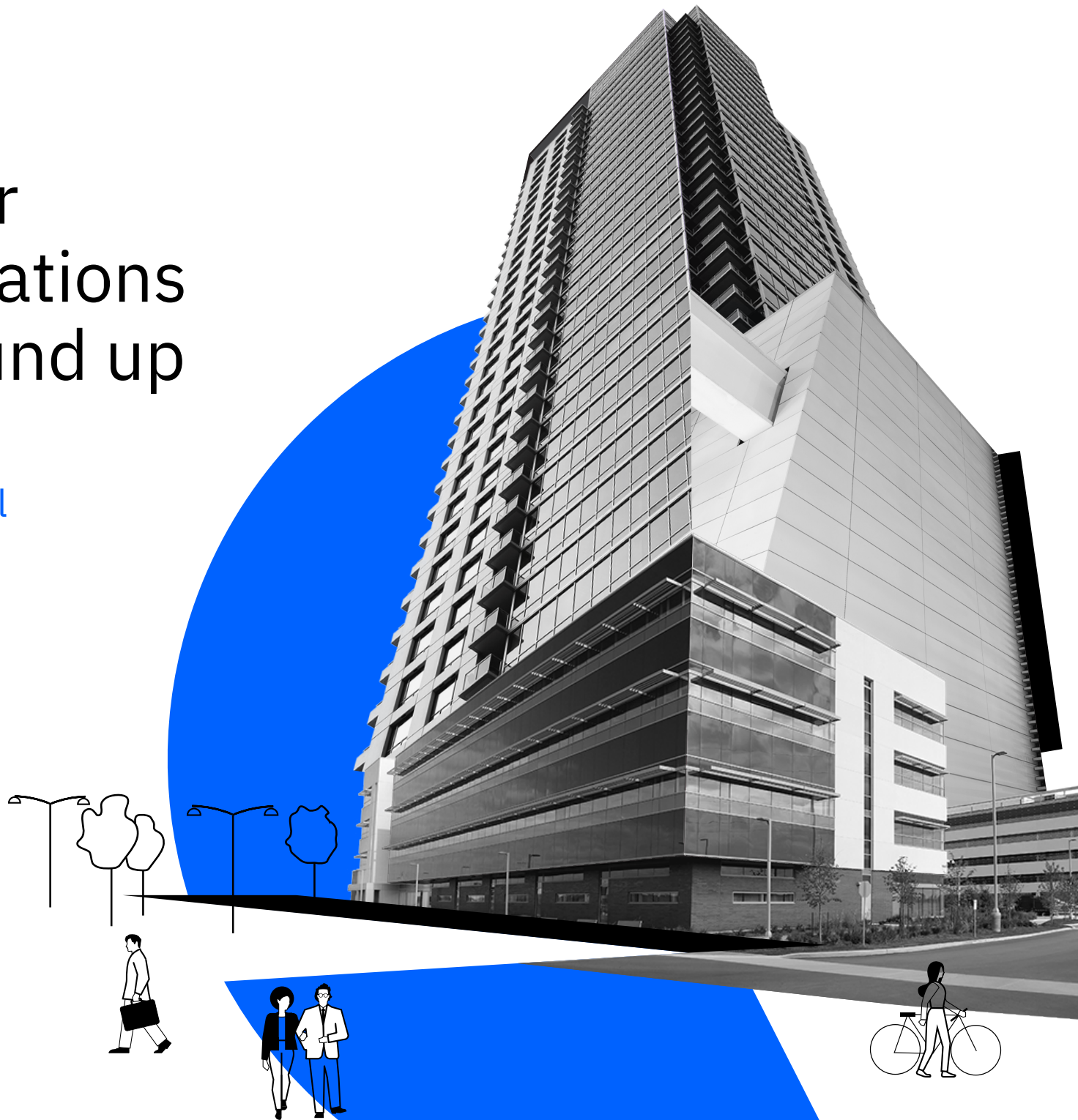


Watson IoT™

Optimize your building operations from the ground up

See how to take your facilities to the next level



IBM

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Your smart buildings journey begins with TRIRIGA

Buildings are getting smarter. But before you can have a smart building, it's important to understand how your building operates across critical operational areas. You need to answer questions like:

- How much building space sits unused?
- Is your space optimized to meet employee needs?
- When are the biggest spikes in energy usage?
- Is it difficult for occupants to request maintenance services?
- Is demand maintenance on the rise due to lack of preventive maintenance?
- Are your capital projects on time and within budget?
- Are you on track to be compliant with new lease accounting standards?

