



Annual check-up: Time for healthcare to examine its assets

5 trends leading to a shift in asset and energy
management for 2023



The healthcare industry is facing a conundrum: boost the quality of experience for workers and patients, modernize facilities and tackle the challenges of hiring across functions — while finding ways to pay for it all.

COVID-19 rapidly redirected budgets from overdue facility updates to focus on airflow, HVAC and space management. Now, leaders must rebalance the funds needed for short- and long-term improvements as they also promote positive healthcare patient and worker experiences.

But funding is sparse, and healthcare isn't immune to higher costs. And with higher priorities related to staffing challenges, patient safety and minimal visibility into the needs of facilities managers, it can be confusing for health systems leaders to know where to best allocate maintenance and operations (M&O) spending. On one side, repairing or replacing equipment and materials is necessary to satisfy health and safety requirements. On the other, aging facilities and plants also call for structural improvements, energy efficiency upgrades, and staff to maintain operations and upkeep.

Healthcare, by nature, provides time-critical, clean and safe services to the community, services that are highly dependent on optimally performing facilities. Asset managers need help to ensure buildings, plants and systems maintain functionality.

Managing energy or an asset over its lifecycle is the key to providing the environment required by workers and patients — so long as the money can be found to support operations. To gain alignment, everyone from the person signing off on the budget to the M&O professionals that keep facilities running needs a common language complete with tools that can leverage data and deliver actionable insights so funding can be distributed to the most impactful projects.

Amidst staffing challenges, aging infrastructure expenses and new compliance regulations ignited by COVID-19, organizations have no option but to spend wisely. In this guide, we'll explore how to bridge the disconnect between administrative and operations leaders to tackle five of the most pressing healthcare-specific market trends affecting hospitals and health systems, including:

1. **Health and safety of workers and patients**
2. **Supply chain-driven cost increases**
3. **Growing complexity of assets**
4. **Rising energy costs**
5. **Sustainability**

Trend 1: Health and safety for all

The health and safety of patients and healthcare workers has always been a leading priority across health systems, and many communities also now place this at the top of their trend list. As we just learned so well, facilities must be prepared to handle not just the threats of today but potential health issues in the future. The landscape of health has changed since the start of COVID-19, and no industry has been more impacted than healthcare.

Today, hospitals and health systems face even larger health and safety challenges that impact facilities at record rates. For example, according to OSHA data, U.S. hospitals recorded [221,400 work-related injuries and illnesses](#), a rate of 5.5 work-related reported incidents for every 100 full-time employees — almost twice the rate of any other industry.

Maximizing space and safety

The pandemic gave new meaning to space planning for hospitals, emphasizing the management of areas to ensure buildings were effectively used to full capacity and able to keep people as safe as possible. For example, when elective surgeries were paused to open up beds for COVID-19 patients, operations managers needed to modify maintenance, cleaning and other facilities-based tasks.

It's now table stakes for plants and facilities in the healthcare ecosystem to maintain space planning and maximization, HVAC management and additional cleaning for safety — even as many floorplans return to their original use.

Compliance and risk mitigation

This is a major pain point for healthcare M&O managers today. Compliance lists were already long and hard to manage prior to COVID-19 and now in a post-Covid world, that list is only growing and more challenging to stay up-to-date with.

Old data that takes on new meaning

According to a joint study by the American Society for Healthcare Engineering (ASHE) and the American Institute of Architects' Academy of Architecture for Health, the average age of plant for U.S. hospitals in 2015 [ranged from 10.78 to 11.48 years](#), compared with 8.6 in 1994. This increase in median average age of plant of nearly three years over the past two decades indicates that hospitals, in general, have struggled to raise the capital needed to keep their facilities up-to-date.

That data is similar to a more recent report from the [American Hospital Association](#) that revealed nearly one-third of rural hospitals reported an average age of plant of 15 years or older. Since that number reflects an average, that means many are even older. Aging often means outmoded equipment, outdated and, in some cases dangerous, utilities and an inefficient workflow that hampers production.

