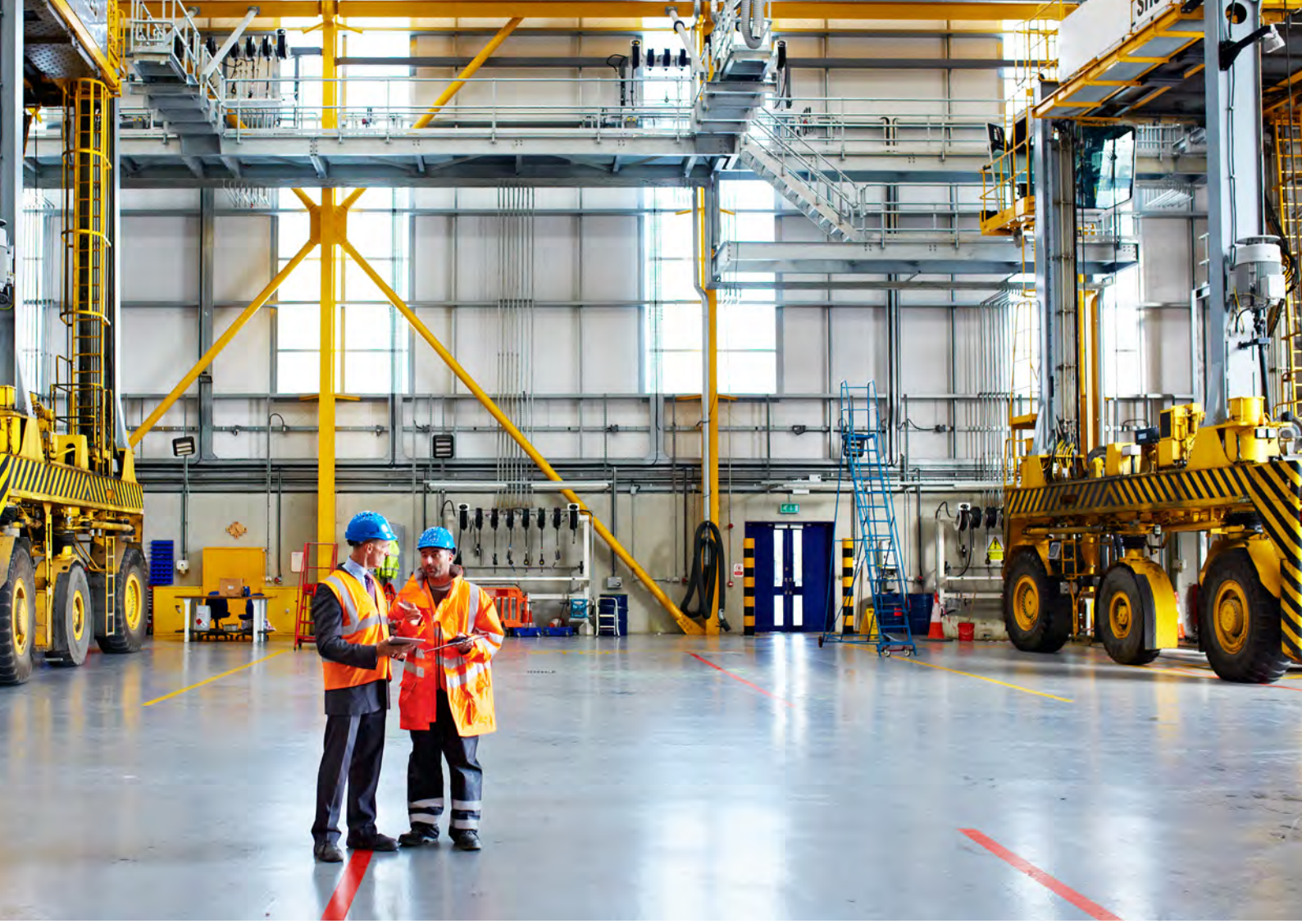

Report

The state of facilities management technology 2024

JLL/Technologies

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Executive summary

Facility managers and their teams will be challenged to do more with less in 2024—more work orders, more reporting, more data, more compliance and risk, and more disruption from technology and possibly from the economy. There will also be more and higher expectations as facilities management (FM) job roles and descriptions expand to include new software and technology skills.

And there will be less. Shrinking FM budgets, fewer facility managers, a shortage of qualified FM labor, less hiring, less time, and tighter margins for service providers will all impact productivity.

How FM teams will get more done this year

FM software automation coupled with innovative technologies will be the solution for capturing gains in efficiency to compensate for understaffing. The ongoing mass retirement of aging facility managers, along with hiring freezes and budget constraints, will prevent full staffing through the end of this decade.

Automation exists right now to accelerate 80% of FM workflows from request assignment and dispatch through execution and invoice submission review, approval, and payment. Automation makes quick work of setting not-to-exceed (NTE) limits and scheduling preventive maintenance (PM), reporting, warranty flagging, and more.

In 2024, facility managers must exploit the power of FM software and related technologies to accelerate work order completion, capture time- and cost-savings, ensure compliance, and raise team performance.

About this report

This report presents the responses—a number of them surprising—from facility managers and adjacent stakeholders about challenges and opportunities related to software, technology, and FM practice in 2024. Read on to discover how doing more with less in 2024 will require bold action and awareness of the following:

- **Optimized preventive maintenance** extends asset life, increases performance, and safeguards uptime. PM takes on new importance in 2024 because declining capital budgets necessitate that existing equipment remain in service longer.
- **Intuitive prompting with generative AI** delivers actionable FM insights and faster, more-informed decision-making. Combined with automation, AI accelerates FM workflows that were previously challenging, like refrigerant and emissions tracking for grocery stores and incident reports for critical environments.
- **Value-creating, time-saving business intelligence** (BI) enables data-driven decisions for repair vs. replace, optimized service provider networks, and efficient FM operations. BI data informs budgets and capital replacement schedules. It identifies cost savings in service provider networks and shows assets not currently on PM schedules but should be.
- **Rapid progress on sustainability goals** is top of mind for companies and organizations and often begins with a focus on reducing energy consumption, usage, and costs, which also reduces carbon emissions. Well-maintained equipment uses less energy; therefore, PM also contributes desired environmental benefits.
- **Transparent and consistent sustainability reporting** builds trust and credibility with stakeholders. It also helps organizations manage risks and regulatory compliance. Software and third-party providers help ensure accurate and consistent data in complex compliance reporting.
- **Simple and powerful mobile apps** with augmented reality drive greater operational efficiency through predictive maintenance, remote assistance, and on-site access to maintenance and inspection histories via virtual tagging.

Focus on work orders, assets, and energy

We surveyed* more than 230 FM experts, mostly across North America with representation from EMEA and Asia Pacific regions. Respondents, who came from multiple industries, including technology, education, financial services, manufacturing, and retail, were united in their responses about what they would prioritize this year. The top three were managing work orders, energy, and assets, generally in that order.

Those priorities, along with managing service providers, are core FM responsibilities Focusing on core functions and FM best practices, like software automation, PM, staff retention, warranty tracking, and budget compliance will increase operational performance. AI- and BI-driven technologies providing visibility into operations will yield insights for boosting efficiency and productivity.

