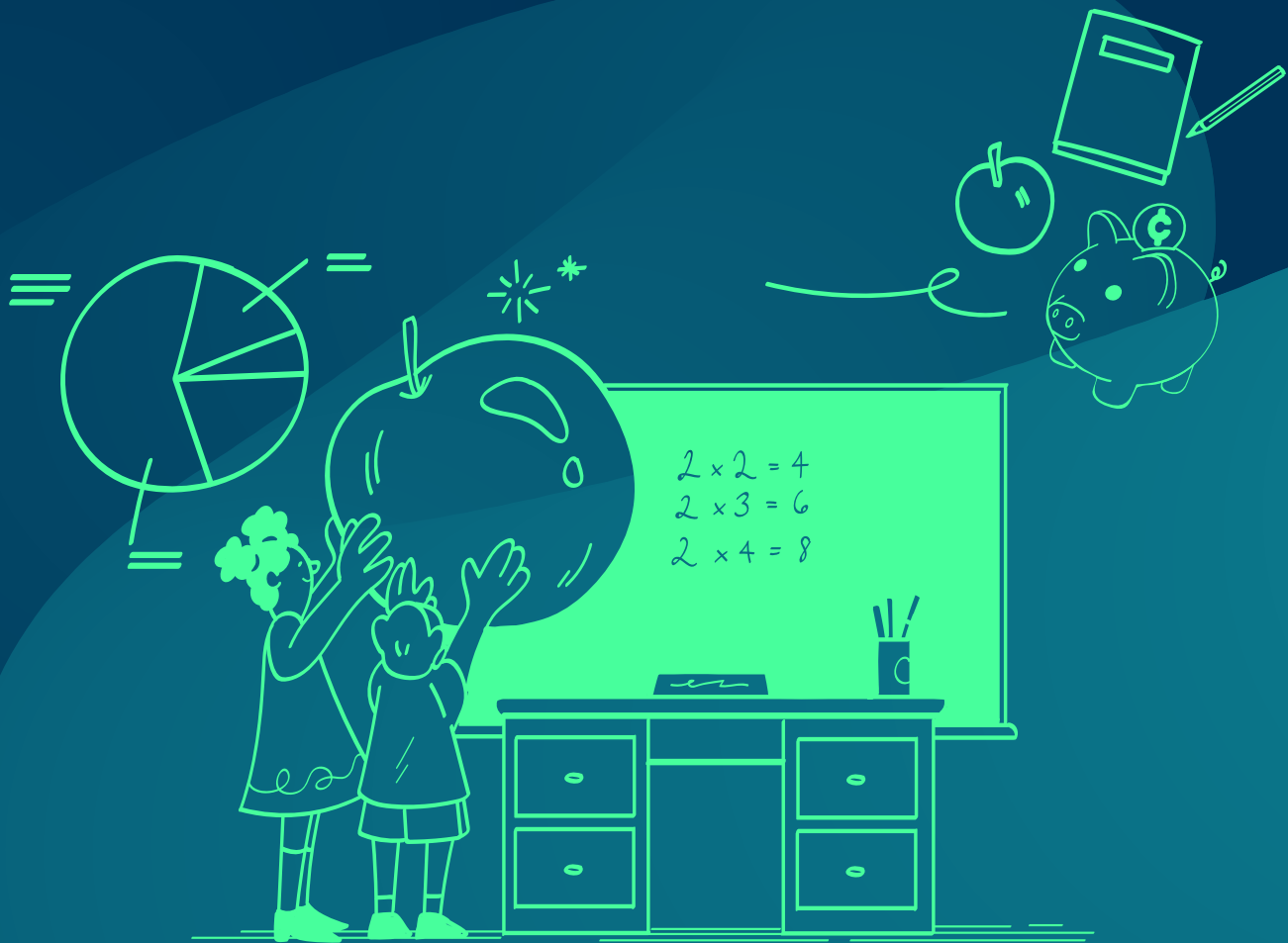# 5 asset management trends for education

How educational institutions can use data to rebalance the budget

Educational institutions are placing more value on the experiences of students, faculty, and nearby communities while general maintenance and improvement needs keep growing. The COVID-19 pandemic rapidly redirected budgets from building improvements to focus on airflow, HVAC and space management. Though important to maintain a usable learning environment, shifting investments to ensure facility health and safety meant less money for long-term and ongoing projects.