There is a huge need to drive, improve and centralize compliance — especially as hospital footprints are expanding and staffing levels are contracting. Meeting compliance standards with The Joint Commission or the Det Norske Veritas, Inc. (DNV) is critical to meeting safety standards and the environment of care rounding.

Many systems in place today for many hospitals are a set of band-aids, temporarily fixing a disparate system. Without a compliance-driven or centralized documentation solution, many departments attempt to tweak what they have to meet compliance standards. But for the most part, it doesn't work. As a result of these band-aids, compliance inspections fail because too many things are falling through the cracks.

We know compliance and risk mitigation is becoming one of the most important — but largely unfixed — aspects in asset and energy management. [Brightly TheWorxHub™](#) is designed specifically for hospital and health systems, combining asset management, compliance readiness and safety rounding all into one solution. With access to embedded accreditation standards and preventative maintenance templates, Brightly ensures that those on the frontline have what they need to stay organized and be compliance-ready for all safety inspections and other M&O functions.

Light at the end of the tunnel

It is possible for struggling health systems to make improvements. According to the [U.S. Department of Agriculture](#), the USDA is awarding \$110 million in grants to improve healthcare facilities in rural towns nationwide. The investments will be used for projects to help rural hospitals and healthcare providers build or renovate facilities, including HVAC, ventilation and filtration systems.

Leveraging data promotes more effective transparent budgeting, enabling leaders to utilize benchmarks and reporting that measures against key performance indicators (KPIs). Capabilities such as better budgeting tools, detailed reporting and industry benchmarking can help create capital plans and enable analytics-based repair vs. replacement decisions for healthcare plants and facilities.

Brightly works with hospitals and health systems to help get their facilities upgraded to support patient and worker health and success via data, maintenance and efficiency. Our tools can help provide structured data and asset plans to optimize funding opportunities for healthcare institutions of all sizes.

Brightly Origin™ delivers insights to optimize facilities budgeting

A clear line of sight into capital needs can protect against unplanned failures and the resulting emergent spend. For the healthcare industry, benchmark data reveals accumulating risk from deferred maintenance:

- **47%** of major mechanical, electrical and plumbing assets have exceeded industry expected useful life.
- If deferred maintenance levels exceed **60% or 70%** for a given facility, it can be very difficult to recover the infrastructure of that facility without major disruption to daily operations.

Understanding the true cost of deferring maintenance enables facilities to operate at peak performance and helps understand the impacts of cutting or increasing labor spend.



Trend 2: Supply chain-driven cost increases

Globally, prices are soaring; the healthcare industry has not escaped increased expenses with parts or resource constraints resulting from supply chain issues.

Health systems and hospitals need to seek solutions that drive down costs and use resources more efficiently. Specifically, healthcare institutions need to do more with less, which calls for taking better care of existing assets and machines to save capital.

Increased expenses for essential medical supplies and building materials will impact not-for-profit hospitals, healthcare providers and public finance sectors with significant capital expenditure programs, which should be expected. According to a Moody's report, higher prices for materials and public spending constraints will likely [increase costs for new construction projects](#) for hospitals.

Billion-dollar hospital bill(s)

Inflation and rising labor costs will continue to increase U.S. national healthcare spending, according to a [McKinsey report](#).

- More than **\$370 billion** in the next five years
- Rising clinical labor costs will account for **\$170 billion** of healthcare spending
- Non-clinical labor costs for medical equipment and construction projects will contribute **\$90 billion by 2027**



Capital planning is mission critical

Research from the [Journal of American Medical Association](#) indicated that optimizing asset management is at its most crucial because U.S. hospitals waste between \$760 billion to \$935 billion, amounting to about 25% of total U.S. healthcare spending.

And don't forget about construction costs. Data from a recent Brightly survey revealed:

- **Repairs:** There is a \$243 billion immediate investment needed for healthcare infrastructure assets.
- **Replacement:** Hospital and healthcare facility maintenance and operations assets are aging out of useful life at a rate of \$1–\$2 billion per month.
- **Renovation:** A roughly \$39 billion annual investment is needed over the next 10 years (\$391 billion total) to adequately update healthcare infrastructure assets.