***See survey methodology**

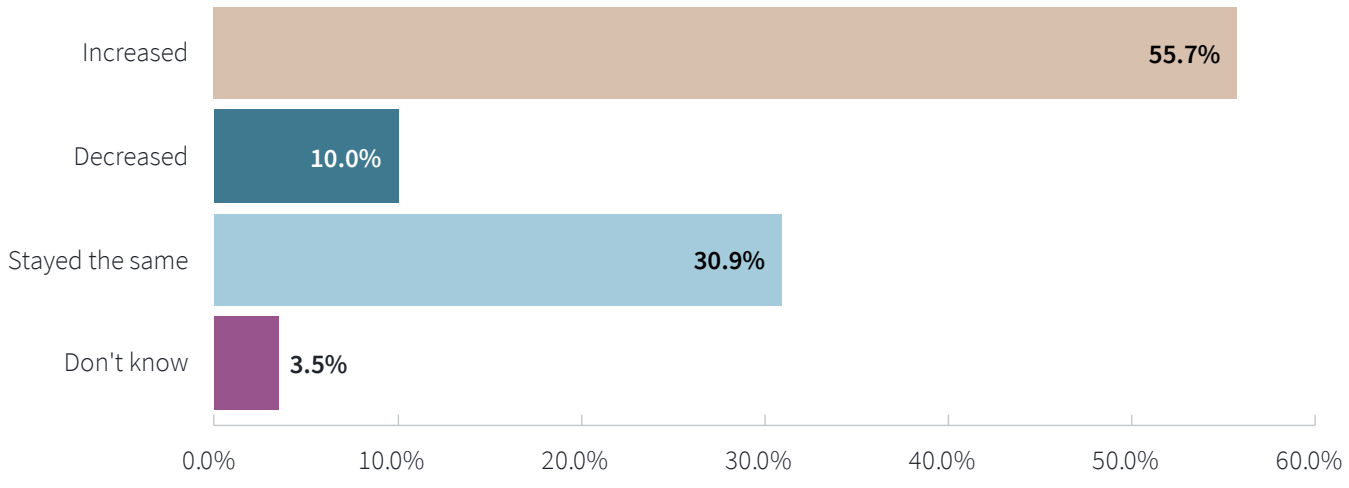
Increasing work order volumes will challenge understaffed FM teams

Work orders are the heart and soul of facilities management. They're the daily focus of FM energy and resources, the subject of conversations and scrutiny, and a metric by which FM performance is judged.

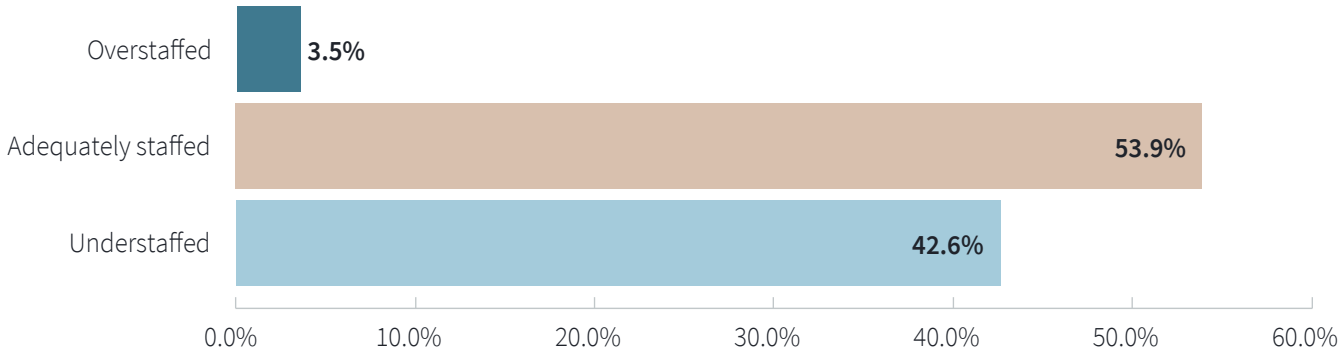
According to 55.7% of survey respondents [see Q1 below], work order volumes in 2024 will increase compared to those in 2023. That will challenge the 42.6% of respondents [see Q2] who report their FM teams as understaffed.

FM software automates repetitive, labor-led tasks that would otherwise impede productivity, giving FM teams more time to process more work orders. Business intelligence promotes efficiency in a sophisticated way by analyzing thousands of data points and generating actionable insights and streamlining workflows. It also identifies assets not yet on preventive maintenance schedules but should be. Gains in efficiency generate gains in productivity, enabling shorthanded FM teams to keep up with increasing work order volumes.

Q1: Compared to 12 months ago, your team's volume of work orders has:

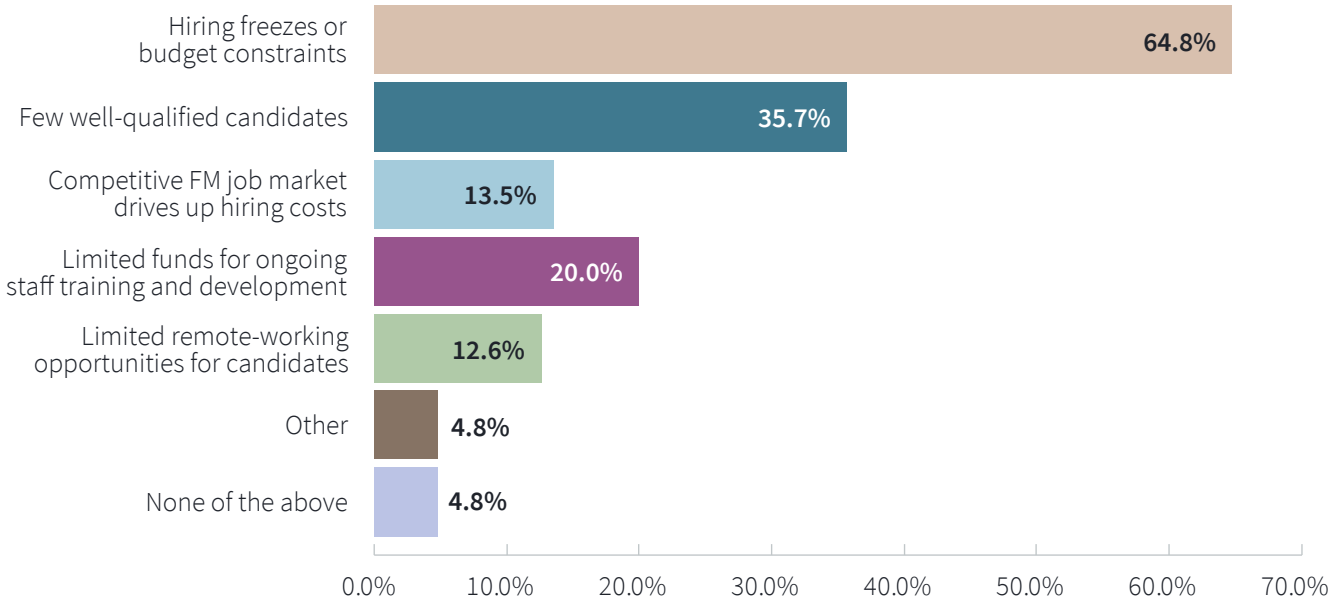


Q2: How do you feel about the current level of staffing for your FM team?



Understaffed FM teams may not find relief anytime soon with 64.8% of respondents [Q3 below] citing hiring freezes and budget constraints as major obstacles preventing full staffing. Additional impediments include few well-qualified candidates in the ongoing war for talent, especially at the managerial level. The generational shift caused by the mass retirement of older facility managers begun around 2018 is expected to create thousands of unfilled FM positions and persist through the end of the 2020s.

Q3: Which obstacles prevent you from hiring additional FM staff?