The list goes on...

You want to know the answer to some (or all) of these questions and you're striving to remove siloes that inhibit the ability to do so. At the same time, you're aiming to reduce operational costs, maintain regulatory compliance and keep occupants happy. Sounds exhausting.

IBM® TRIRIGA® provides the foundation needed to begin your smart buildings journey. As a market-leading integrated workplace management system (IWMS), it provides you with the needed solution to break down siloes and optimize operations across four key pillars:

- Space optimization
- Maintenance and energy management
- Lease accounting
- Capital projects

All four areas are important to look at for opportunities to improve efficiency and cut costs. Choose one below to get a more detailed look.



Space optimization



Maintenance and energy management



Lease accounting



Capital projects

Space optimization

People spend about 87 percent of their time in buildings.¹ The space they occupy plays a fundamental role in how they experience a building and has a major impact on your bottom line.

Take meeting rooms as an example. Employees use those spaces to drive your company forward. The same thing goes for the collaborative spaces in your workspaces. Different people and groups need different types of spaces. It's important that your planning accounts for this activity. And when it comes to meetings, fluidity is key as scheduling should be dynamic. Is it easy for your employees to schedule rooms? Understanding these behaviors not only improve the bottom line, but also keeps your occupants engaged and more productive.

Client spotlight



ISS Transforms 25,000 buildings worldwide with IBM TRIRIGA and Watson IoT platform.

Headquartered in Copenhagen, ISS is one of the world's largest private employers with over half a million staff managing everything from catering to technical maintenance for thousands of high profile clients.

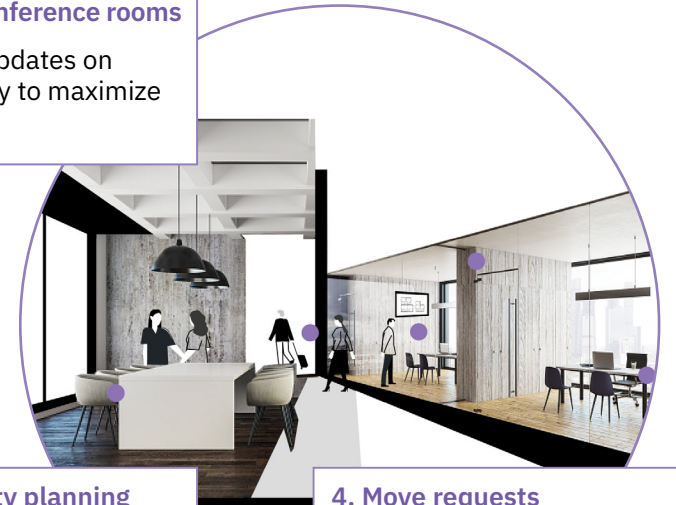
Sensors in meeting rooms, chairs and tables not only help building managers better manage room occupancy and cancel unwanted room bookings, but also inform service staff when a room needs more refreshments or requires cleaning.

ISS has already fitted its Copenhagen headquarters with hundreds of sensors connected to the IBM Watson IoT™ platform and TRIRIGA facilities management software to help improve room bookings and catering services for the 250 employees based in the building.

How can TRIRIGA help optimize your building space?

1. IoT-enabled conference rooms

Get real-time updates on room occupancy to maximize availability.



2. Strategic facility planning

Redesign floors to match demand.

4. Move requests

Know where all your assets are and where your people are stationed at any time.

3. Space utilization

Optimize your space and consolidate unused space for cost savings.

5. Room reservations

Help your occupants easily book the room they need when they need it.