American Jobs Plan: A light you want to walk toward

In response to rising supply chain costs, the White House created the American Jobs Plan, which includes more than [\\$2 trillion in investments for healthcare](#). The bill's goal is to update aging healthcare facilities nationwide. Many organizations may qualify to receive grant funding and may qualify for other funding opportunities.

Using Brightly tools like [Origin](#), you can collect and understand the data behind your assets to help qualify for funding for labor, equipment and construction projects. We can also partner with you to structure and plan for the application process or seek private investment to mitigate supply chain costs, ensuring you have what you need to apply for available opportunities.

Trend 3: Growing complexity of assets

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

With hospitals and health systems facing inflation/rising costs, supply-chain turbulence and labor challenges, uncovering operational efficiencies can be difficult. Economic uncertainty is placing pressure on hospitals 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 leaders 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 mobile device.

Increased demand for real-time, data-driven decision-making and predictive analytics has led to a push for smarter and more connected assets, such as the Internet of Things (IoT), in healthcare. In addition to using live data to improve patient care and generate cost savings, hospitals and health systems can integrate simple-to-use technology to boost facility safety through automated occupancy and disinfection protocols.

IoT and mobile devices are transforming healthcare delivery by providing healthcare workers with more secure access to patient-related data than ever before. On top of the stationary medical instruments, such as the machines used for X-rays, laboratory tests and drug management, connected devices can help providers monitor vital signs. "Interoperability" has become an important term with developing trends in healthcare, and now there are more and more ways to manage integrated information management processes — including reducing asset downtime.

Increasing efficiency in hospitals

IoT implementation in healthcare can streamline access to data, improve the quality of patient care and optimize asset and operational systems performance. Connected devices can transmit huge amounts of data across a healthcare ecosystem.

Leveraging information, management systems can be optimized in a variety of ways, including:

- Creating smart hospital designs
- Establishing data collection technology
- Fostering interoperability among devices
- Developing a centralized data storage platform

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 healthcare leaders 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 its data.

Modernizing asset management

While it promises to bring a great deal of efficiency to hospitals, connected 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 healthcare institutions to stick to their familiar home-grown systems. But for healthcare organizations, 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 catches problems early — a primary goal of IoT with smart assets — can have tremendous benefits for your hospitals. 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.

The potential of IoT for M&O management

Connected technology enables hospitals to run much more efficiently and cost-effectively across all functions. Data from hospitals and health systems data can be used to improve power reliability and stop energy leakage in its tracks. By using this information, healthcare facilities can reduce energy-related operational expenses.

Brightly is here to help you optimize your healthcare facilities and operations. With the right technologies in place, prevent downtime by providing real-time alerts of any anomalies. We work with healthcare facilities to integrate perhaps the most important benefit — improving patient safety — while leveraging IoT to prevent the occurrence of power outages.

Digital transformation and IoT efforts create smart hospitals that can lead to significantly less clerical work as well as improved patient care and satisfaction — ultimately helping hospitals and health systems remain efficient, reduce operating costs and, importantly, stay open for their communities.



Trend 4: Rising energy costs

Healthcare institutions are dealing with rising costs due to inflation, but no place is felt more acutely than in energy. Hospitals operate 24/7 and have significant electric power, heating and cooling needs. Increasing energy prices put pressure on health systems to find ways to decrease energy usage to manage costs and meet budgets.

Operating needs make hospitals one of the most energy-intensive facilities in the commercial sector, consuming more than twice as much energy per square foot as average commercial buildings, according to research from CAT. Comparatively speaking, hospitals use an average of \$1.67 per square foot for electricity, whereas universities use an average of \$1.10 per square foot.

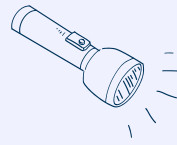
What to know about the Health Sector Climate Pledge

The White House has committed to reducing greenhouse gas emissions 50% by 2030, and the pledge includes plans to strengthen resilience to climate change and protect public health, with a larger focus on decreasing reliance on electricity. The overall goal is to lower the carbon footprint of the healthcare sector, which sits at 8.5% with the potential to increase, according to the same report.