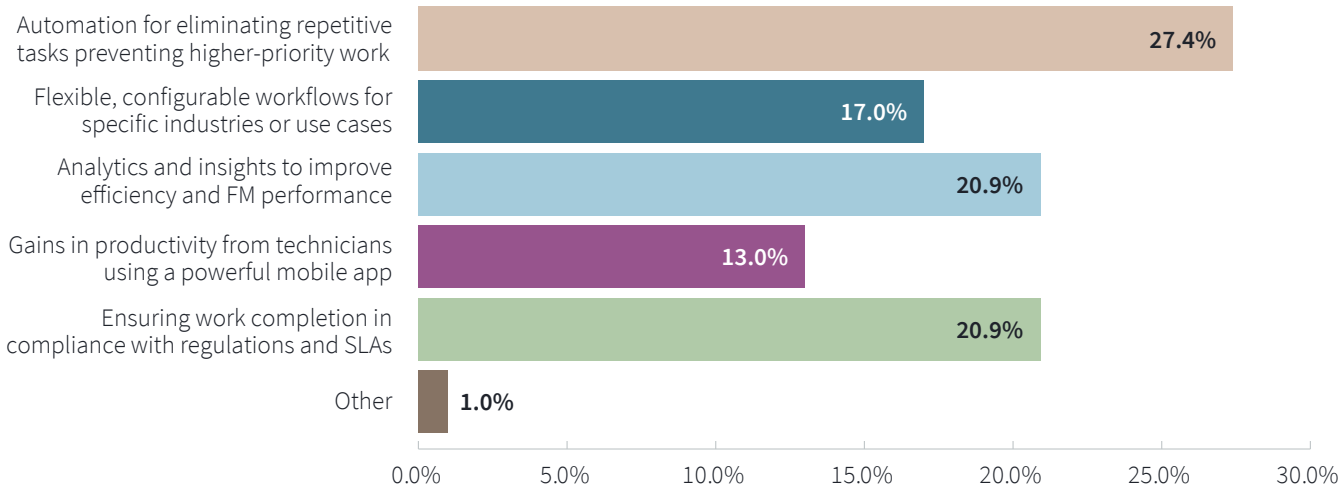


How to manage work orders at scale

Automation is the solution to reduce time spent on labor-intensive, recurring tasks that slow FM productivity and the completion of more work orders. In fact, the only way to manage work orders at scale—like one large JLL client who processed 3,000 per day in 2023—is by automating repetitive tasks, including work order dispatch and approvals for invoices and payments.

Automating FM tasks is the number one work order outcome expected by 27.4% of survey respondents [see Q4 below]. Reporting is a common monthly task that can be easily scheduled and automated via a computerized maintenance management system (CMMS) integrated with a company's accounting system. Automation frees up FM teams for higher-value, often urgent, work that requires greater attention and problem-solving.

Q4: What top outcomes do you expect from your work order management software?



Analytics and insights for quickly identifying and correcting inefficiencies was the top choice for 20.9% of respondents, highlighting belief in the power of data to detect problems otherwise hidden in a mountain of CMMS data.

An equal number of respondents selected the third option, completing work orders in compliance with SLAs. Technicians and service providers must be productive wherever they are, whether that's on a factory floor or the roof of a supermarket. A robust mobile app connected in real-time to a CMMS database providing access to full asset maintenance histories, serial numbers, photos, and more increases first-time fix, on-time completion, and conformance with service level agreements (SLA).

An FM mobile app with augmented reality (AR) increases the effectiveness of field technicians, enabling them to take advantage of predictive maintenance to effectively solve problems before they occur and avert downtime and unscheduled maintenance. Using AR to proactively anticipate maintenance needs results in improved performance and efficiency and reduced costs.

Facility managers speak...

Kyle McDaniel is the Manager of Store Facilities for **Gordon Food Service** and responsible for 193 stores primarily located in the midwestern and southern United States. Using Corrigo automation to schedule, create, and deliver FM reports eliminated the month-end flurry of phone calls and questions from accounting and enabled his team to stay focused on FM priorities.

FM software priorities focus on work orders, assets, and energy

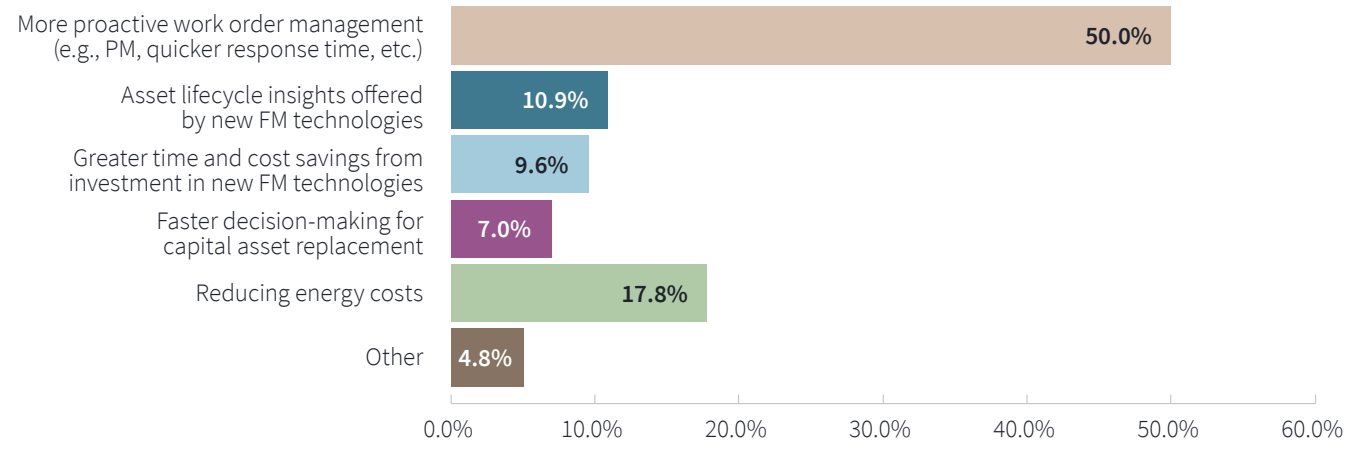
Proactively managing work orders is the number one priority for FM teams, per 50.0% of survey respondents [see Q5 below]. Reducing energy costs and increasing lifecycle asset insights were numbers two and three, respectively.

Facility managers work within a budget and are known for their cost-containment mindset. Reducing energy costs has always been a priority, especially in data centers and grocery stores where energy costs are often 50% of total building expenses. Trending corporate commitments to sustainability goals often target energy efficiency, amplifying this year's focus on reducing energy costs.

Lifecycle insights increase visibility into the performance of assets, equipment, and buildings. Preventive maintenance is an FM best practice for extending asset life and ensuring reliability and uptime, especially for critical facilities.

The truth is assets and energy should be managed together because well-maintained equipment and buildings reduce energy consumption, usage, and cost. Assets and energy are connected. Holistic asset and energy management drives efficiency and cost-savings while making progress on sustainability goals.

Q5: Which of the following FM software areas will your team prioritize this year?