Space optimization



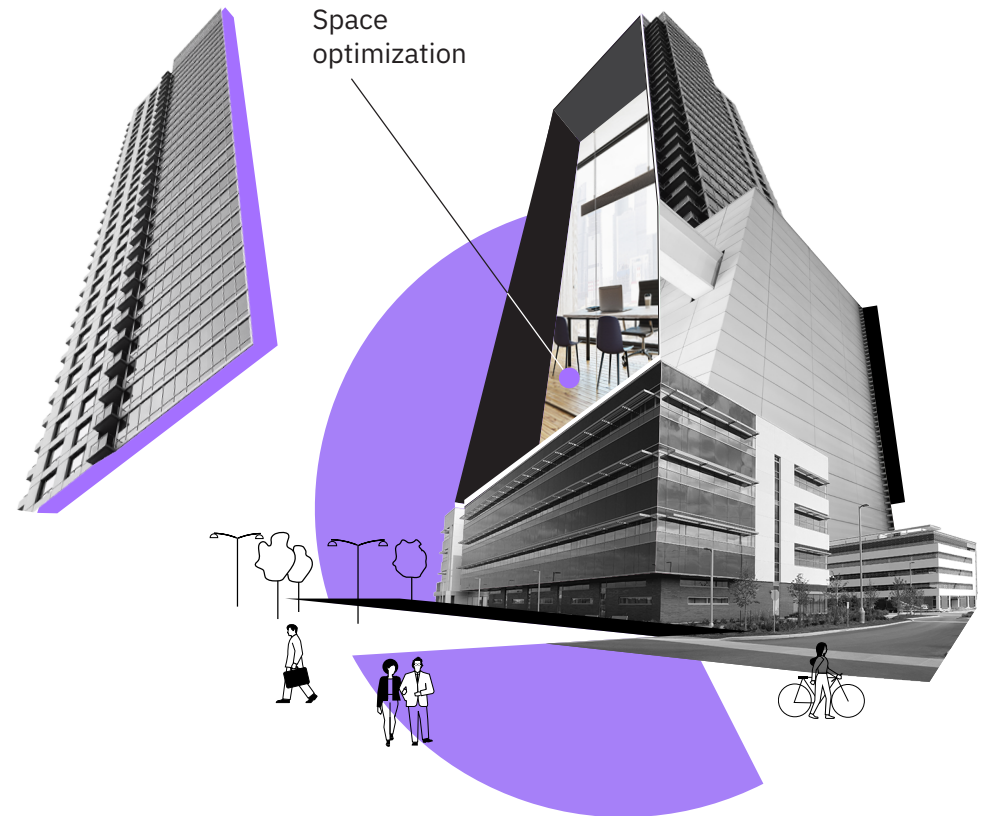
Questions to think about:

- Do you find that it is time-consuming and inconvenient to find available conference rooms? Is it largely a manual process?
- Are you currently maintaining locations of people and assets in a spreadsheet? How frequently is this updated and is it prone to errors?
- Can you tell by simply walking the floor how effectively your space is being used? Do you know the cost of your unused space?
- Is your floor plan optimized to drive the differing needs of your employees or occupants?

Additional resources

Video: Learn how to move from space assignment to true utilization:
ibm.co/tririgaspace

Blog: How Teradyne saves money by reducing unused space:
ibm.co/teradyneblog



Maintenance and energy management

One major opportunity for every facility manager is around maintenance and energy management.

You cannot completely avoid maintenance or energy costs—but you can do a better job of getting in front of them. By better understanding the condition of your buildings, the assets within, and energy usage, you can optimize repairs and energy projects accordingly.

Client spotlight



Can smart facilities management slow tuition increases?

The University of Maryland has **800 facilities employees** covering **250 buildings**—about **13,000 square feet**. Their buildings range anywhere from 100 years old to brand new and it's a major challenge to stay ahead of maintenance problems and focus resources efficiently.

TRIRIGA helps the university process 65,000 work orders per year.

It also captures an enormous volume of data—which is then fed into IBM Watson™.

Fixing one data error uncovered by TRIRIGA and Watson **saved the university USD 30,000**. This cost savings at the operational level has a ripple effect upward when looking at cost of tuition.

Learn more: ibm.co/uom

How can TRIRIGA help optimize your building space?

1. Demand maintenance

Occupants can easily request maintenance and you can act fast when an unexpected issue arises.

2. Preventive maintenance

Track preventive maintenance schedules across buildings to help extend overall life of assets and cut capital costs.

3. Utility Tracking

Tracking utility use helps understand where conservation efforts need to step up.

4. Energy Spike Prediction

Predict when an energy spike is imminent and take action to prevent it.

5. Field and mobile productivity

Provide service technicians with the ability to access work orders from anywhere, anytime.