Leaders in school districts and private institutions are tasked with rebalancing funds needed for short- and long-term improvements—and now, curating experiences. On one side, there are educational materials and cosmetic upgrades necessary to satisfy the community. On the other, aging buildings call for structural improvements and energy efficiency updates, not to mention the staff to maintain operations and upkeep.

But, higher education and K–12 schools face a universal challenge: funding. And with competing priorities or a lack of visibility into the needs of facilities managers, it can be difficult for administrators to know where to properly allocate spending.

Schools provide critical services and can't risk the safety or quality of education of the students in their care. Managing an asset over its lifecycle can be hard, especially for educational institutions, but it's key to providing the safe and comfortable facilities needed by students and faculty. To get everyone from the person determining the budget to the maintenance professional that keeps operations running smoothly on the same page, schools need tools that can easily gather data to deliver visibility and actionable insights to help make the smartest spending decisions possible.

In this guide, we'll explore how Brightly can help bridge the disconnect between administrative and operations leaders to tackle five of the most pressing education-specific market trends affecting both higher and lower education institutions, including:

1. **Health and safety for students and staff**

2. **Sustainability**

3. **Simplifying complex assets**

4. **Rising energy costs**

5. **Infrastructure Investment and Jobs Act**

The high cost of K–12 and higher education

It's never been more critical for institutions to upgrade their infrastructure.

- The 2021 State of our Schools report by The National Council on School Facilities revealed that districts **spend about $110B each year** on maintenance, operations and capital construction for K–12 schools.

- However, **that is still $85B short** of what schools actually need every year.

- Higher education experiences similar problems: a study conducted by the APPA, a national resource for educational facilities, found that deferred maintenance backlogs cost colleges and universities **$112 billion in 2021.**

Smart asset management can help organizations capture and understand the data to save money—and make better investment decisions.

Trend 1: Health and safety for students

The landscape of health has changed significantly since the start of the pandemic, and no industry was more impacted than education. Though the health and safety of students and faculty have always been at the top of priority lists, COVID-19 increased pressure to keep buildings safe via space planning and maximization, HVAC management and additional cleaning.

It's time to breathe new life into old schools

Educational facilities must be prepared to handle not just the threats of today, but potential health issues in the future. Recently, the 2021 State of our Schools reported that the average age of a U.S. K–12 school is 44 years old—meaning it's critical to focus investments on improvements to counteract chronic issues with health and safety related to aging infrastructure.
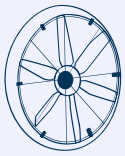
> For example, we now understand how low ventilation is a concern because it is directly associated with an increased risk of transmission of respiratory infections.

## The urgency for our outer communities

Schools in economically challenged areas are at increased risk for health and safety problems due to underfunded aging facilities. According to the State of our Schools report, rural districts serving high-poverty public schools have funded capital improvements at almost half the level of the national average—$2.3 million on average per school compared to $4.3 million per school. So what does this mean for these ecosystems? The 21st Century Schools Fund found school facility deterioration was directly correlated with negative student and teacher performance.

Light at the end of the tunnel

It is possible for struggling educational systems to make improvements. Through the Environmental Protection Agency's Clean Air in Buildings Challenge, the US government has offered hundreds of billions of dollars in funding for schools to upgrade their HVAC, ventilation and filtration systems. And, with the American Rescue Plan, higher and lower education schools were given $122B in funding for these updates as well.