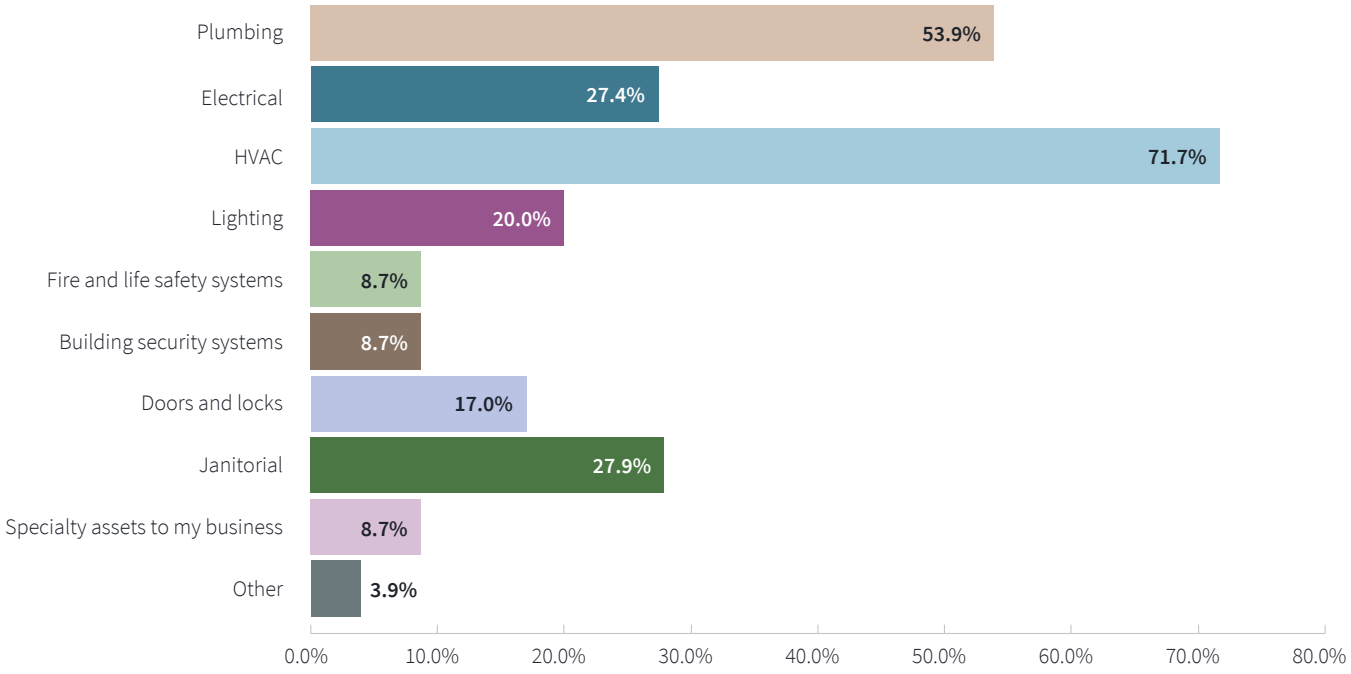


Top reactive work orders are consistent across FM verticals

HVAC repair is the top reactive work order category for 71.7% of respondents [Q6 below]. The second, third, and fourth highest categories were plumbing, janitorial, and electrical, respectively.

Minimizing the number of reactive repairs is an FM best practice. HVAC, plumbing, and electrical are prime candidates for preventive maintenance schedules, which can easily be set up inside FM software. Over the long term, PM is proven to be less costly, less lengthy, and less hazardous than reactive repairs. FM business intelligence is a powerful tool for identifying assets primed for PM schedules.

Q6: What are your most common types of reactive work orders?



Survey responses for Q6, filtered by industry, identified the following:

The third most common reactive work order for the retail and multifamily verticals was doors and locks.

The most common reactive work order for restaurants was plumbing.

Education is the industry with the lowest reactive work orders for HVAC.

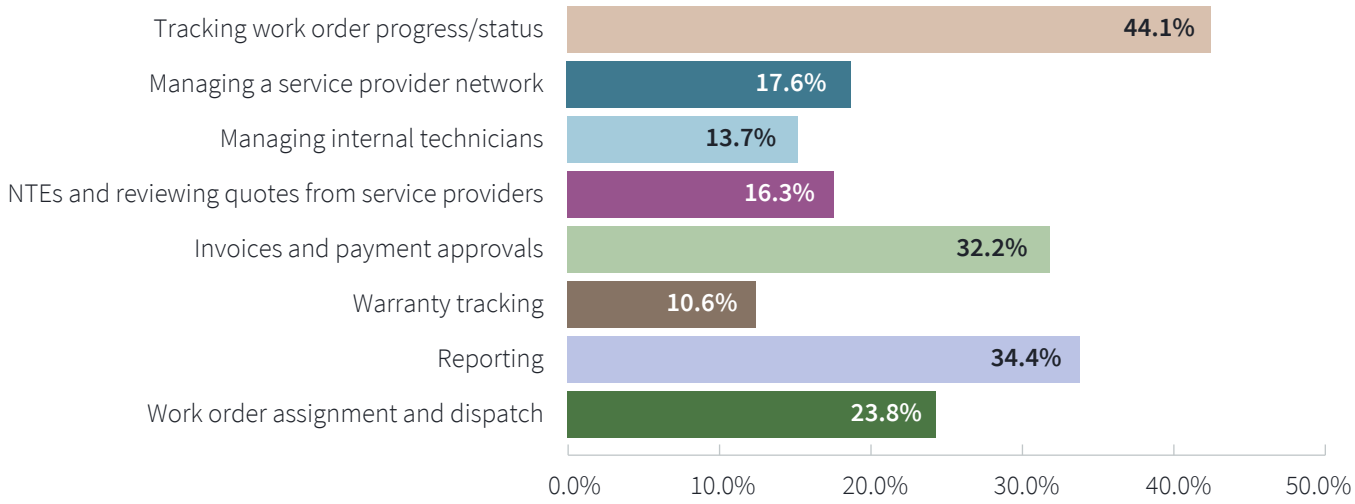
The highest percentage of janitorial work was for education.

FM software drives efficiency and productivity

FM software brings order to the interruption-rich world of facility managers. One facility manager who worked for a large multinational manufacturer used to answer 60 phone calls per day—mostly from stakeholders inquiring about work order status—before upgrading from paper-driven to software-driven FM. After the upgrade, the number of calls dropped substantially because the software enabled stakeholders to easily check work order status for themselves. Automation streamlines repetitive processes and boosts the efficiency of FM teams by freeing them for higher-priority work.

Survey respondents report tracking work order progress (44.1%) as the task that would benefit most from automation. The second and third tasks primed for automation were reporting and approving invoices and payments. Automation takes on other common FM tasks, like setting market-driven, not-to-exceed (NTE) limits on every single work order. **Automating warranty tracking saved one JLL customer $787,000 in a single year.** Automation rules that save FM teams hours per day quickly grow to thousands of saved hours per year.

Q7: Which areas of your FM operations are most time-consuming and/or primed for automation?



Facility managers speak...

Meritage Hospitality Group, the largest U.S. franchisee of Wendy's restaurants, automatically exports its 25,000 annual work orders to accounts payable where 90 percent are approved and paid without any human intervention. Software integrations like these relieve Meritage facilities managers of the heavy administrative burden of manually reviewing and approving thousands of invoices.

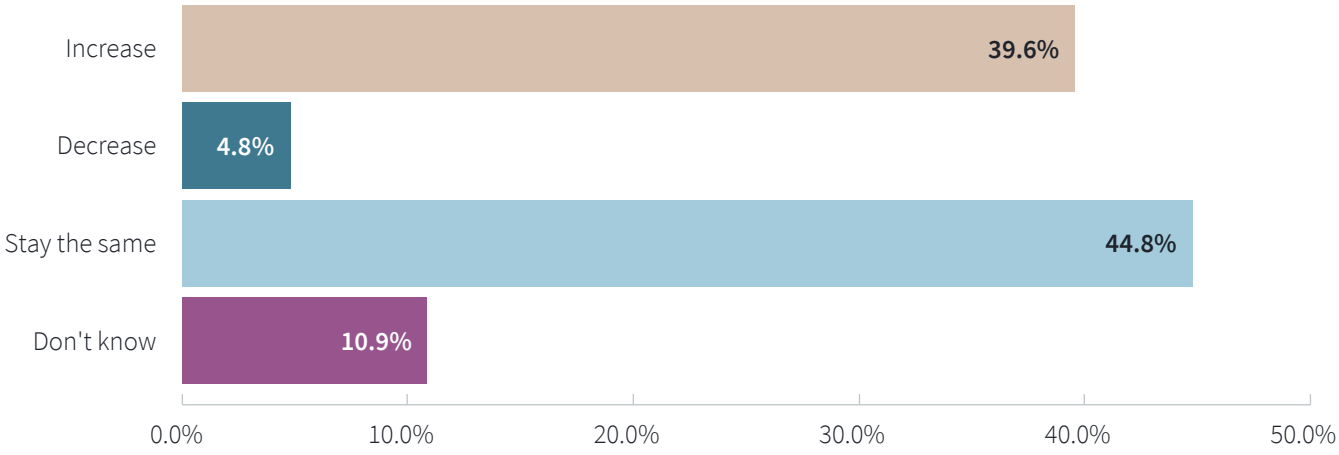
Ali Dungarwalla is the Director of SupportServices for **Bristol Farms'** 26 grocery stores in California. Invoicing, a laborious process involving copying, printing, signing and stapling hundreds of invoices every month and then taking them over to accounts payable, was his number one challenge. JLL's Corrigo CMMS helped him automate the entire process by integrating with the company's accounts payable system, saving precious hours every month.

