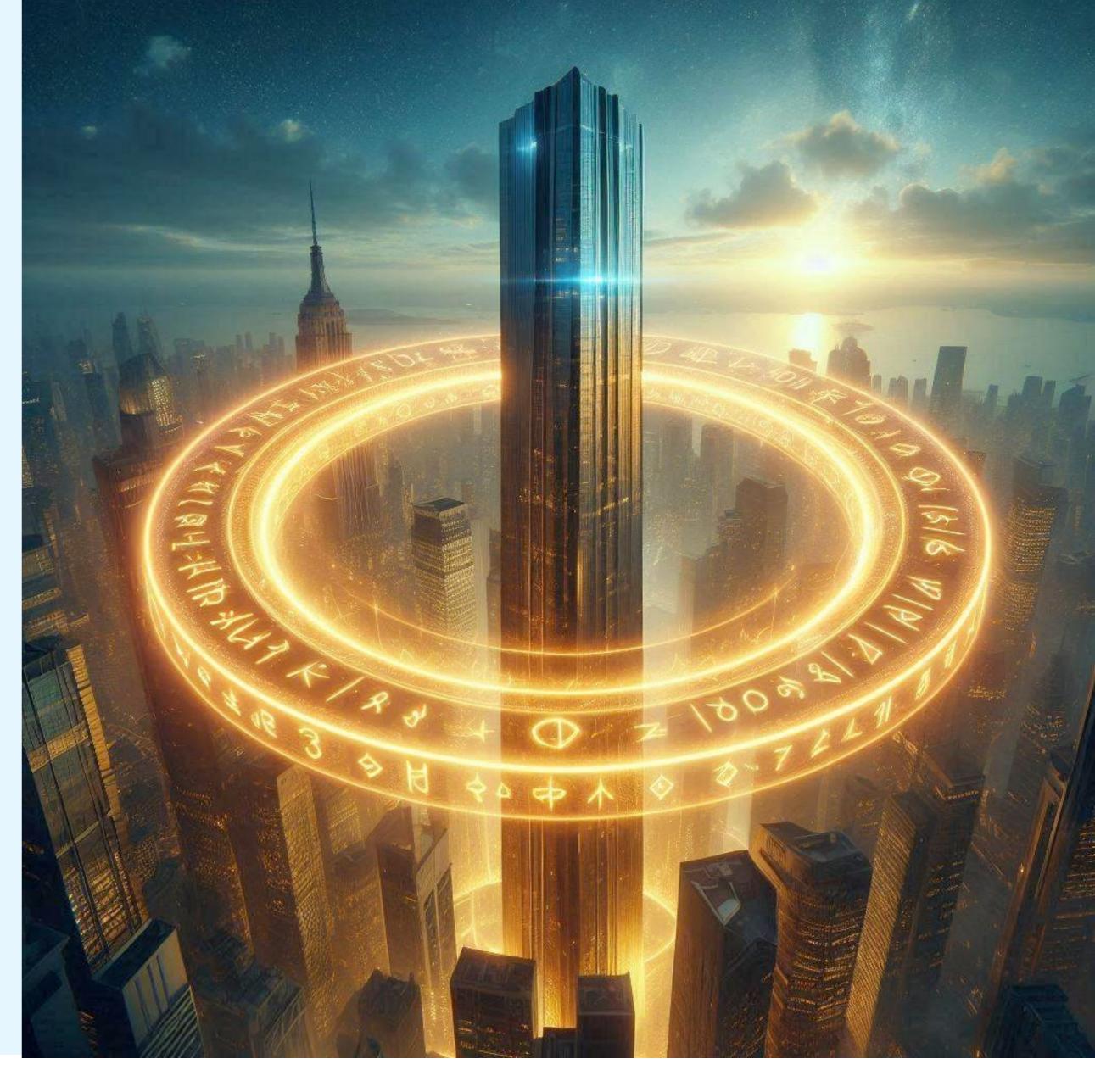
One Application Suite to rule them all ... assets that is





Andy Barnes
TRIRIGA/Maximo Real Estate & Facilities
Lead Technical Product Manager



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Thriving in today's dynamic market requires agile real estate and facilities strategies and execution

Enterprises are struggling to right-size underutilized real estate portfolios

Enterprises seek to generate free cash flow by consolidating and repurposing spaces throughout their portfolio holdings in the face of growing operational costs.

Sustainability is essential to operational excellence

40% of global energy consumption.¹ While 53% of M&A dealmaker's report that sustainability due-diligence has led to cancellation or downward adjustments of large acquisitions.²

Capital project delays and cost overruns are commonplace

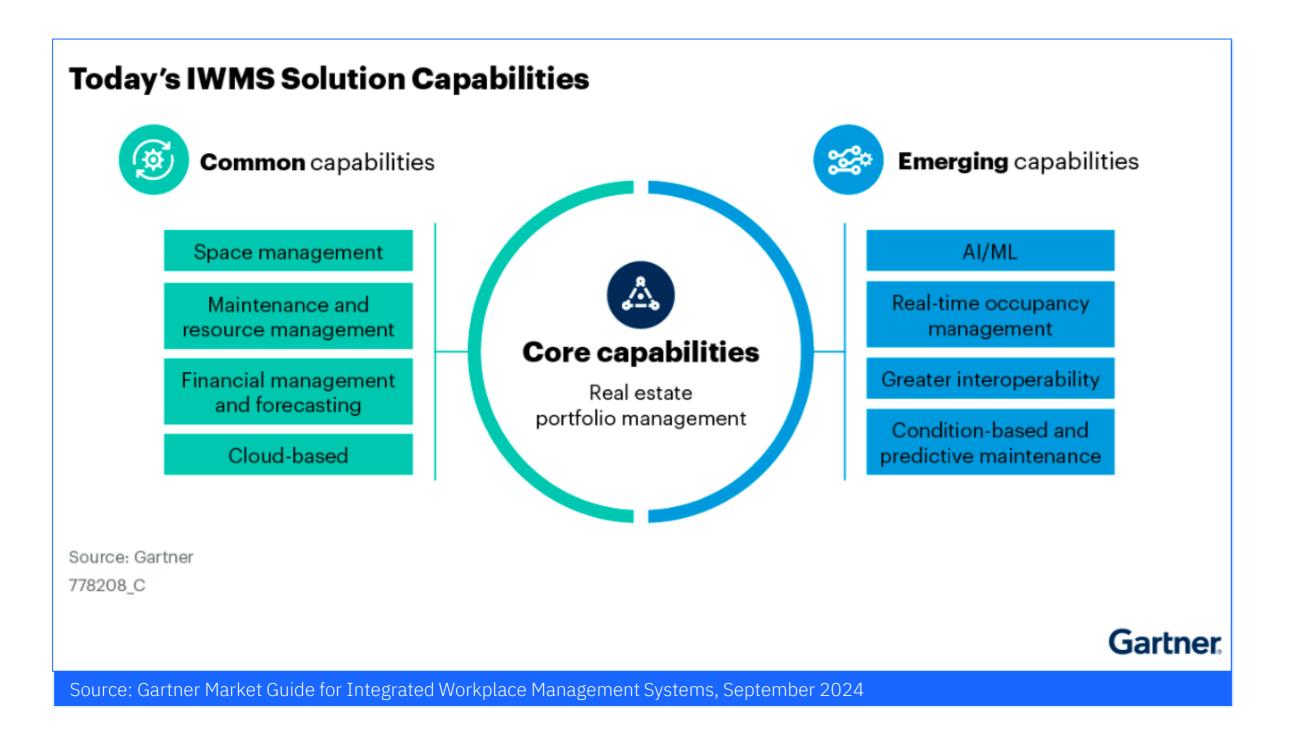
Investment in large capital projects has far eclipsed pre-Pandemic levels. 72% of real estate projects are delayed with 55% cost overruns compared to initial estimates.³

^{1.} United Nations Environmental Programme, WorldGBC, IEA 2023

^{2.} KPMG, 2023

^{3.} Capital investment is about to surge, McKinsey & Company, 2022

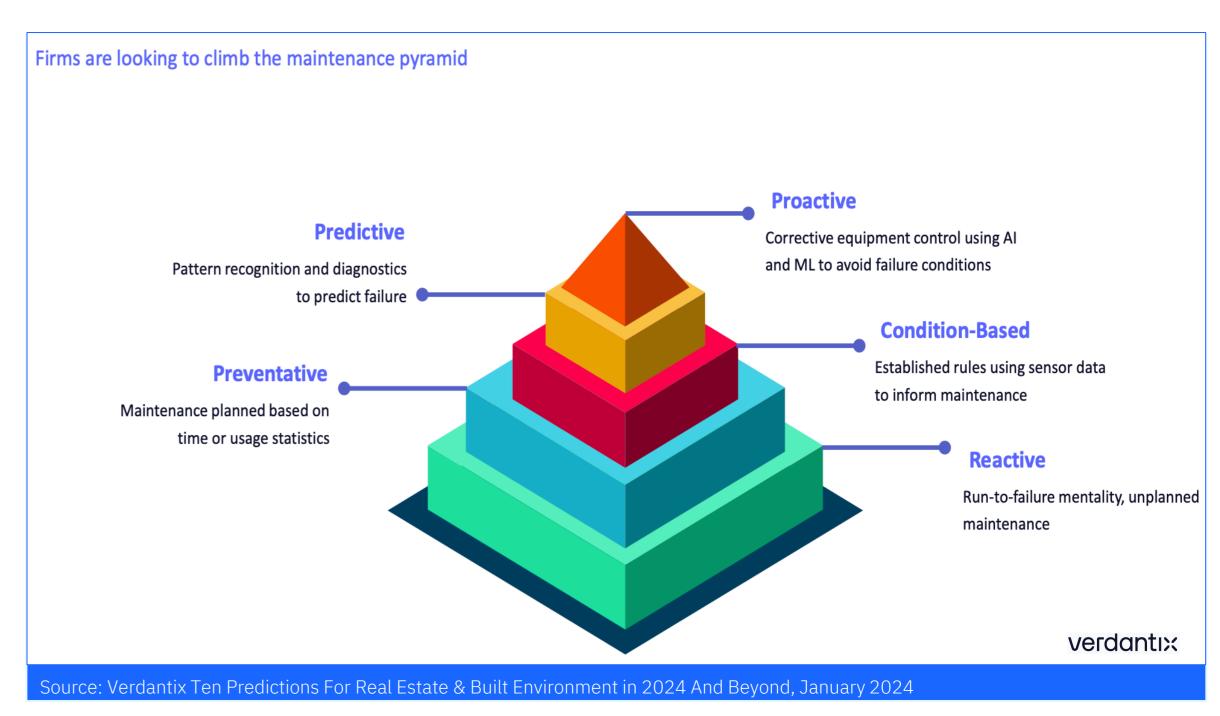
Facility management and asset management can no longer be viewed independently



The old way of thinking about facilities and assets is no longer sustainable. We need to break down the silos between FM and AM and work together to optimize our entire portfolio.