Brightly can help optimize funding for educational institutions of all sizes to help get their facilities upgraded to support student and teacher health and success via data, maintenance and efficiency.

Across the world, there are districts that are demonstrating the path forward to a brighter future. Organizations like Hamilton Southeastern Schools rely on Brightly's industry-leading EAM solutions to make operations efficient without increasing budget or staff. After adopting Brightly, the district doubled in size, yet increased efficiency with limited staff, all while maintaining building health.
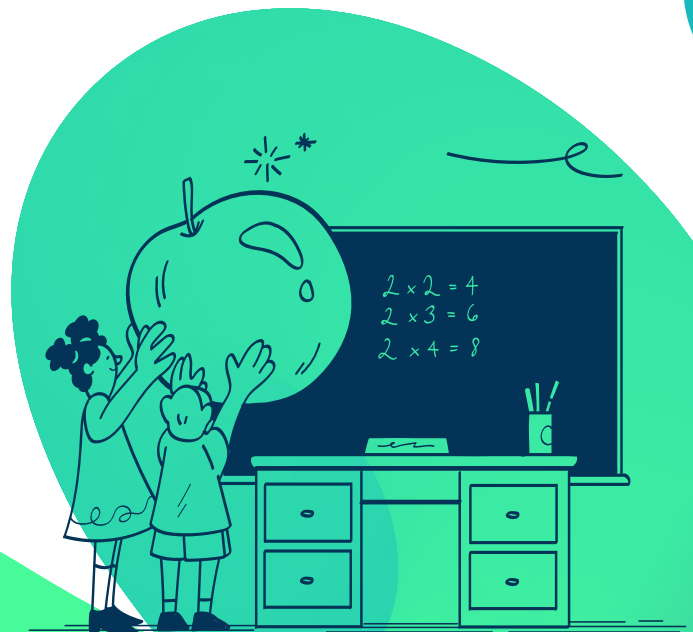
Trend 2: Sustainability

Globally, sustainability is driving many initiatives such as smart cities or more efficient energy grids. But Stateside, many environmentally-influenced projects have been back-burnered to redirect funding—especially as it relates to education.

Modernizing and replacing old public schools can help communities conserve undeveloped land, energy and water. It can also assist in the reduction of carbon emissions, and in the face of climate change, protect lives while reducing the level of relief funding needed following disasters. However, in the wake of COVID-19 and other economic challenges, not enough is currently being done.

At a time when hiring and retention is one of the top challenges for maintenance and operations (M&O) at educational facilities, poor infrastructure and lagging technology are what's getting in the way of more sustainable institutions and even community vitality. What's worse, if facilities fail to make updates, institutions become even less appealing to faculty, students, and all the staff that make up those ecosystems. That may result in lower academic performance, lesser caliber of talent and a whole host of other issues.

It's a vicious cycle.

So how can educational systems begin to set and achieve sustainability initiatives?

Gather data to boost transparency and improve environmental impact

With the right tools, M&O leaders can gain insight into the state of their assets to use the data to better communicate with stakeholders about where to direct funds. As fixing or replacing aging school infrastructure built without environmental impact in mind becomes a priority, technology can help make smart updates where they'll do the most good and help managers to hire and train the next generation of professionals.

With communities demanding more sustainable public and private schools, and states and municipalities also starting to require—under strict penalties—increased transparency and action toward sustainability, it's critical to start laying the groundwork.

A task made easier with technology.

The high price tag of inefficiency

If your M&O teams can't track the information your assets already have, how can you be sure that you aren't losing money from failing boilers or excessive energy consumption—you know, stuff that could be automated or easily avoided with proactive maintenance?

Sustainability is more than just replacing old machines—it's about knowing where your inefficiencies are happening. On top of the demand for building updates, there are also leakage costs associated with excess energy consumption in aging educational buildings, adding to the increasing expenses for educational infrastructure.