Maintenance and energy management



Questions to think about:

- How difficult is it for employees or occupants to submit a work order request?
Is this an added frustration for them?
- Is there a large volume of demand maintenance tickets each week?
Is this because preventive maintenance efforts are not effective?
- Do you find yourself replacing assets before the average lifespan due to missed preventive maintenance?
- Are there checks in place to ensure work is being completed by approved vendors and in accordance with SLA's before it begins?
- Is your energy reporting done after-the-fact (thus preventing the opportunity to address issues before they cost you)?

Additional resources

Carnegie Mellon University **saves USD 2million annually** on energy costs with TRIRIGA: ibm.co/carnegie

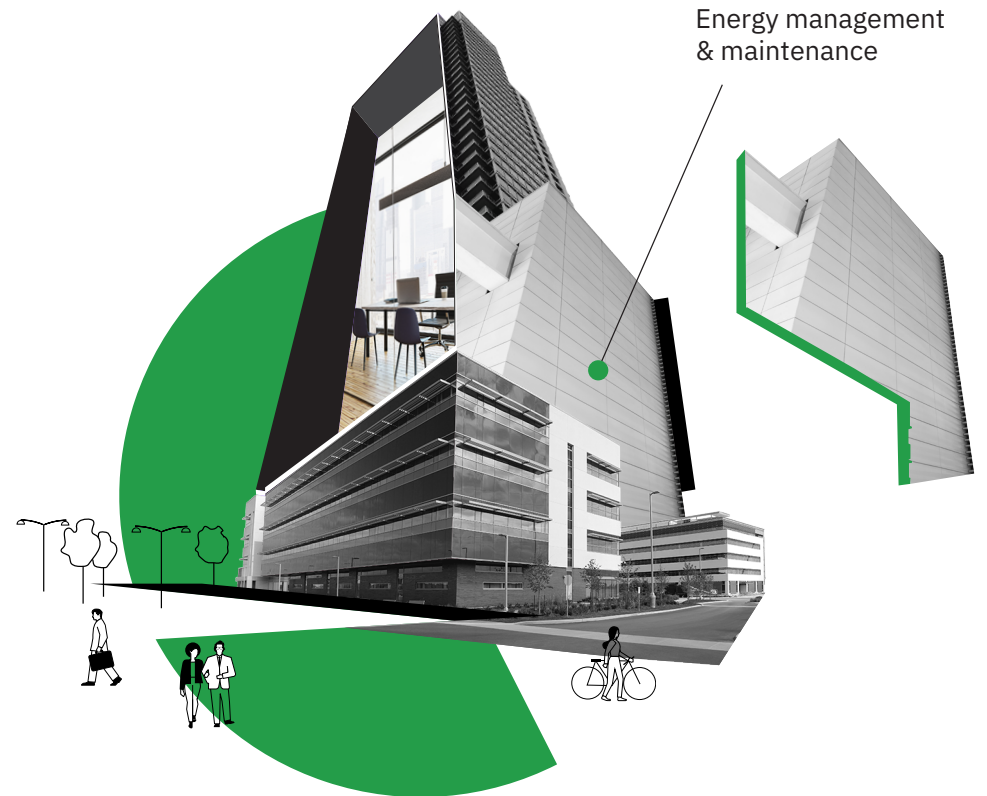


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Lease accounting

The devil is in the details when it comes to managing your leases. There is little room for error and no time for methods that don't work. In 2016, US-based FASB and the European IASB published new lease accounting standards. This forces companies to disclose **USD 3 trillion** in off-balance sheet lease commitments. That's huge.

Things are going to get more complex. TRIRIGA has helped hundreds of businesses conform to the new lease accounting standards, ensure accurate financial reporting, and adhere to lease requirements.

Client spotlight



Umpqua Bank transforms real estate with TRIRIGA

Umpqua Bank manages over **500 leases** as part of its capital financing business. They used TRIRIGA to drive analysis of their lease holdings in order to capitalize on opportunities and mitigate risks from lease changes.

The lease administration capabilities are helping to streamline operations around construction and procurement. For example, they are working on a new e-invoicing capability that helps automate many time-intensive processes.

Umpqua is also expanding their use of TRIRIGA into space optimization and capital planning.

Learn more: ibm.co/umpqua

How can TRIRIGA help optimize your lease accounting practices?

1. Align portfolio and accounting decisions

Ensure that business decisions around buildings make sense from an accounting perspective.