President and CEO Asset Management Council The convergence of facility management and asset management is the future of our industry. By working together, we can optimize our facilities and assets, reduce costs, and improve sustainability.

Executive Vice President and CEO
International Facility Management Association

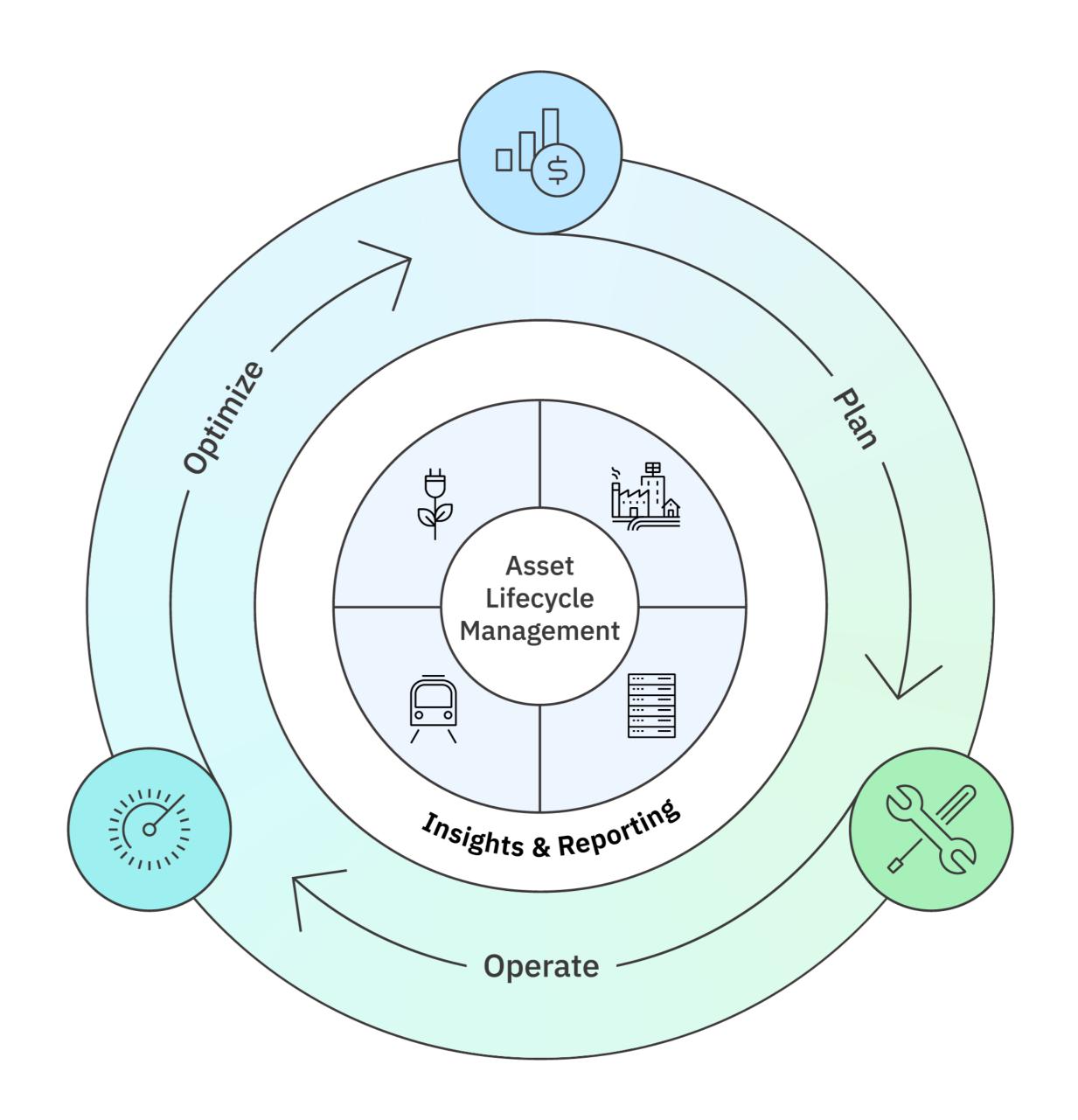


Real estate and facility portfolios should be managed and optimized throughout their lifecycle

An integrated solution enables real estate and facilities portfolios to be managed as a system.

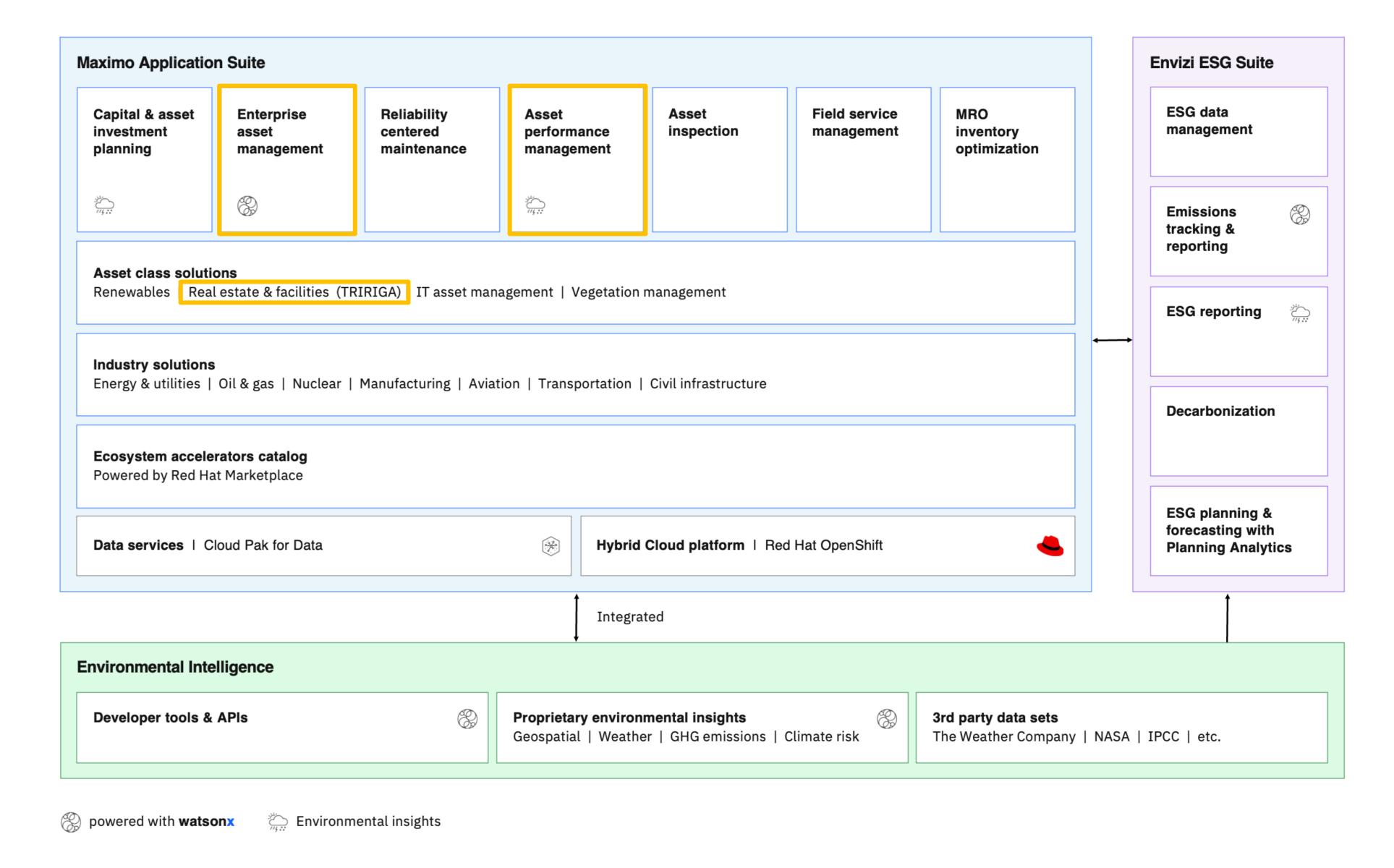
Streamlined workflows, boosted collaboration, and smarter resource management create synergies that improve organizational bottom lines.

Minimize risk and environmental impact with a comprehensive solution that manages your entire real estate portfolio lifecycle, from planning and acquisition to disposal. This includes optimizing build-out, administration, occupant experience, operations, and maintenance.