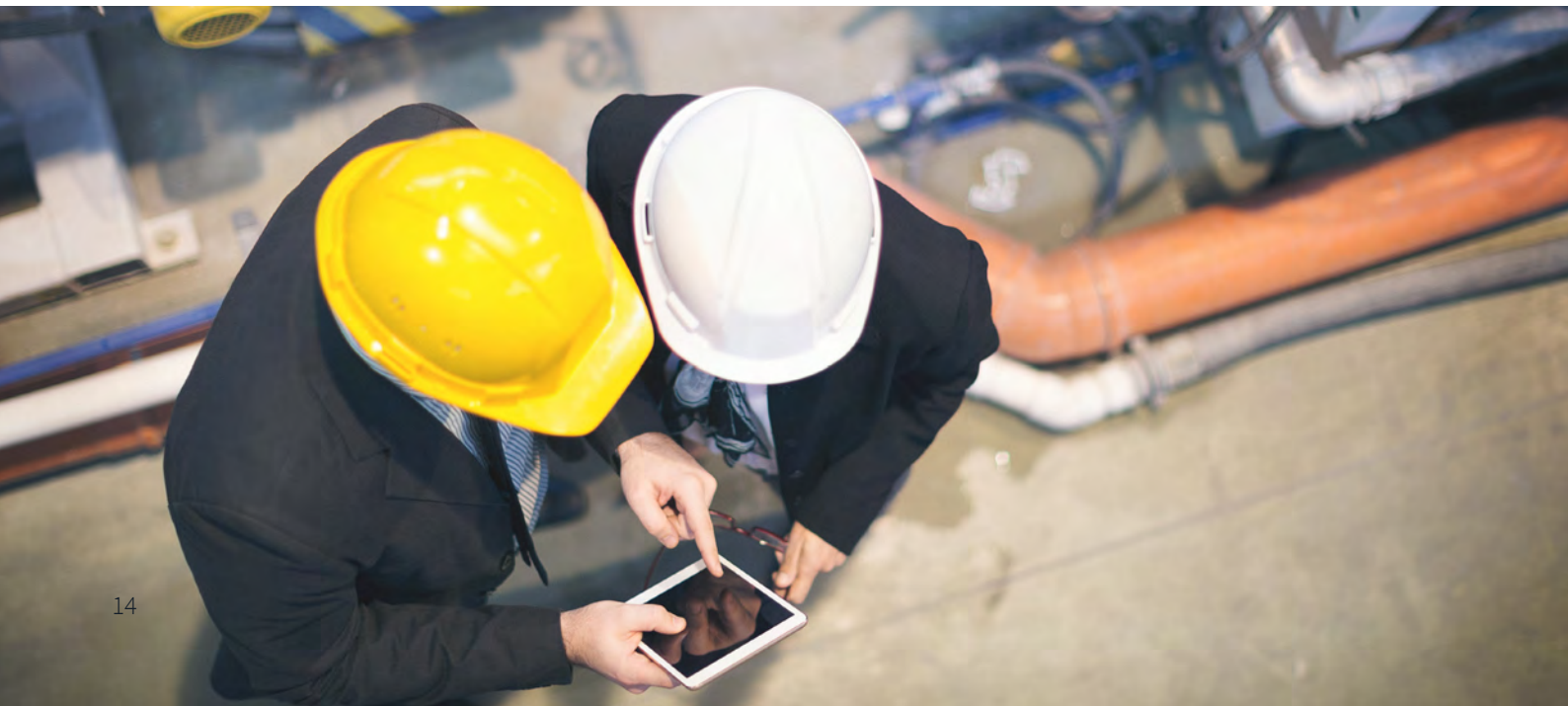
What's happening with FM software in 2024?

It makes sense to think there will be an increased investment in FM software in 2024 given more work orders, fewer staff, and software automation poised to free up time. At first glance, the jury appears to be out with 44.8% of respondents expecting investment to remain the same as last year [Q8 below], and 39.6% expecting it to increase.

However, 39.6% could signal more investment intent than expected because most FM practitioners only stop to consider their software spend when it's time to renew their contracts. Since renewal periods occur every three to four years, that number of respondents considering additional technology allocations could be a positive investment signal. FM practitioners see technology as a viable strategy for driving efficiency, recapturing time, and boosting productivity.

Q8: How do you expect your investment in FM software to change this year?





Preventive maintenance now more than ever

Automated preventive maintenance scheduling was the top asset management outcome for 29.1% of respondents [see Q9]. Declining CapEx budgets in 2024 dictate that existing assets remain in service longer. Plus, delivery times for replacements, like electrical equipment, could take months. PM is a longstanding, successful strategy for extending asset life and reducing energy consumption.

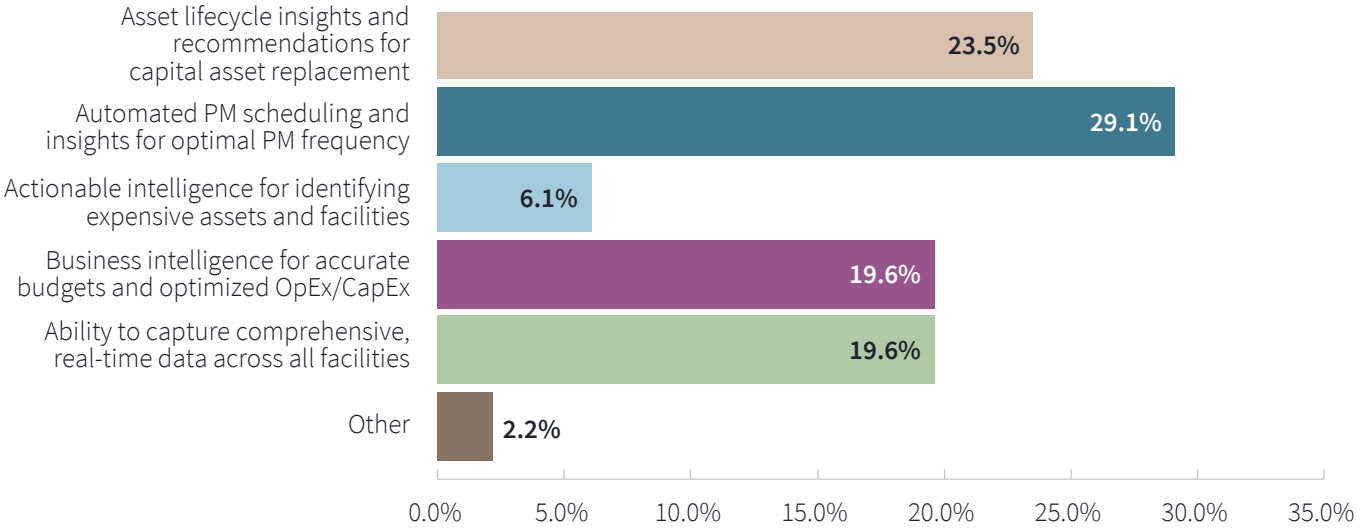
Lifecycle insights and recommendations for capital asset replacement were the second top outcome at 23.5% for asset management software, like a CMMS.