4. Separation of duties

Maintain the needed separation between financial accounting and lease administration. Both require different levels of access to needed information.

2. Conform leases to accounting standards

Book leases accurately to ensure standards are met and there is needed visibility during the accounting process.

3. Financial system integration

Tight integration between your operating systems and financial systems is vital to maintain accuracy for financial reporting.

5. Lease administration

Stay in adherence to your leases, streamline renewals, and prevent overpayments.



Lease accounting



Questions to think about:

- How much time do you spend on time-consuming lease accounting processes that could be automated? Do you currently have a system to do this?
- Have you begun implementing the needed changes to align to the new lease accounting standards?
- Does your organization have a way to automatically flag financial reporting requirements for your leases—to ensure nothing is missed?
- Do you have protections in place to avoid accounting fraud?
- Can you automatically track important lease dates, invoices, and other critical information to ensure adherence to SLAs? Have you lost contracts or violated them due to lack of visibility?

Additional resources

Whitepaper: Streamline and automate lease accounting processes:
ibm.co/leaseaccounting

Blog: Checklist to prepare for lease accounting changes:
ibm.co/leasechecklist

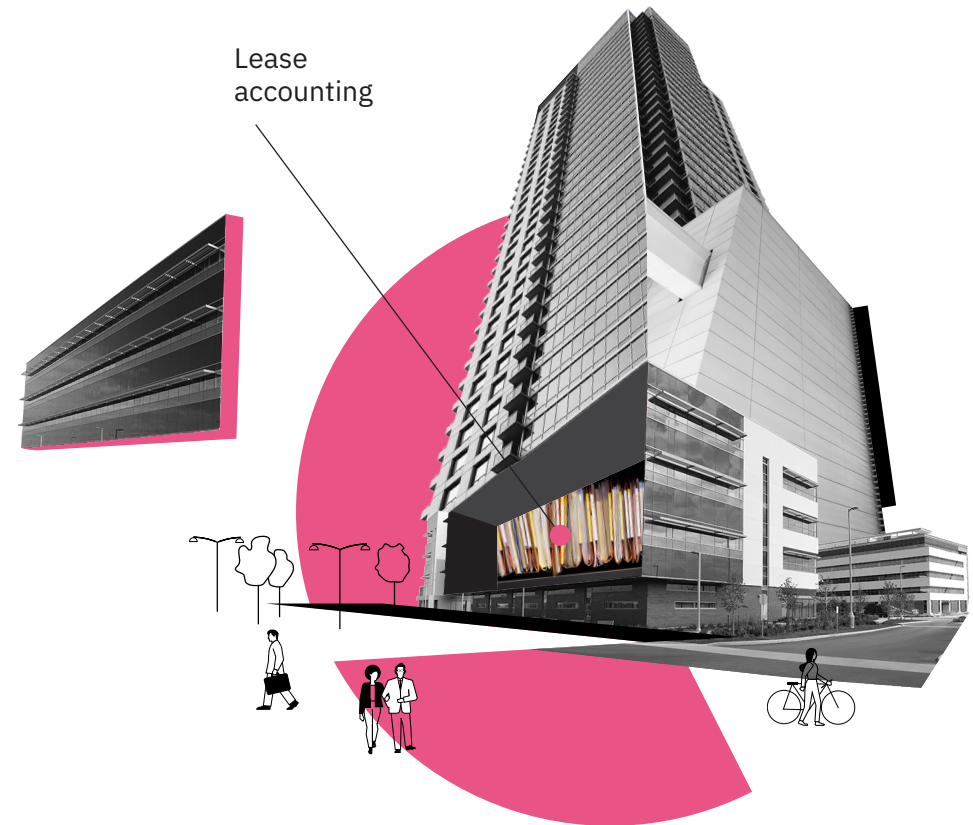


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Capital projects

Nearly 50 percent of all buildings are considered middle-aged. This means more maintenance. But it has to be balanced against a whole host of things going to remodel a school in the fall, are you?

Capital projects have so many moving pieces. Doing it manually means a mountain of paperwork and a lot of confusion. And of course, there's always more work than money. When it comes to your buildings, you can't afford sub-optimal. That's why TRIRIGA offers you a better way.

Client spotlight



The Dow Chemical Company uses Tririga to manage large-scale capital projects

The Dow Chemical Company is the world's second-largest chemical producer and **oversees 13 business units.** Each unit operates their business autonomously while receiving common services from Dow. This presents challenges with capital planning.