IBM Asset Lifecycle Management powered by Maximo

IBM Asset Lifecycle
Management is an integrated solution powered by Maximo that optimizes the whole-life asset performance and operations for wide-ranging industries and asset classes, leveraging AI, IoT, and environmental data.



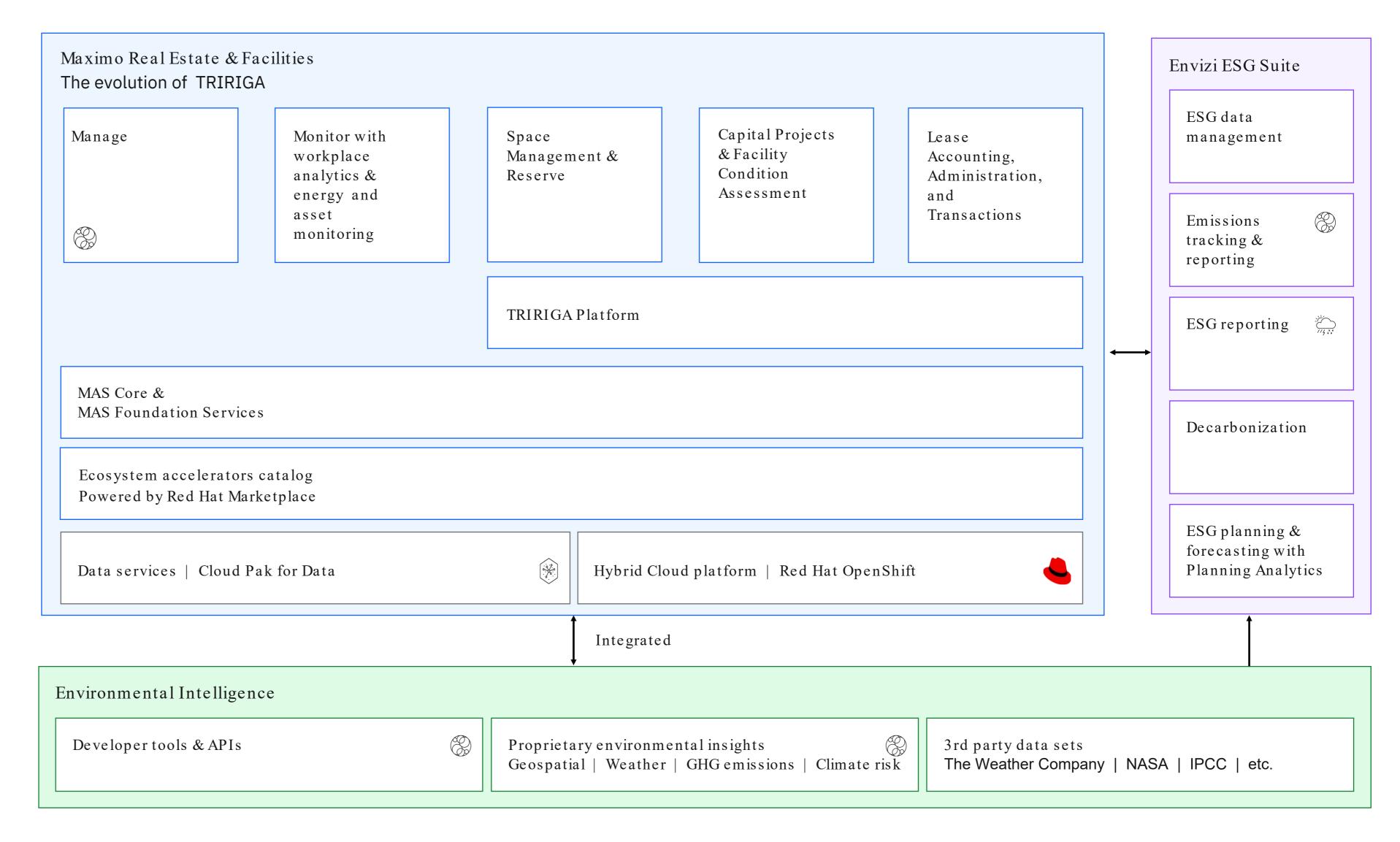
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ALM from a facility management lens

We're bringing our Real Estate and Facilities capabilities into MAS, sharing common infrastructure, to make it easier to utilize more capabilities.

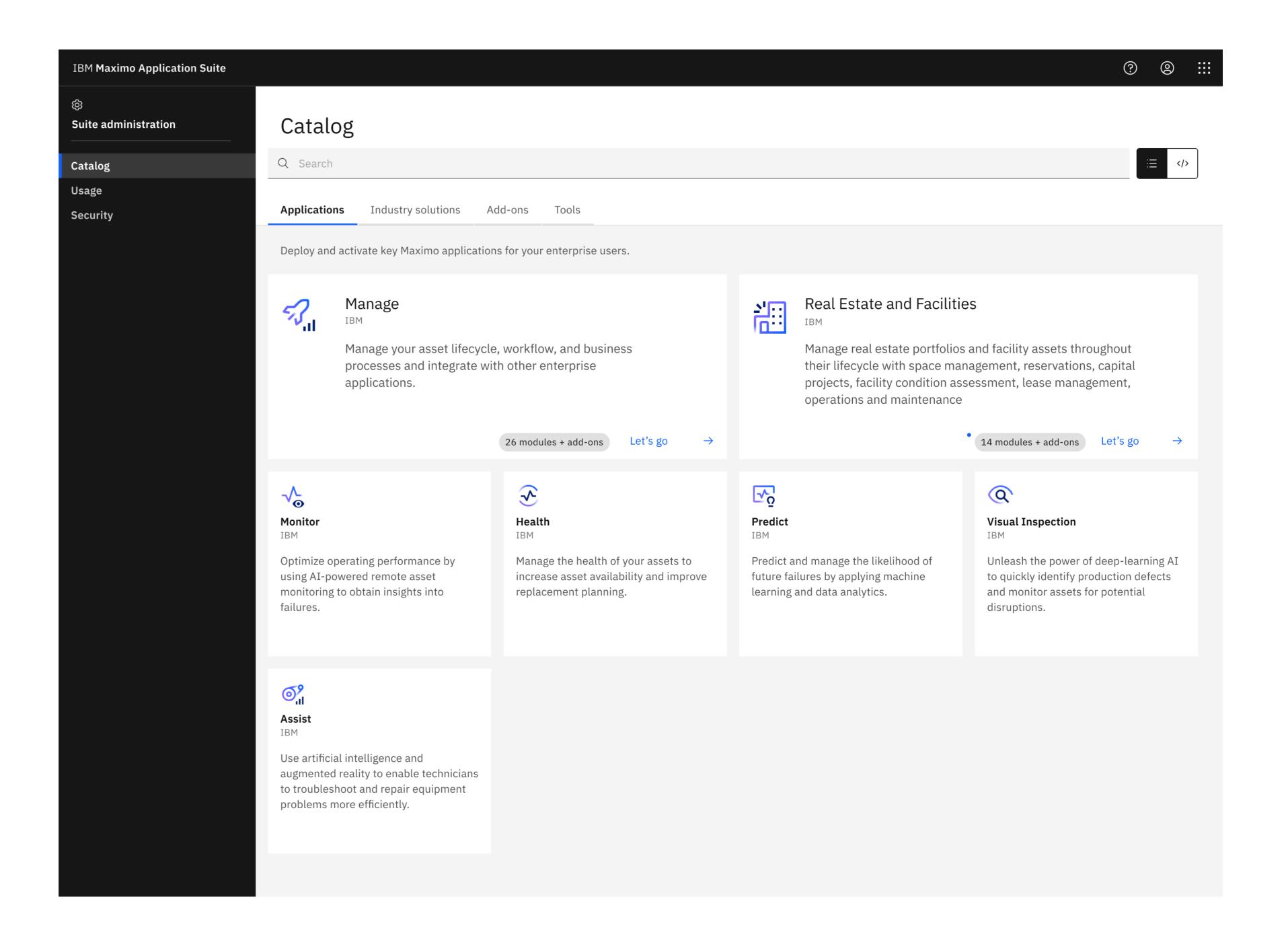
A unified App Point licensing metric will be used, allowing you access to all capabilities.

Our intent is to make this available in 1H25.