Rather than approaching challenges in a siloed and narrow way that could jeopardize the power grid stability, now is an opportunity for smart hospitals and health systems to use a holistic approach to strengthen their infrastructure while reducing costs and carbon footprints. With smart technologies, healthcare institutions can improve patient experience, enhance population health and reduce overall costs.

Smart hospitals need smart technologies

Increasing energy prices is just one of many factors putting pressure on hospitals and health systems to find ways to decrease energy consumption to manage costs and meet budgets. The size of the footprint healthcare accounts for is one of the biggest aspects putting pressure on hospitals and health systems at the local level to create sustainable facilities.



Shining a light on an industry's climate footprint

Healthcare has some pretty big boots:

- The global healthcare industry's climate footprint is equivalent to the annual greenhouse gas emissions from [514 coal-fired power plants](#), according to the sustainable research firm, Arup
- The report claimed that if the health sector were its own country, it would be the **fifth-largest emitter on the planet**
- Recent academic research revealed that a healthcare facility [consumes 2.5 times more energy](#) than a commercial building of the same size
- The Commonwealth Fund reported that the healthcare sector is responsible for as much as [4.6% of total greenhouse gas emissions](#) worldwide
- In the U.S., that number has grown from **6% in 2018, to 8.5% today**



Consistent demand for high-quality, highly reliable power makes hospitals ideal for smart technologies like CMMS for asset management. Healthcare facilities that install the right systems can enjoy reduced operating costs and higher reliability of continued service during instantaneous or lengthy power outages. Brightly can match healthcare institutions to the best solutions to help gain visibility for new funding opportunities, prioritize investments and ensure they are optimizing their energy usage.

With funding top-of-mind, it's logical as to why hospitals have focused on becoming more energy efficient to save money over the last few decades — though implementing measures during ongoing operations can be challenging and funding is not always immediately available.

Smart asset and energy management and the right technology are two ways to use data to better manage energy costs growing exponentially yearly. Brightly software can help healthcare leaders to gain visibility for new funding opportunities and prioritize investment for projects that will deliver the best long-term cost savings.



Trend 5: Sustainability

Globally, sustainability is driving smart city and energy efficiency initiatives. But in the United States, many environmentally-influenced projects have been paused to redirect funding — and the healthcare sector is among the industries getting left behind.

Hiring and retention is a top challenge for maintenance and operations (M&O) managers everywhere, but is especially critical for the healthcare industry. With aging infrastructure and lagging technology getting in the way of more sustainable institutions, hospitals and other healthcare facilities become even less appealing for staff.

But communities are starting to call for more sustainability; how can healthcare systems begin to set and achieve those initiatives amidst a stacked list of funding-based challenges?

Use data to boost transparency and improve environmental impact

As fixing or replacing aging healthcare infrastructure that was built before environmental regulations became a priority, technology can help make technology updates where they'll be most effective and help managers to hire and train the next generation of professionals.

With an uptick in communities demanding more sustainable hospitals and health systems and states and municipalities also starting to regulate increased transparency and action toward sustainability, it's critical to start laying the groundwork.

Technology can help set the stage. When M&O leaders can use their most abundant asset — data — they gain insight into the state of their facilities and operations to use that information to better communicate with stakeholders about where to allocate funding.

Let your data do the talking

Often, there is a disconnect between healthcare administrators and facilities managers, making it hard to even think about sustainability. So use the data to help understand the cost of avoiding essential updates — starting with operations.

In healthcare facilities, your operations people keep the doors open and systems functioning. M&O teams need tools to track the information your assets and your energy already have, to paint a more holistic picture of exactly what's costing more than it should, and where opportunities for preventative and proactive maintenance can help save money for everyone from operations through administrators.

Sustainability is more than just installing LED lights — it's about knowing where to look for inefficiencies. Yes, your healthcare building might need updates. Still, leakage costs are also associated with excess energy consumption in aging hospitals and healthcare facilities, adding to the increasing expenses for healthcare infrastructure. Following the data can enable you to make the most impactful updates.



More than a band-aid: renewable energy saves money

Healthcare facilities can save energy through a number of low-cost measures, resulting in more energy-efficient buildings. When a hospital becomes more energy efficient, the organization saves money while preventing greenhouse gas emissions and improving the air quality in the communities in which they operate.