FM business intelligence (BI) for identifying expensive and assets and facilities came in third. BI also creates capital replacement schedules years into the future, giving FM stakeholders advance notice of future capital expenditures. BI empowers the FM mindset of preparedness for the near and long terms. A focus on readiness benefits all FM stakeholders

Facility managers speak...

Michal Shepard is the Director of Maintenance, Energy, and Engineering for **Harris Teeter** supermarkets with 258 stores from Delaware to Florida. Michal talks about how CMMS data informs his decisions about asset replacement and maintenance spend.

Q9: What top outcomes do you expect from your asset management software?

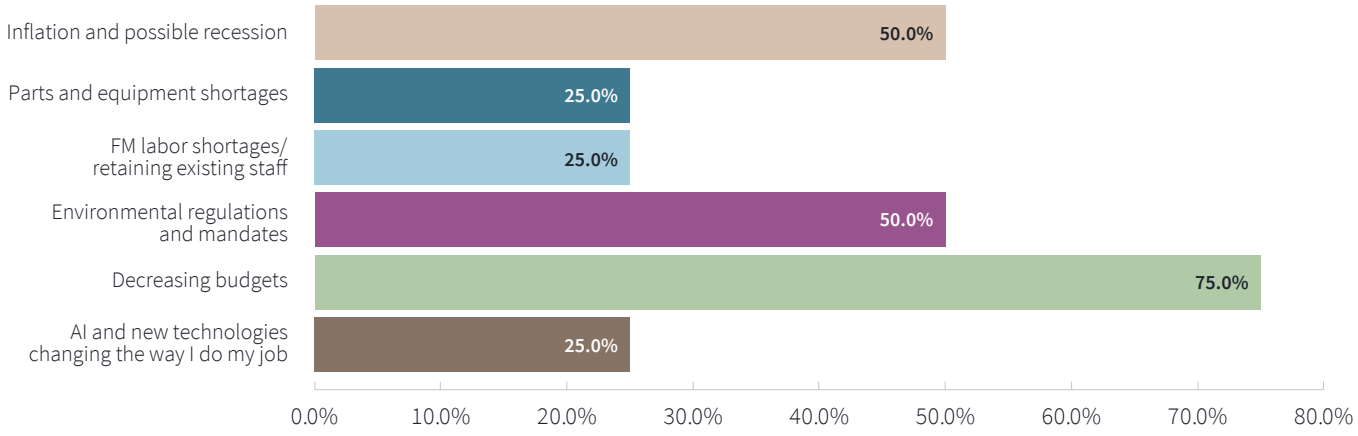


What's keeping facility managers up at night?

For 2024, 75.0% of respondents report decreasing FM budgets as their top concern [Q10 below], which is different from the parts and equipment shortages that occupied the top spot in 2023. Still, concerns about decreasing budgets are consistent with the realities of understaffing and hiring freezes.

If FM budgets are shrinking, an unwanted side effect is that PM starts looking optional. In that case, expect to see more reactive repairs, which, in a strange twist of fate, are more expensive than PM over the long term and take longer to complete.

Q10: What are your top FM concerns for 2024?



The second top concern for FMs in 2024 was a tie. Concerns about a potential recession would certainly amplify existing worries about falling budgets and understaffing and would limit FM software investments.

The other second-place concern was environmental regulations and mandates, especially ones targeting grocery stores, restaurants, data centers, offices, healthcare, and others and often focusing on sustainability and environmental compliance and reporting.

Tied in third place were two concerns that ranked highly last year: parts/equipment shortages and FM labor shortages. While parts and equipment shortages began to ease by the end of 2023, shortages of electrical equipment have persisted with long delivery times. FM labor shortages, already discussed, will be a concern throughout the remainder of this decade.

Also tied in third was a new concern about AI changing the FM job role, acknowledging that new technologies disrupt as well as innovate.

Do AI and innovative technologies really pose a threat to facility managers?

According to industry recruiters, facility managers with solid FM software skills are currently in great demand, especially in the healthcare and pharmaceutical industries, which require rigorous skill sets.

Expectations for tech-savvy facility managers will continue to grow as technologies, like AI and BI, accelerate the path from data to insights to action, a necessity for combatting the impact of chronic, industry-wide understaffing.

AI and BI are already proving their value by capturing and presenting FM metrics that matter, like identifying maintenance-heavy assets and buildings and revealing high- and low-performing technicians and service providers.

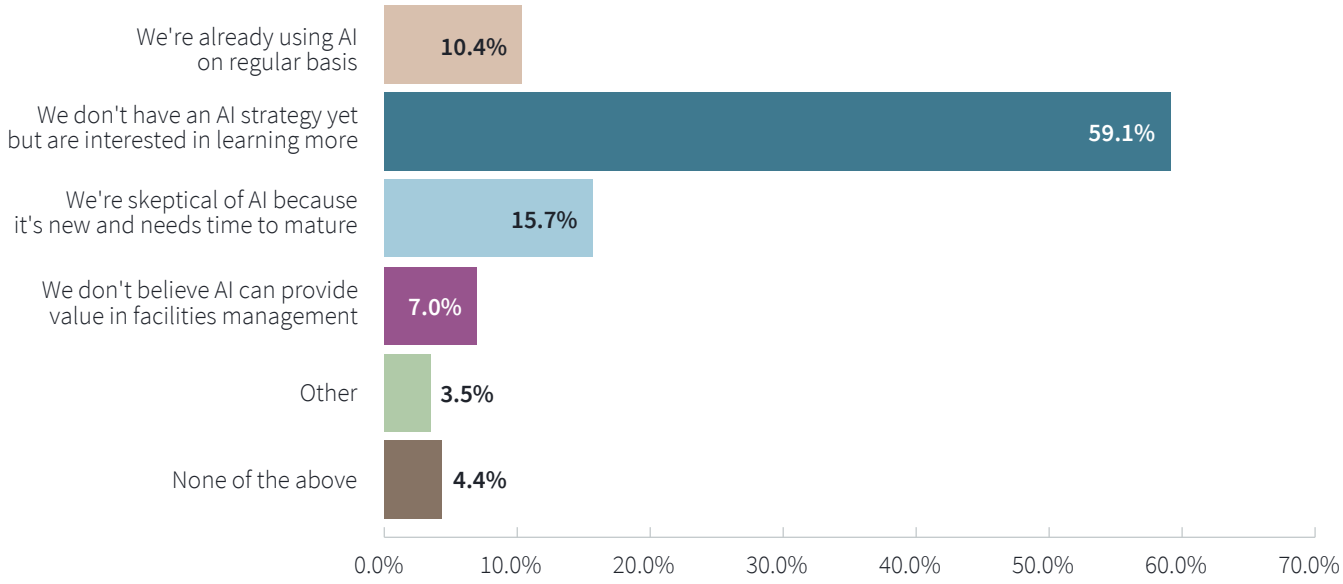
Employer expectations for greater tech skills are transforming and disrupting FM job roles. But in the case of generative AI, specifically, the ability to use natural language with chat bots trained in FM jargon and best practices, facilitates skill acquisition and accelerates the path to tech competency.

Strong interest in AI but no firm strategy yet

Artificial intelligence (AI) stormed into the collective consciousness with the launch of Chat GPT in November 2022. Within 60 days, it had over 100 million users, making it the fastest-growing consumer application in history. It also ignited an explosion of awareness and interest in AI development for business, including facilities management.

As our survey demonstrates, avid interest does not necessarily lead to adoption; 59.1% of respondents [see Q11] have no AI strategy in 2024 but are interested in learning more. The second highest response at 15.7% was about skepticism, citing AI as a new but unproven technology. Coming in third was the 10.4% of respondents already using AI in their FM operations.

Q11: Which of the following most closely matches your FM team's view of artificial intelligence?