Within the MAS catalog



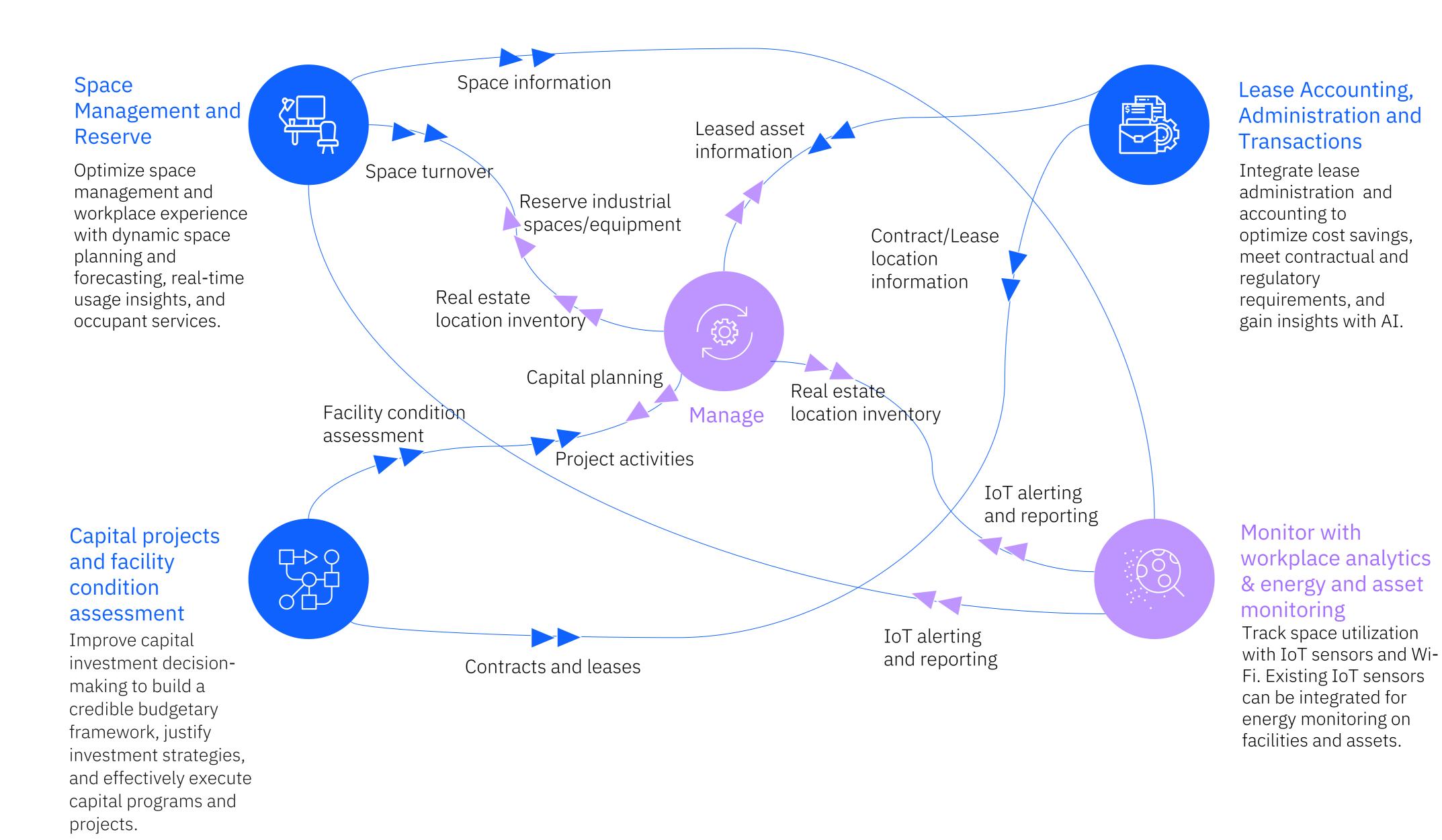
Real estate and facilities lifecycle should be managed as an integrated system

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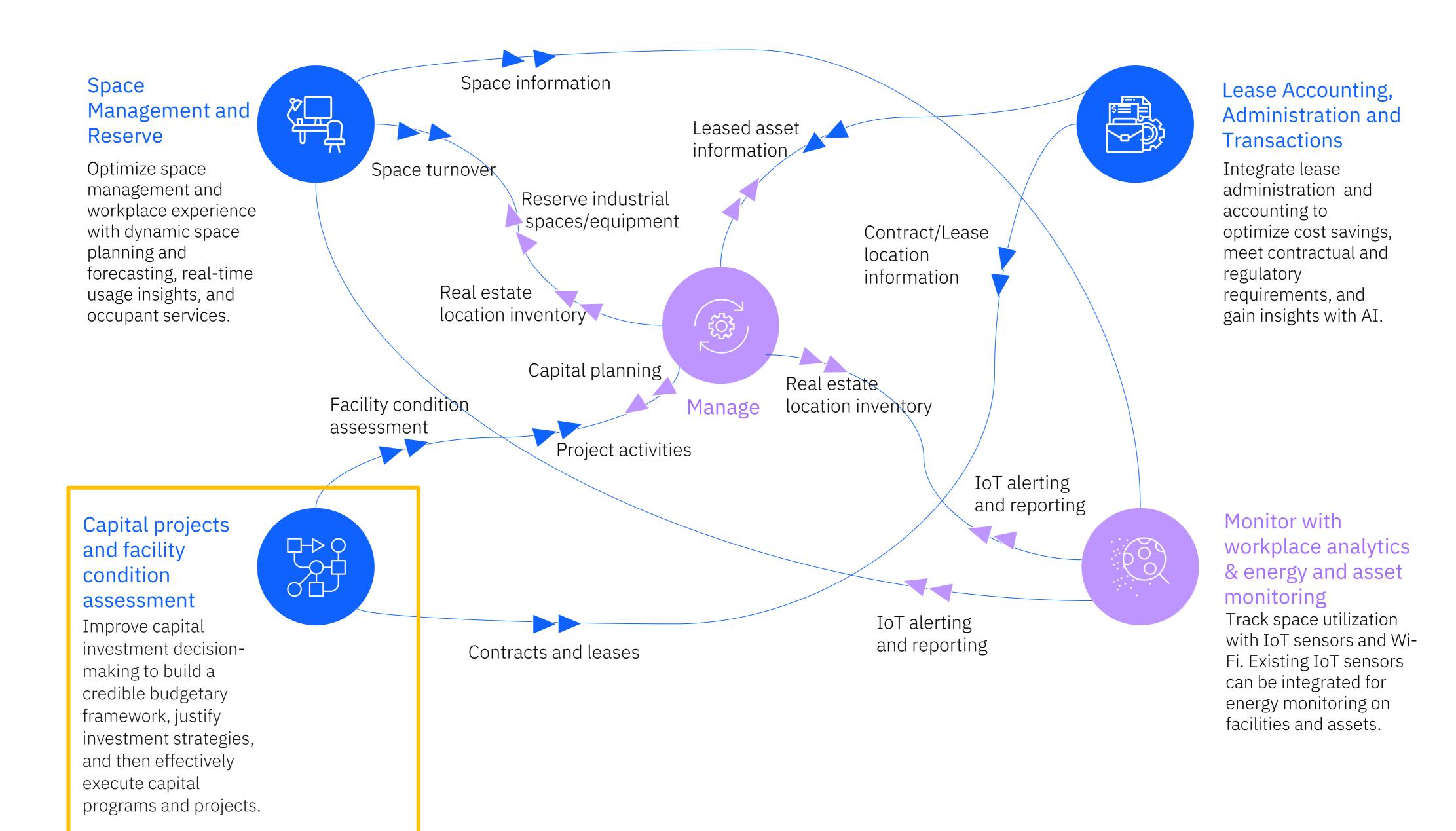
Disposal Utilize On-Boarding **Administer Populate Experience Build-out** Maintain Acquire Dispose **Portfolio Data Real Estate** - Manage and route service- Portfolio assessment Portfolio assessment Estimate projects Abstract new leases Measure real time Populate location requests and demand hierarchy space use Meet lease accounting Identify requirements Prioritize and execute Identify space and work orders facilities to relinquish regulations environmental Load floorplans from Validate space use Search for potential improvement projects Manage planned, CAD/BIM Manage lease financials locations Initiate and manage Model space scenarios predictive and condition Establish and manage Load assets moves Track critical dates Compare potential Implement moves maintenance schedules locations Employee workplace Manage space details Comply with Identify excess space Maintain parts inventory Manage proposals services portal Justify lease or lease terms for disposal Manage space Warranty management purchase decision Reserve work and Manage commitments allocations Define and compare Renegotiate leases Plan for facility and payments meeting space downsize scenarios Exercise lease options Assign seats Execute property component lifecycle Manage project risks, Indoor wayfinding Execute purchases management on leased Decide and execute Synthesize utility and changes and progress Manage facility and owned properties Locate colleagues BMS data sources - Site remediation condition index - Plan and instrument IoT Track supplier Remote asset Ingest energy, waste - Prepare site to sell or - Plan and execute technology monitoring and sustainability data and water data for return local projects Track carbon reduction utilization reporting and KPIs Aggregate operational - Retire assets Identify environmental to project progress Health analytics for KPIs to dashboards Convert utility and fuel improvement projects Report carbon savings Project close-out facility use and assets consumption data to ESG reporting and risk from consolidation Track utility consumption carbon emissions HSE Management management Physical and visual Submit facility rating inspections data to agencies

Mobile technician WS

Maximo Real Estate and Facilities complements Manage for facility maintenance



Capital projects and facility condition assessment



Real Estate and Facilities provides comprehensive Capital Planning and Project execution

There are several tools and techniques utilized to improve capital planning for facilities

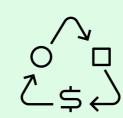
Portfolio Management



Portfolio Life Cycle Analysis

System of Record to capture building portfolio condition.

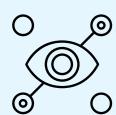
Strategists make real estate portfolio decisions based on cost estimates to address structural deterioration and deficiencies in facility components.



Asset Management Systems

Tracks the performance and condition of building systems and equipment, as well as scheduling and tracking maintenance activities. This prioritizes investments based on asset condition, optimized maintenance schedules, and avoiding unexpected breakdowns.

Assessment



Facility Condition Inspection

Systematic evaluation of a building's systems condition identifies deferred maintenance issues and improvements. Determine Facility Condition Index and classify per Uniformat code.



Energy Audits

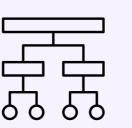
Identifies energy-saving opportunities in equipment and systems to reduce operating costs and improve sustainability.



Risk Management

Identifies and evaluates potential risk liabilities and opportunities associated with a facility. Evaluate funding scenarios. Prioritize capital investments for the appropriate risk responses.

Execution



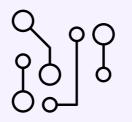
Program and Funding Management

Manage large scale planning program to coordinate business objectives across multiple related projects. Aligns funding sources, ensuring they are applied to proper projects.



Vendor Management

Manage RFIs, bids, and inquiries from vendors. Also, tasks, work orders, progress reports/payments, change orders, inventory updates, and documents throughout project execution



Project Management

Manages scheduling, budgeting, and tracking of capital projects,. Ensure projects are completed on time and to budget, and that resources are allocated efficiently.