According to the US Department of Education, between 2016–2017 schools spent roughly $12.5 billion on utility costs—and that number continues to rise. That same report found that an estimated 25% of those energy and operational expenses could be avoided through investments in long-term sustainability.

New generations, new top priorities

Sustainable educational facilities are not just about the environment and saving on funds; Generation Z prioritizes sustainability on par with employment or healthcare.

- As current students, Gen Z is more focused on the environment than any previous generation and will be more likely to attend "green" universities and private institutions

- According to a **2021 study by Deloitte**, climate change and environmental issues were driving factors in decision-making among the Gen Z population

- The **2021 Princeton Review survey found that 75% of students** applying to colleges said the institution's commitment to environmental impact was a driving factor in their decision to attend that school

With more and more people prioritizing the environment, many look to places like Europe where institutions have already begun government-backed sustainability initiatives. But even with new legislation and societal pressure putting an emphasis on funding for sustainability projects in schools in the United States, many asset management professionals either have no plans in place or do not see it as a priority—in a recent survey we conducted with education leaders nationwide, 23% of respondents reported not have a strategy in place.

Get on the path with benchmark data to prioritize investments

Educational institutions can partner with organizations like Brightly to help get the most out of their assets—and their data. By capturing, tracking and centralizing this valuable information, M&O managers and administrators can work together to make sustainable investments that will benefit their ecosystem for years to come.

Brightly can help your organization with sustainability objectives, such as:

Capturing legacy information to save valuable resources on future projects

Zero carbon targeting that enables asset owners to monitor and report on sustainability metrics

Making informed investment decisions aligned with environmental, social, and governance (ESG) goals, commitments, and regulations

From public opinion to long-term cost savings, investing in sustainability can help educational systems attract students and talent to ensure they remain operational. The right tools can help identify where the best investments can be made. Brightly can help kickstart your educational institution's environmental goals by working with you to get on the path to a more sustainable future.

Trend 3: Rising complexity of assets

Across industries, leaders expect more from the technologies they use, and education is no different.

With higher and secondary education facilities facing inflation/rising costs, supply-chain turbulence, and labor challenges, finding operational efficiencies can be difficult. Economic uncertainty is placing pressure on schools to adopt everything from mobile solutions to new technology, and amplifying the need for smart tools, in an attempt to address, well, all these unknowns.

However, this can feel like a challenge if administrators lack visibility into the operational needs of facilities or if M&O departments are reluctant to adopt new tools. A challenge that compounds when newer generations don't want to work somewhere that lacks the technology to make their jobs more efficient.

Luckily, the right tools can be as easy as using a smartphone.

The case to upgrade from whiteboards and sticky notes

Since manual maintenance systems tend to consist of a disorganized combination of word-of-mouth, phone calls, emails, printouts, sticky notes and spreadsheets, the data can be difficult to track. Many institutional boards or administrators also take the "if it ain't broke" approach and don't understand the value in modernizing operational functions—a change that could save them considerable time and money (and not to mention help with hiring).

Implementing the right system is like throwing a life preserver to a maintenance and operations manager drowning in a sea of paper; not only can smart technology be incredibly easy to learn, it can amplify team morale and streamline workflows. It can also help maintenance and operations managers rise from costly reactive damage repair to proactive maintenance (and you know, help secure valuable funding for priority projects).

Beat the backlog blues

Backlog leads to reactive fixing, which ultimately means higher costs because M&O teams wait to repair assets at the last minute. Often, this means having to pay more for rushed parts or emergency servicing. A "fix it first" mentality can help extend asset life cycles instead of causing increased fees for unplanned repairs—and it's easier to know the status of your machines when you're capturing their data.

But who will bankroll the backlog?

Adopting smart technologies is one of the best ways to save money over the long term.

- According to a study by the APPA, the cost of the national backlog for capital renewal projects is over **$2 trillion**.

- The US Government Accountability Office reported that 54% of public school districts need to update multiple building systems or features in their schools.