The three responses paint a common picture of technology adoption. FM software users run the gamut from early to late adopters. A wait-and-see approach is common for most. Only when a technology proves itself by delivering a positive ROI or adequate time/cost savings will FM software adoption accelerate. Facility managers focus more on saving money than spending it. A new technology must make financial sense before they have the justification and confidence to propose a new software purchase to leadership.

Critical facilities balance uptime and sustainability

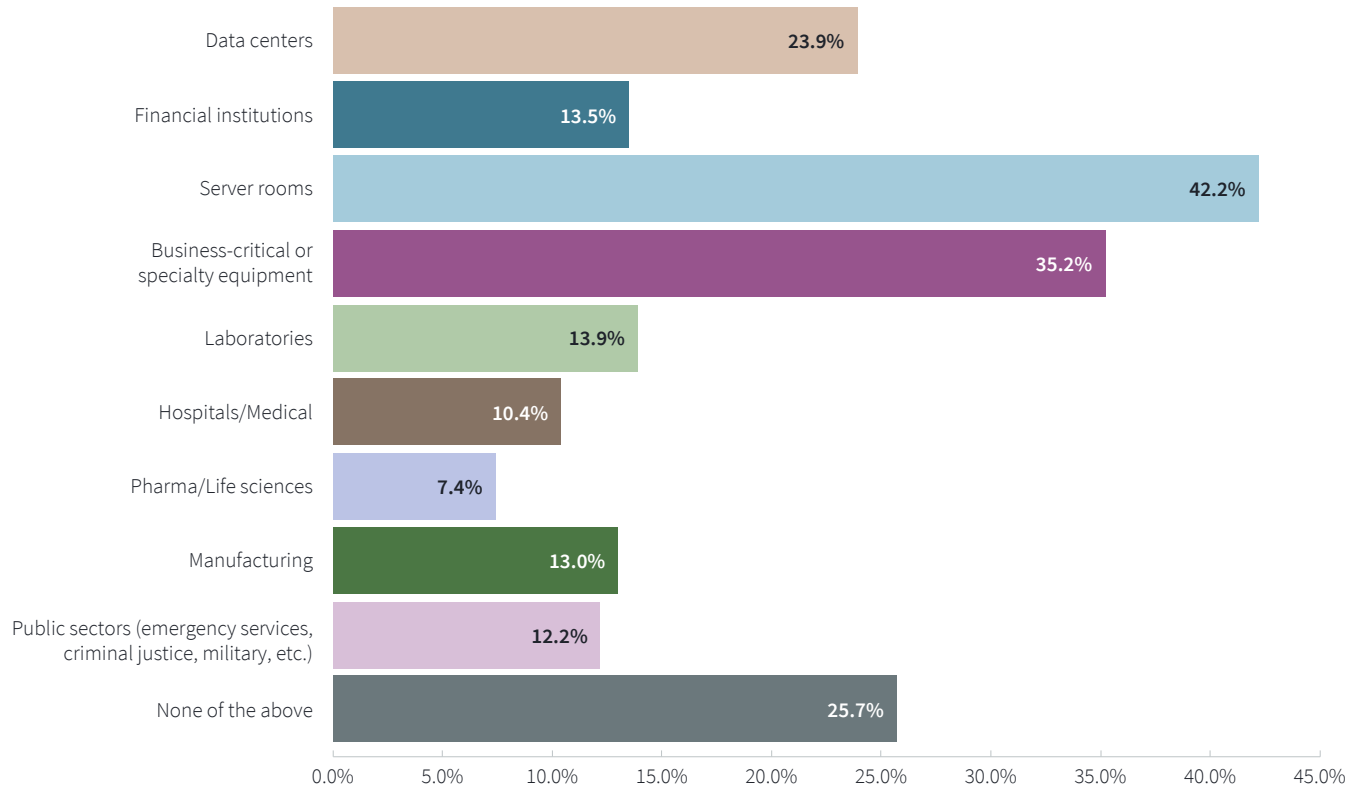
Critical facilities house operations, equipment, or services crucial for financial institutions, hospitals, laboratories, utilities, museums, national defense, and dozens more. They require maximum uptime, exceptional resilience, and robust backup systems to prevent disruptions and ensure continuity during emergencies.

The survey's top three critical facilities [Q12] in descending order were (computer) server rooms, business-critical or specialty equipment, and data centers. The top performance metric [Q13] for critical facilities was reliability and uptime at 64.3%.

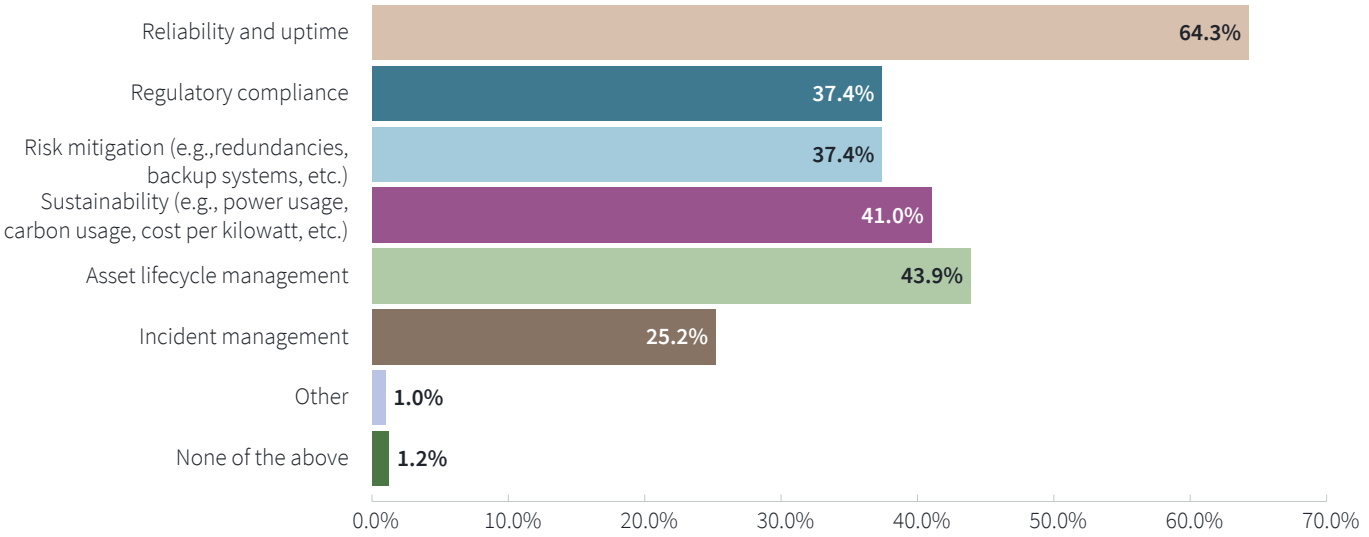
Lifecycle asset management was next at 43.9%. Well-maintained assets and equipment last longer, perform better, use less energy, and are more resilient—all of which contribute to data center imperatives for uptime and energy efficiency.

The third metric was sustainability, which, among other things, measures energy efficiency with the goal of reducing power usage and related carbon emissions. By prioritizing sustainability, data centers can reduce environmental impact, lower operating costs, meet regulatory requirements, and contribute to a more sustainable future.

Q12: What type of critical facility are you responsible for?



Q13: Which performance metrics matter for your critical facilities?