Capital Project Management provides the inputs to Work Order & Asset Management

Planning

Capital Project Management

Capital Projects
Facility Condition Assessment
Needs Inventory / Opportunities

Master Plans

Capacity Analysis

Sequencing

Condition

Assessments

Bonding / Funding

Grants

Compliance

Execution

Work Order & Asset Management

Work Orders
Job Plans / Scheduling
Inventory Management
Preventive, Predictive Maintenance
Asset Renewal / Replacement Strategies



Facility Condition Assessment provides a structured approach to understanding the state of a large real estate portfolio



Establish assessment criteria and standards

- Full facility/system condition lifecycle tracking
- UNIFORMAT code For building/system baseline, renewal planning and calculation
- Apply inspection standards to build consistent analysis across portfolio



Assess buildings and building systems

- Establish financial targets and benchmarks (FCI/SCI)
- Repair / replacement modeling including RSMeans integration
- Communicate facilities data into condition rating and total risk impact scores

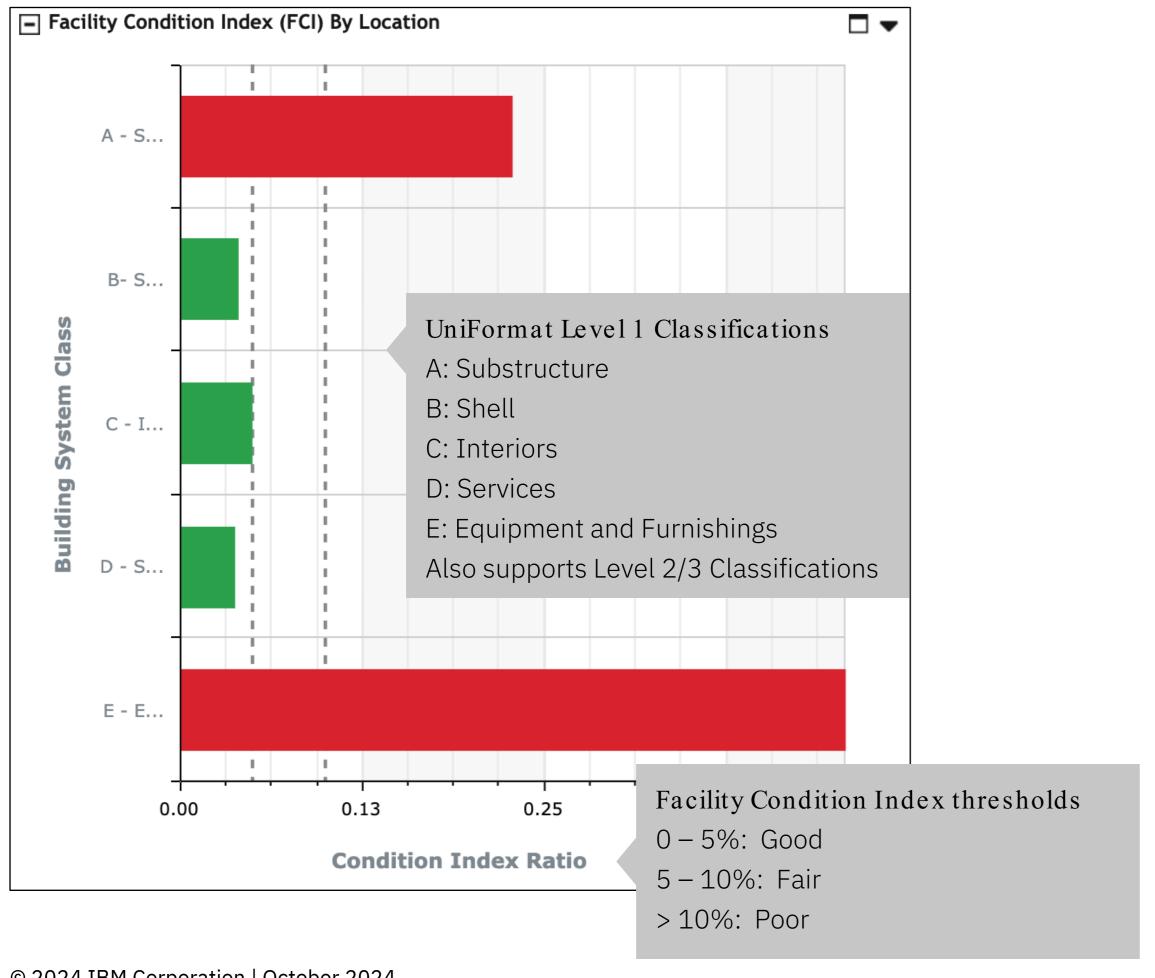


Analyze and prioritize capital opportunities and projects

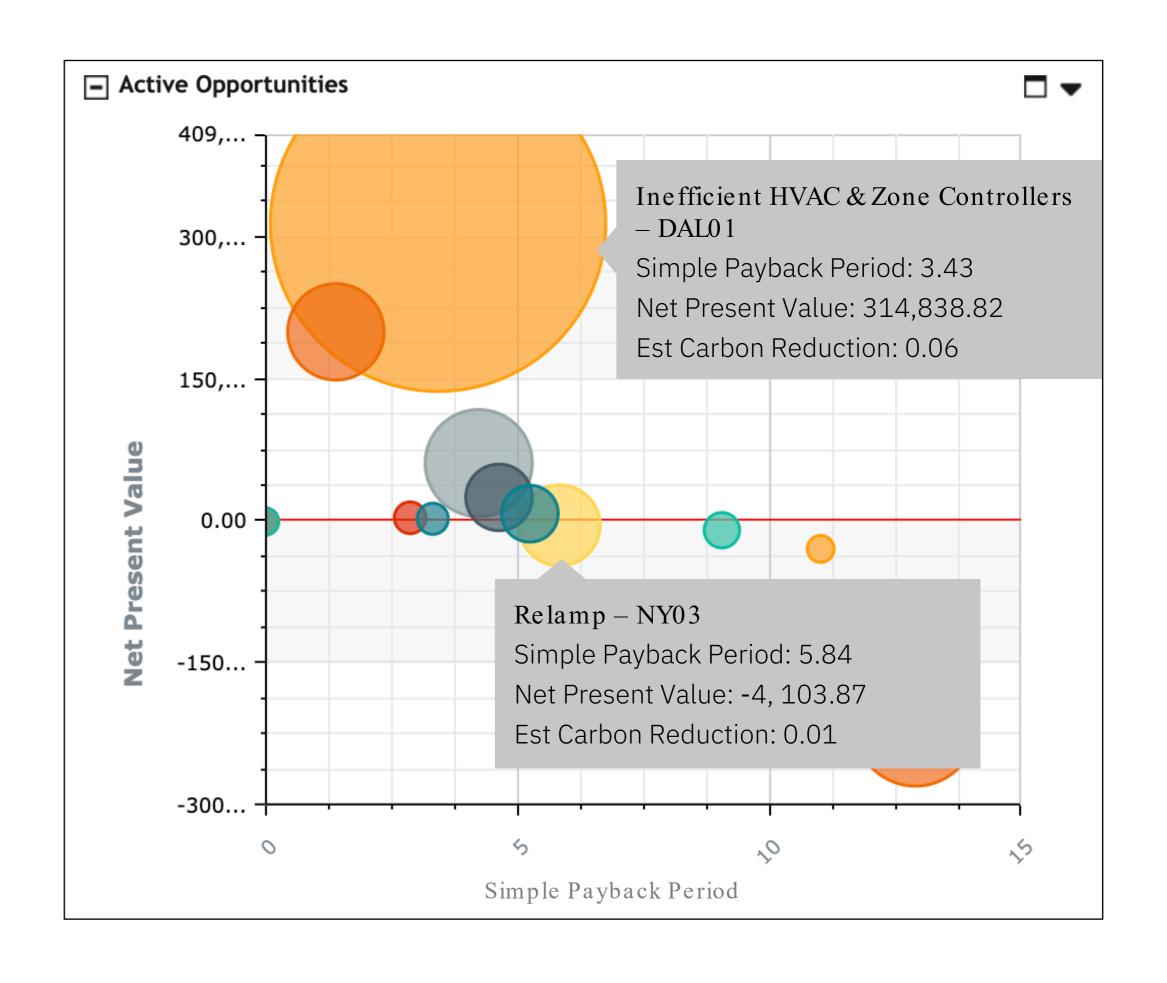
- Group improvement investments into projects
- Identify, analyze, and prioritize investment trade-offs
- Drive execution of maintenance and capital renewal projects
- Maintain completed projects and FCA history database