- It also reported that **41 percent** of districts need to update or replace heating, ventilation and air conditioning (HVAC) systems in at least half of their schools, representing about **36,000 schools nationwide that need HVAC updates**.

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Proactive maintenance can help schools save big

Smart tools can help educational institutions to get ahead of backlog projects. A shift toward preventive maintenance can help educational facilities reduce expenses. According to **a Facilities Net report**, the cost of deferred maintenance could be as much as 30 times that of the early intervention cost.

Smart assets are becoming commonplace in our everyday lives and will soon be standard in our operations world. Gone are the days of creating paper-based work orders, as new technology has allowed anyone with a smartphone to track progress and share updates. Mobile devices seemed exotic. Before you know it, connecting with your assets to have them tell you when they need help will be the norm.

"

It's the one tool we use which enables us to drive productivity, efficiency and really have a grasp on the maintenance work. It really helps link some of my goals, objectives and metrics in a meaningful way that I can report on.

"

Ruth Haynam
Senior Director of Maintenance Operations,
Robert Morris University

Modernizing asset management

While it promises to bring a great deal of efficiency to schools and universities, IoT technology can be deployed inefficiently, creating more work and maintenance. Highly reactive/run-to-fail maintenance environments are extremely costly—both for the maintenance and the capital to replace premature failing assets, systems and facilities.

It might seem easier for educational institutions to stick to their familiar home-grown systems. But for higher and secondary education systems, new tech can be easier and less expensive than ever before to implement, scale, and get everyone up to speed.

With Brightly, we can help with a predictive maintenance strategy that leverages IoT technology to catch problems early, providing tremendous benefit for your organization. The cost of implementing IoT is a fraction of the savings you get, not to mention the boosts to morale, safety and operations that come with a successful adoption. Brightly can help your organization simplify the increasingly complex asset landscape via predictive maintenance and smart IoT management technologies.

Trend 4: Rising energy costs

Globally, humans are dealing with rising costs due to inflation and economic distress. For educational institutions, no place is the pressure felt more acutely than in the energy bill.

The energy expense keeps growing

For administrators keeping a close eye on the bottom line, it's been rough lately. After salaries, energy is the second biggest expense for public K-12 schools at $8 billion per year, according to **White House data**. This was echoed by the **U.S. Energy Information Administration**, which predicted that energy costs increased by 2.7% in 2022, with winter prices 6% higher than expected since 2021. And, educational facilities are not immune to these expenses. Bloomberg reported similar data with **US power prices having risen the most in 41 years**, with schools getting hit hard.

Can't we find a smarter(er) way?

Increasing energy prices is just one of the many factors putting pressure on schools to find ways to decrease energy consumption to manage costs and meet budgets.

So just how much money are institutions losing from inefficient energy usage?

According to research firm RMI, the average K–12 school spends **$300 per student in energy costs**. Even more alarming is that they waste about 33% of that energy expenditure. In total, US schools spend more than $6 billion a year on energy—but most of them could save 25% with the use of smart technology.

Smarter facilities could save a big chunk of change

The State of our Schools reports found that smarter facilities management could reduce capital investment on energy by 1%, nearly $28 billion every year. With rising costs to keep facilities running, it's more important than ever before for departments across educational institutions to work together to find ways to save money.

Smart asset management is one way to use data to better manage energy, workflows and operations. The right solutions in place can make a big difference in realizing savings over time. This is where Brightly can help. We can work with education institutions to help them gain visibility for new funding opportunities, and prioritize investment for projects that will deliver the best long-term cost savings.

$20M saved and prevented 40K metric tons of CO_2 emissions

"

We use Energy Manager as a concise place that has all our data. Spreadsheets and things like that are difficult to manage. Having everything in one spot has proven to be a valuable thing for us. It allows us to quickly understand our utility usage and costs.