Using TRIRIGA, they can now plan 3-5 years forward, more accurately forecast funding requirements, and effectively manage projects that span multiple business units. Dow also uses TRIRIGA to improve space optimization and energy usage, **realizing a 20 percent increase in facility use** and a **USD 4 million annual savings** via space consolidation.

Learn more: ibm.co/dow

How can TRIRIGA help optimize your capital project practices?

1. Condition assessments

Different buildings have different cycles for updates. Forecast and prioritize projects based on risk factors.

4. Manage budgets

Provide the needed organization to assist with documenting, matching and allocating funds to the projects it is earmarked to support.

2. New project analysis

Understand if, and when, a project is necessary. Identify high return projects and streamline project cost accounting processes.

3. Oversee maintenance projects

Ensure your projects are on time and within budget by reducing delays and avoiding redundant work.

5. Manage vendors and commitments

Organize vendor information, communication and proposals across all of your projects.



Capital projects



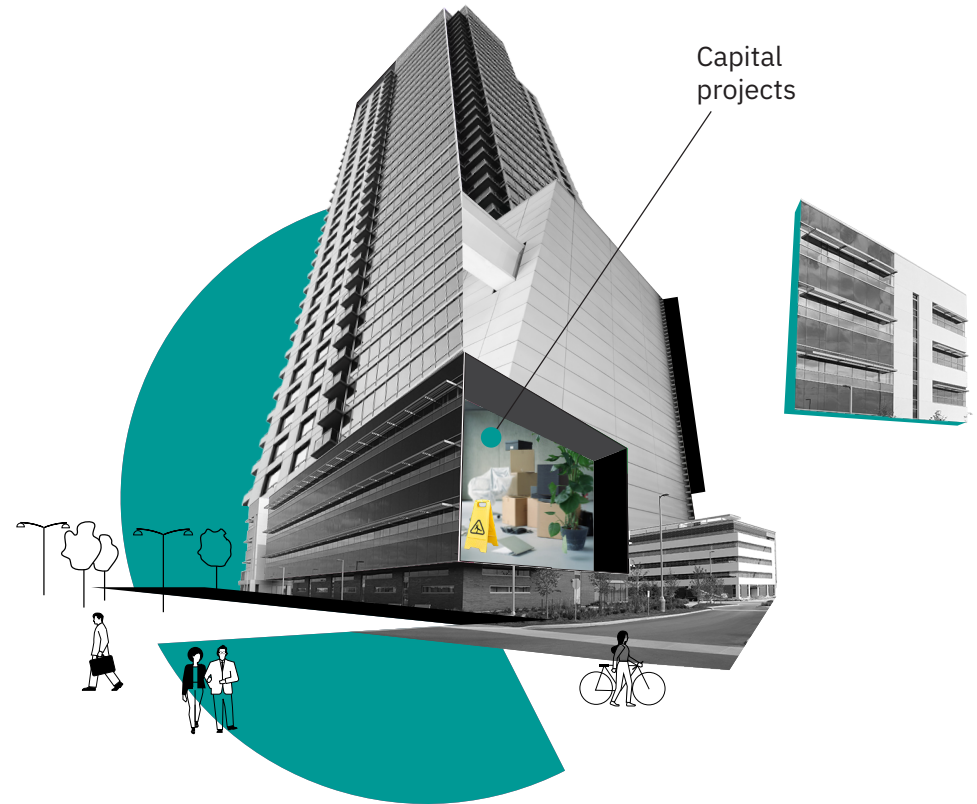
Questions to think about:

- How effectively do you manually manage hundreds of different project timelines simultaneously?
- Can you easily pinpoint where in its lifecycle the roofs, floors, parking lots, and other major pieces of your buildings are?
- Do you have the needed data to analyze potential new projects against each other?
- Is there a place where you can organize vendor information and proposals in an easily searchable and accessible way?
- How much time do you spend searching for needed information in paper records or spreadsheets?
- Do you have an automated communication system to keep vendors updated on status of proposals?