Reporting and analytics prioritize where funding is most urgent and impactful

Summarized portfolio by UniFormat classifications

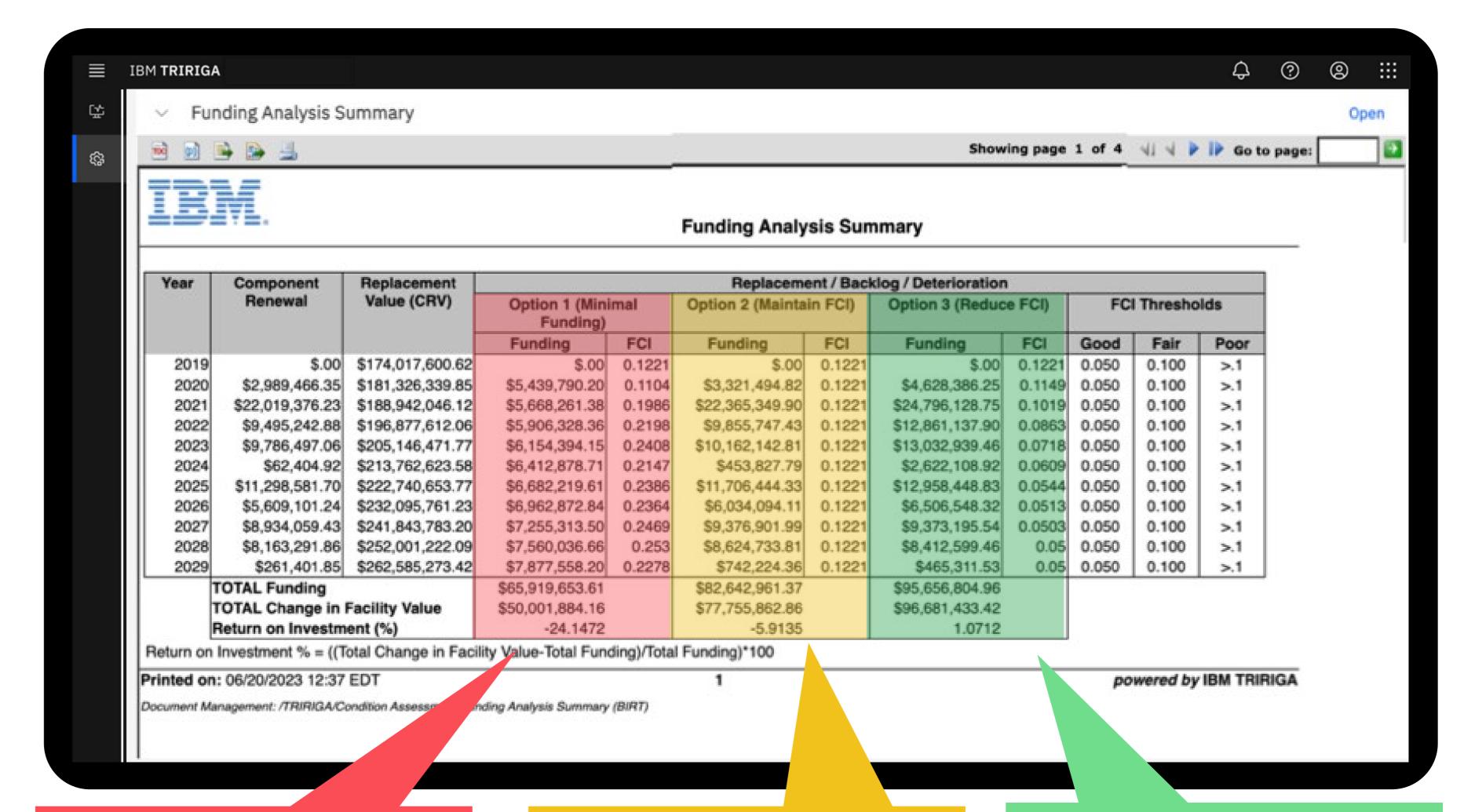


Bubble chart helps strategists prioritize funding



Comparative report for alternative funding scenarios

- Minimal funding without portfolio improvement
- Maintain average FCI
- Investment to improve to target FCI based on user criteria



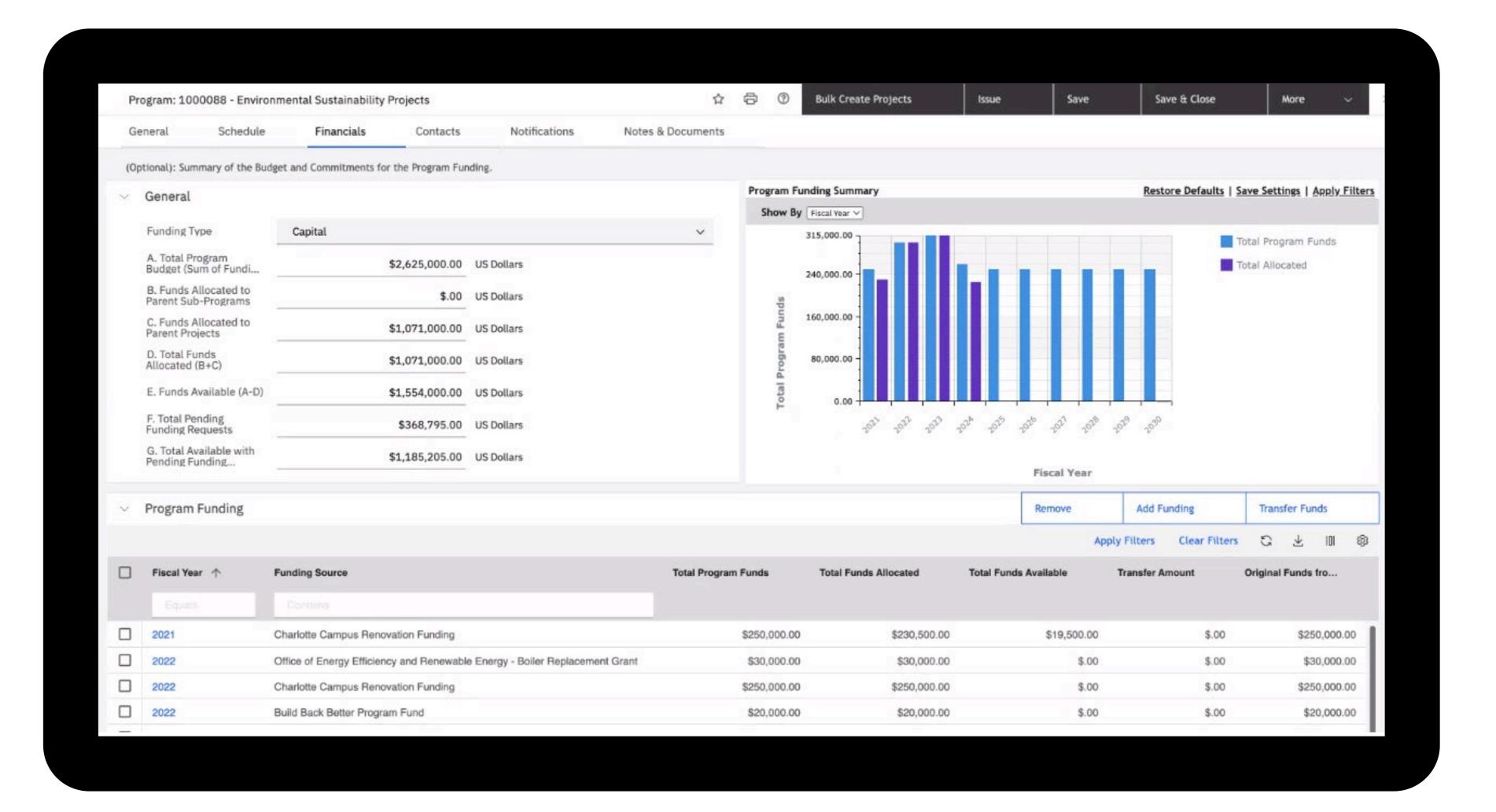
Minimized funding leads to further deterioration and negative ROI