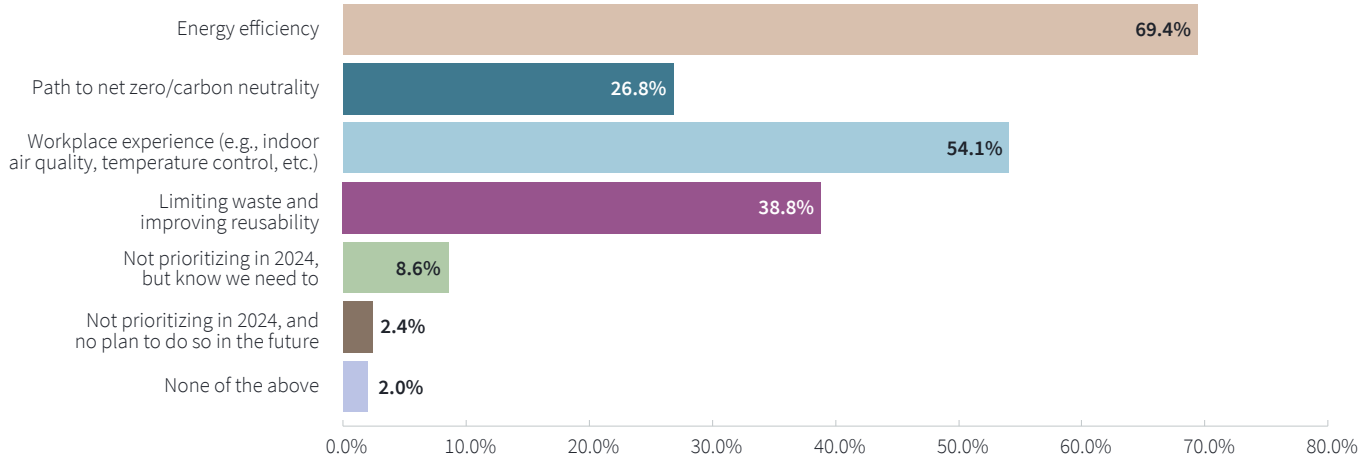
Energy efficiency is the clear sustainability priority

It's no surprise that energy efficiency should be the number one priority for 69.4% of survey respondents [Q14] since it's positioned to drive both savings and sustainability over the near and long terms. It may also be easier to calculate the return on energy efficiency than on other, deeper sustainability concepts, like embodied carbon footprints and circular economy policies. Strategies that prioritize energy efficiency also strike a balance between the growing demand for energy-intensive facilities, like data centers, and the imperative to mitigate climate change.

The second sustainability priority is workplace experience, which refers to indoor air quality, lighting, temperature, occupancy, security, comfort, and more. Sensors and continuous monitoring conserve energy by adjusting lights and HVAC settings in unoccupied conference rooms and public spaces. "Smart buildings" use technology to enable efficient and economical use of resources while creating a safe and comfortable environment for occupants.

The third priority was limiting waste and improving re-usability, which refers to facility lifecycle and includes the use of sustainable, low-carbon materials, responsible reuse and recycling, water conservation, green energy solutions, and repurposing equipment.

Q14: When it comes to sustainability, what will your FM team prioritize in 2024?



FM teams will do more with less in 2024

In 2024, facilities management teams will rely on software for gains in efficiency and productivity to counteract the effects of persistent FM understaffing, increasing work order volumes, rising labor costs, and concerns about a potential recession.

Software automation will be key for relieving FM teams of repetitive, labor-intensive tasks, giving them more time for higher priority work and processing more work orders. Innovative technologies that give visibility into FM operations will drive insights for greater efficiency.

To keep up with growing work order volumes, FM teams will need to be productive wherever they are. A robust mobile app enables on-the-go technicians to have all the information needed for first-time fix, on-time completion, and SLA compliance. An app with augmented reality and virtual tagging multiplies the effectiveness of field technicians, giving them the power of predictive analytics to ensure maximum uptime.

Preventive maintenance, always an FM best practice, will be even more important in 2024 for keeping existing equipment in service longer due to smaller CapEx budgets and persistent shortages of electrical equipment.

Work order management at scale with Corrigo Enterprise

Ideally, FM software should enable FM operations to scale with increased work order volumes. Corrigo Enterprise by JLL Technologies, the leading FM software for facilities management, processes more than 15 million work orders per year. The immense Corrigo database enables customers to easily scale their work order volumes, while providing invaluable benchmarks for comparing costs based on work order type, trade, region, season, and vendor. The database also simplifies and accelerates the task of finding quality vendors in new markets based on vendors' current performance scores.

Contact a Corrigo expert today

Survey methodology

This report presents survey results from FM practitioners primarily in North America with some representation in EMEA and APAC. The surveys were completed during a two-week period in June 2024. Respondents answered 21 quantitative questions—with qualitative feedback—on the following topics:

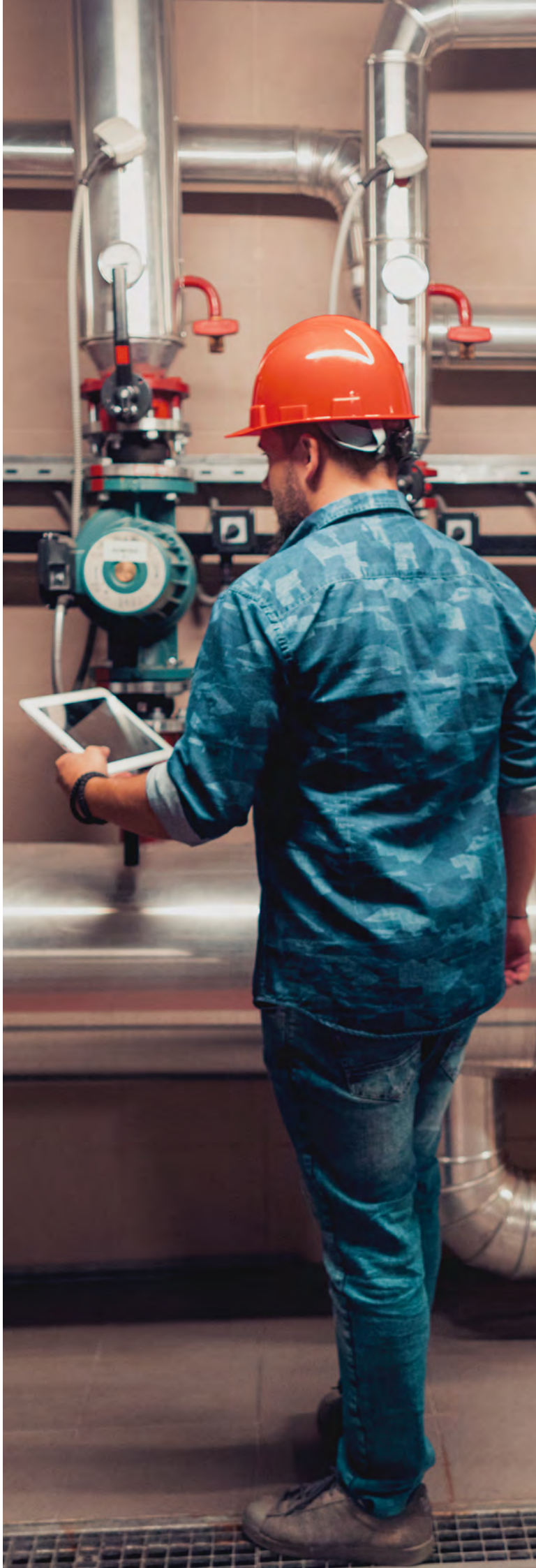
- FM software for managing work orders, assets, and service providers
- Current work order volumes, staffing, and hiring constraints
- FM software spend, priorities, and automation
- Critical facilities and performance metrics
- AI, BI, compliance, and sustainability
- Facility manager concerns for 2024

Several of the survey questions were multiple answer, so the response percentages when added together may exceed 100 percent.

Survey respondents

Respondents, 75% of whom had the word “facility” or “facilities” in their job titles, identified as working in the following industries:

- Technology
- Manufacturing
- Education
- Public institutions
- Financial services
- Healthcare
- Pharma / Life sciences
- Retail
- Multifamily
- Grocery
- Restaurant
- Other



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