Additional resources

Whitepaper: The true value of an IWMS:
ibm.co/iwmspaper

Blog: Generate higher returns with IBM TRIRIGA:
ibm.co/capitalprojects



Your smart building awaits

Buildings—and everything that goes into managing and maintaining them—requires an operational fortress. TRIRIGA has the unique ability to see and understand your whole building operation. You'll get the data-driven information you need to improve the operational, financial and environmental performance. No matter what your role or how many buildings you own.

That's why you need an integrated workplace management system like TRIRIGA.

For more information

Learn more about IBM TRIRIGA or request a custom demo, visit: ibm.co/tririga

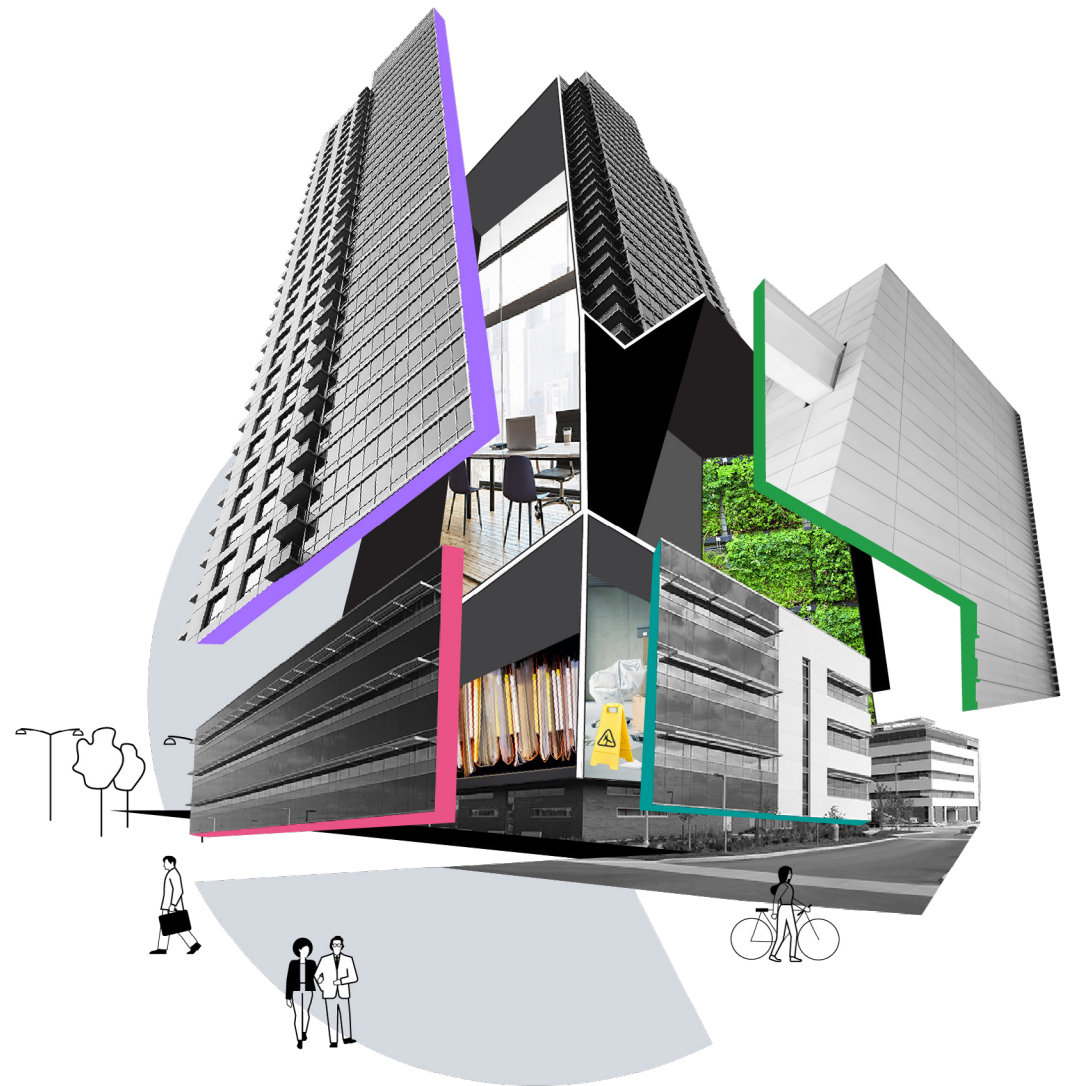


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Endnotes:

1. Source: <https://www.nature.com/articles/7500165>

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