Maintaining condition at current level still results in negative ROI

Optimal funding leads to improved FCI and positive ROI

Capital Projects allows program funding to be auditable through its lifespan

- Grand summary
- Budget vs. allocation graphics
- Yearly summary and breakdown

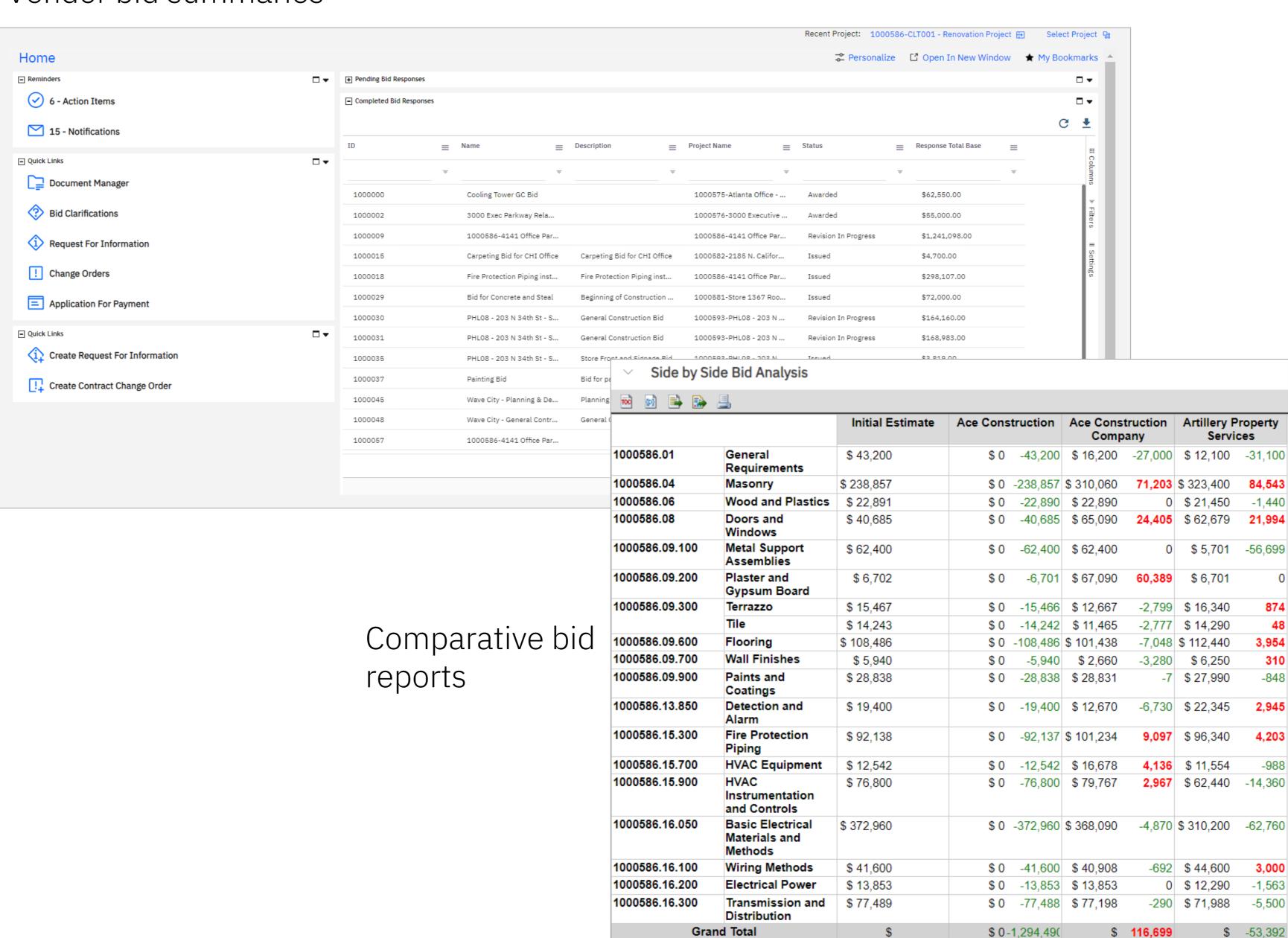


Soliciting, selecting and tracking tenders and vendor bids is core to executing projects

Procurement management at the tip of your fingers

- Summary reports on vendors
- Manage multiple bids
- Evaluate bids
- Review bid clarifications

Vendor bid summaries



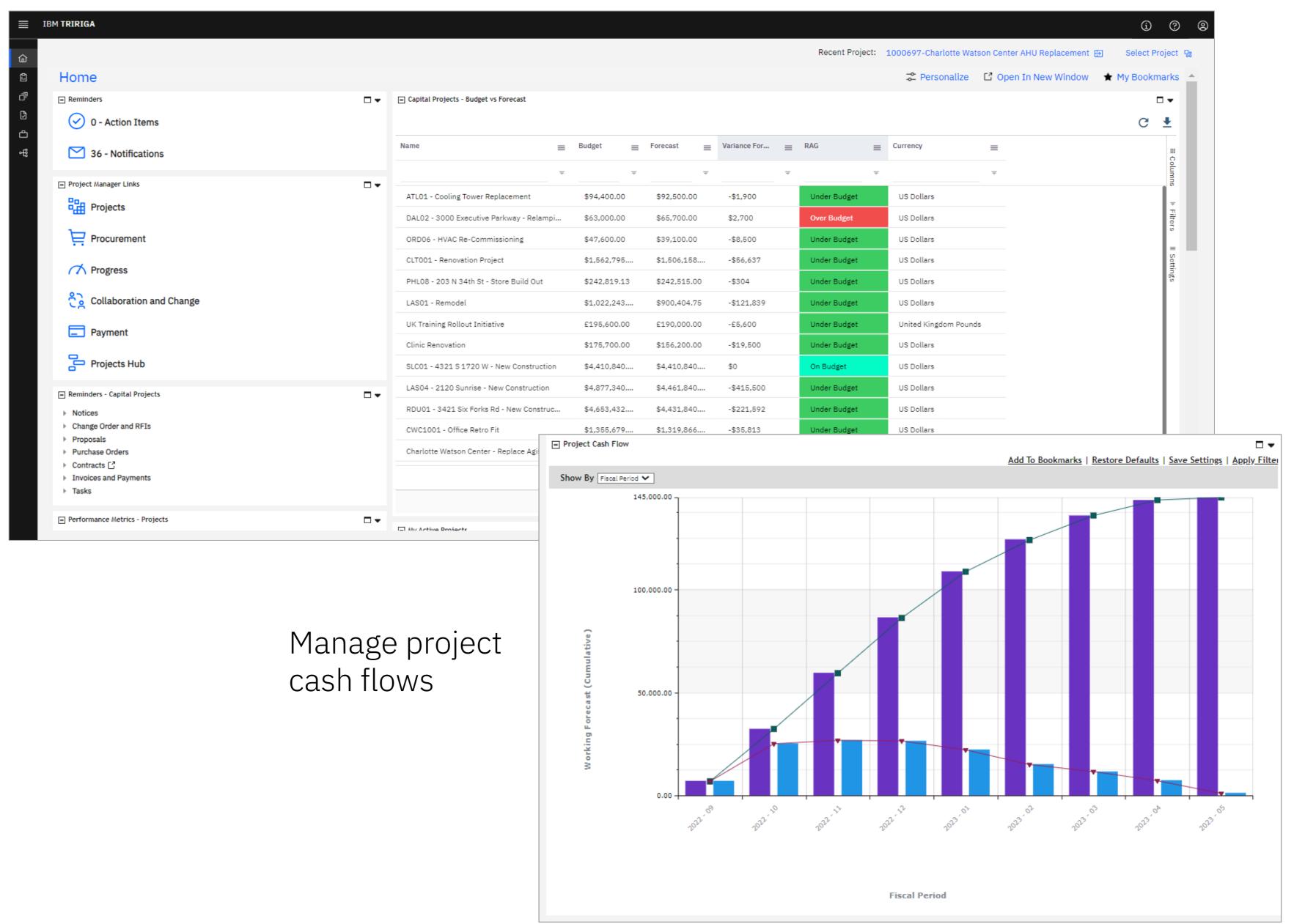
1,294,491

1,411,189

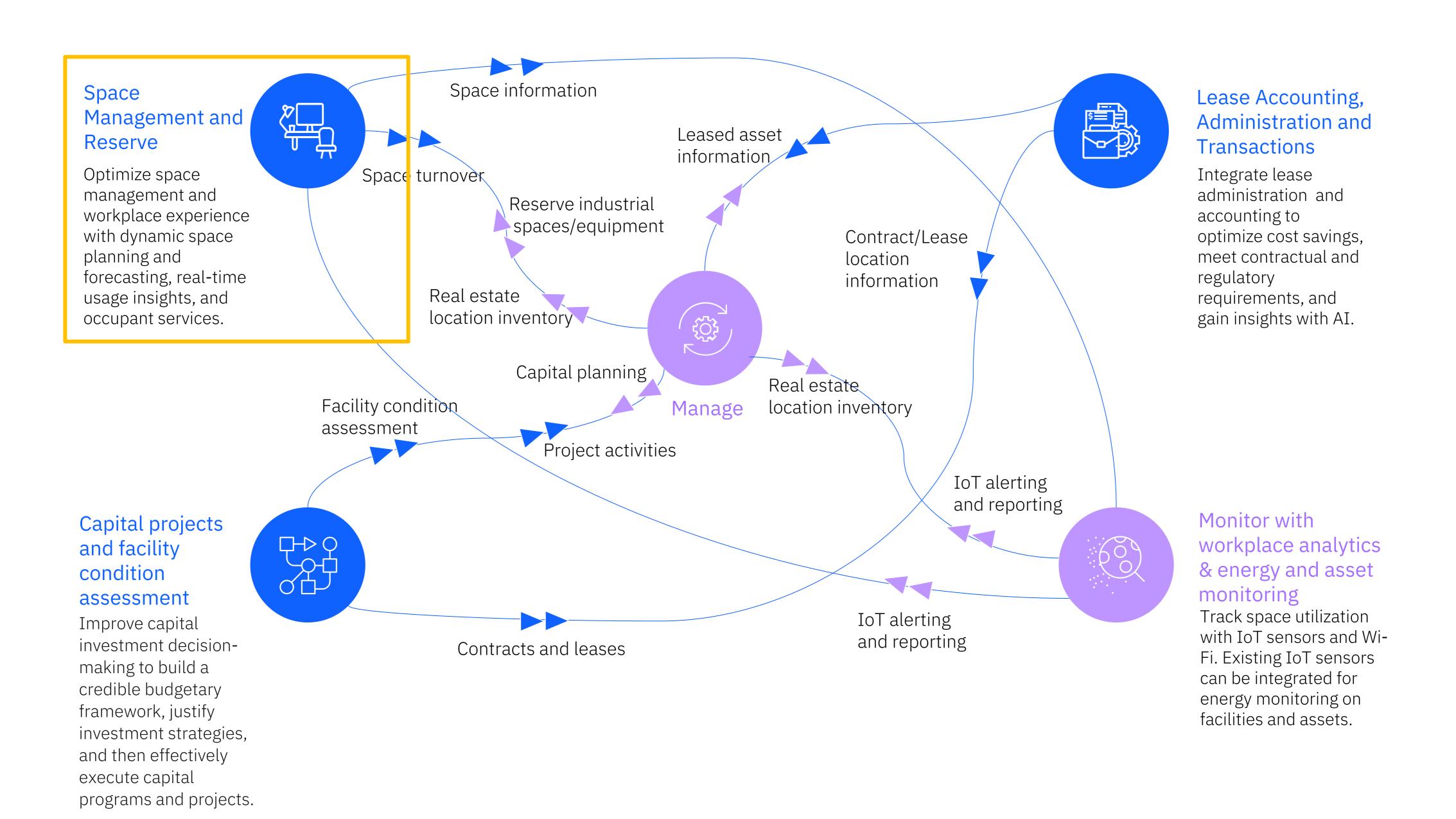
1,241,098

Dashboards help project managers monitor status across all projects

Project and budget details



Space Management and Reserve



Enabling space management and the occupant experience

Space Planners need strategic, administrative and oversight capabilities to manage and tune how space is to be used efficiently

Space Users expect to access facilities and space seamlessly, to add productivity to their day rather than impeding work tasks