"

Tyler Puls
Energy & Environmental Specialist,
Des Moines Public Schools

Trend 5: Infrastructure Investment and Jobs Act

The Infrastructure Investment and Jobs Act (IIJA) focuses mainly on safety, transportation and sustainability with the potential for funds to support resilient infrastructure through pre-disaster mitigation projects.

Know your options

It's critical for district and university leaders as well as facilities managers to know how **IIJA for schools** can impact their budgets. According to the **Congressional Research Service**, now is the time to keep a close watch for additional funding that may become available to support and upgrade school systems. With the IIJA offering opportunities for educational institutions to improve water systems for alternative water sources like reclaimed stormwater, greener roads and pathways educational institutions may be able to make improvements to school properties with renewable energy initiatives or under disaster mitigation as a community resource clauses.

Use data to illuminate your funding needs

Brightly can help overcome the biggest stumbling blocks for education institutions in getting their strategic asset management up to date so they can access the data they need to apply for the IIJA grants. We work with both higher and secondary education to help increase visibility into the information associated with lifecycle costing, ESG assessments, climate resiliency and many other evaluations to prepare institutions for proper allocation—and requesting—of funds.

"

Our need for improving school facilities was obvious, but we needed a comprehensive way to document and communicate these needs, specifically in terms of funding, in order to develop an effective long-range capital improvement plan.

"

W. Jeffrey Booker
Superintendent of Schools, Gaston County, NC Schools

Conclusion

No matter where you work in education, it's a challenging time. Whether you're tasked with dispersing funds or trying to justify why your operations department needs a boost to your budget, the right tools and data can help you tell your story to ensure funds go to the most impactful destination.

Closing the gaps in facilities funding is a critical step to ensure that public and private schools meet modern standards for health, safety and educational suitability, as well as environmental sustainability and resiliency. For administrators, this means investments need to be balanced between long-term serviceability and short-term reactive improvements—not just in the silo of an individual facility or campus but across districts and budget holders.

M&O professionals need tools to both help keep things running smoothly and explain why their departments need funding. By sharing access to rich data, historic trends and scenario planning, strategic investment decisions can be made and implemented to truly benefit the entire educational ecosystem.

Brightly is uniquely positioned to partner with K–12 school systems and public and private universities to harness the power of their data and modernize their approaches to managing assets, budgets, hiring and buildings—to create a sustainable future. Once institutions start down the path to sustainability, they can be empowered to stay ahead of these trends and create safe and healthy environments where students, faculty and communities can thrive.

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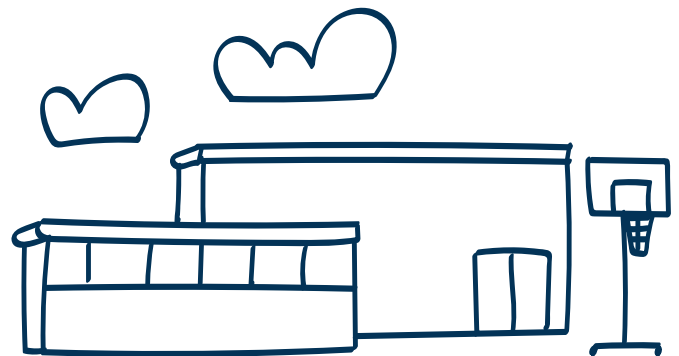
About Brightly Software

Brightly, a Siemens company, is the global leader in intelligent asset management solutions, enables organizations to transform the performance of their assets. Brightly's sophisticated cloud-based platform leverages more than 20 years of data to deliver predictive insights that help users through the key phases of the entire asset lifecycle. More than 12,000 clients of every size worldwide depend on Brightly's complete suite of intuitive software – including CMMS, EAM, Strategic Asset Management, IoT Remote Monitoring, Sustainability and Community Engagement. Paired with award-winning training, support and consulting services, Brightly helps light the way to a bright future with smarter assets and sustainable communities. For more information, visit **brightlysoftware.com**

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