It's critical for hospitals and health systems to invest in renewable energy strategies. Defining a renewable energy strategy as part of long-term sustainability initiatives can help facilities transition to a healthier backup energy supply and close the gap between zero-carbon commitments and goals. Hospitals and health systems can improve the bottom line by increasing energy efficiency, freeing up funds to invest in new technologies while still enhancing patient care.

Read the chart: A case for an upgrade

Hospitals are notorious energy wasters.

According to [Energy Star](#), the energy efficiency government-backed program, hospitals use as much as **2.5 times more energy** than any other commercial building of comparable size.

Technology helps identify where energy is being lost and opportunities for more efficient consumption.

Make sustainability a priority — before you legally are forced to

According to a recent survey we conducted with healthcare leaders nationwide, **23% of respondents do not have a strategy in place, while 62% believe sustainability**

projects are not a high priority. But as new legislation emphasizes sustainability for communities, hospitals and health systems in the United States need to find ways to integrate environmental updates and new best practices, well, into practice.

Get on a sustainable path with benchmark data to prioritize investments

Healthcare ecosystems can partner with organizations like Brightly to help [get the most out of their assets and energy](#) — 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 and start cutting costs for years to come.

Brightly can help hospitals and health systems with sustainability initiatives, including:



Collecting legacy information to store invaluable data to inform future projects.



Creating low to zero carbon programs that push asset and energy owners to diligently monitor and report on sustainability data.



Developing data programs to make more informed investment decisions aligned with environmental, social, and governance goals, commitments and regulations.

From community opinion to long-term cost savings, investing in sustainability can help hospitals and health systems make impactful updates to ensure they remain operational and save money in the long run. The right tools and team can help identify where to focus your investments over time for maximum impact and ROI. Brightly can help kickstart your healthcare institution's environmental goals by working with you to reach a more sustainable future.

Shift to proactive asset and energy management with Brightly

No matter where you work in healthcare; it's a challenging time. Whether tasked with hiring across departments, allocating funding or trying to justify why your operations team needs an increase to your budget, using technology and data can help you direct (or request) funds so they reach the most impactful destination.

Closing the gaps in facilities funding is a critical step to ensure that hospitals and health systems meet modern standards for health and safety suitability, as well as environmental sustainability and resiliency. For healthcare leaders, investments need to be balanced between long-term serviceability and short-term reactive improvements.

Brightly understands the healthcare industry and the major pain points leaders and facility managers face today. This is why we build easy-to-use solutions specifically for them. We can help hospitals and health systems reduce deferred maintenance backlogs and reallocate funding. With the implementation of solutions like TheWorxHub, healthcare facilities have frictionless access to a computerized maintenance management system (CMMS) and compliance monitoring.

[TheWorxHub](#) is an all-in-one, cloud-based CMMS solution that combines asset management, compliance-readiness, and safety rounding into one powerful solution enabling healthcare organizations to stay organized, streamline operations, and reduce costs — ensuring you have what it takes to be compliance ready.

We can help you collect your data to deliver critical insights into the condition and productivity of assets. Asset and energy investment requirements can fundamentally shift if a machine is under-utilized or a healthcare facility needs more staffing. Real-time analytics can help to pivot short-term budgets, while longer-term plans can consider trends when planning the future.

Brightly Origin Revolutionizes Facilities Maintenance and Capital Planning

Check out how Banner Health, a Brightly client connected more than 400 buildings to simplify planning and maintenance. By leveraging data to gain visibility into facilities, Banner Health can benchmark data against others in the industry with Origin.

[Read more](#)

TheWorxHub platform integrates critical features and functionality into one platform, providing hospitals and healthcare facilities with key functionality such as pre-built risk assessment frameworks, embedded compliance codes and automated location and asset-based work orders. Combining these key asset management and compliance functions into one solution is a rare find for the healthcare sector.

Brightly is uniquely positioned to help hospitals and health systems centralize data to not only start down the path to sustainability, but to stay ahead of trends, and create safe and healthy environments where patients, workers and community health initiatives can thrive.

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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