- CAD and BIM integration
- Dynamic space planning
- Space forecasting
- Stacking



- Space allocations and chargebacks
- Move management
- Space audits
- Occupancy monitoring
- Space utilization
- Floor / building level utilization



- Personal desk and meeting reservations
- Outlook integration
- Move requests
- Locate colleagues

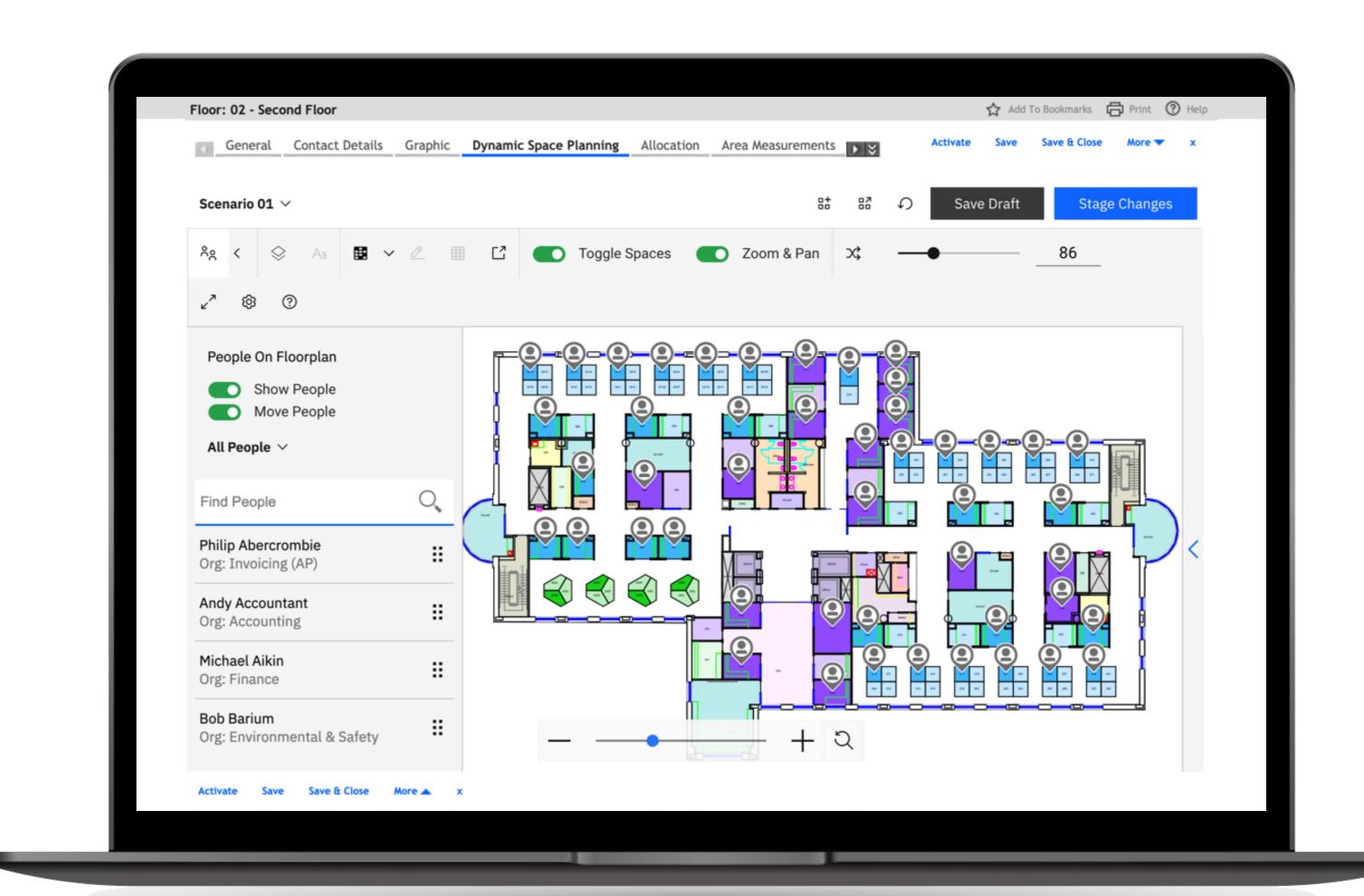


- Indoor maps and wayfinding
- Scan-to-claim desk
- Mobile apps
- Interactive kiosks and room panels

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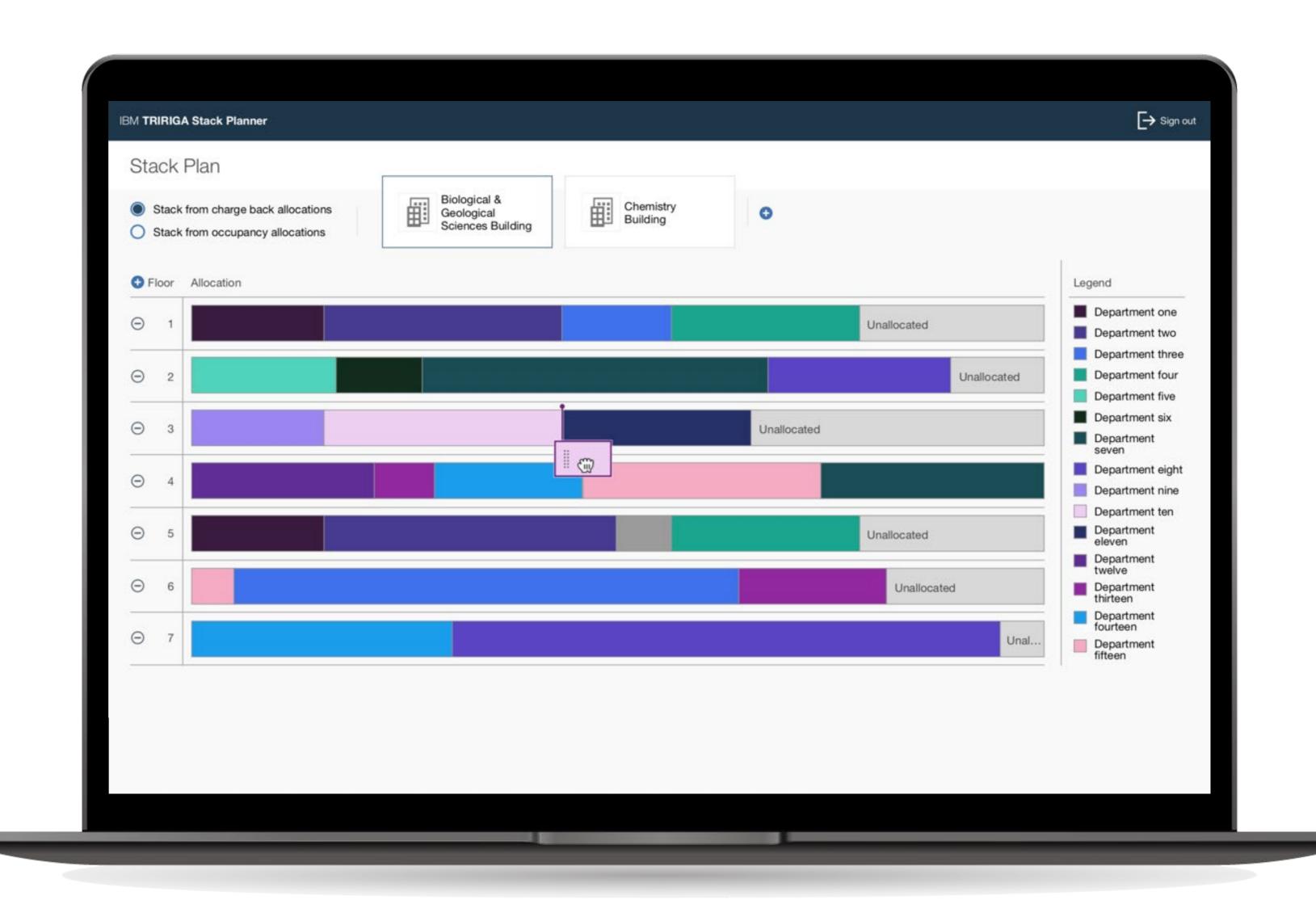
Dynamic space planning helps planners adapt quickly to changing guidelines

- Create scenarios to graphically analyze floors for social distancing
- Update space classifications
- Rearrange seat assignments
- Rearrange organizational allocations
- Designate spaces as reservable or dedicated
- Update active portfolio details directly from "what if" scenarios



Space Planners need tools for making the right space available to the right people

The perceptive Stacking app enables Space Planners to quickly re-stack space plans to enable optimal workspace configurations



Occupants can self manage through a single app

메오[[IBM TRIRIGA Workplace Services Reserve app enables employees to reserve individual work and team meeting space We detected your location: Charlotte Watson Center Charlotte, North Carolina, United Reserve Request Service ← → Move Me Locate app enables users to find colleagues and rooms Locate This Month's Reservations MAR 17 my meeting **Rolling Stones** 02 - Second Floor Charlotte Watson Cente

Service Request app enables easy work request submission

Move Me app allows employees to self-select their assigned work location

Desktop/tablet designs for the portal and apps provide a responsive design for power users on larger screens

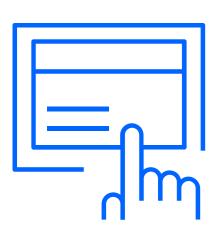
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Wayfinding and navigation with search for rooms and people

- Solution that provides wayfinding within Locate App and an all-new kiosk experience for visitors
- The solution includes ArcGIS Indoors, a set of powerful tools from Esri, to convert and enrich static floorplans into hosted interactive maps integrated with up-to-date space data directly from TRIRIGA.



Room panel interface enables on-the-spot booking of meeting rooms

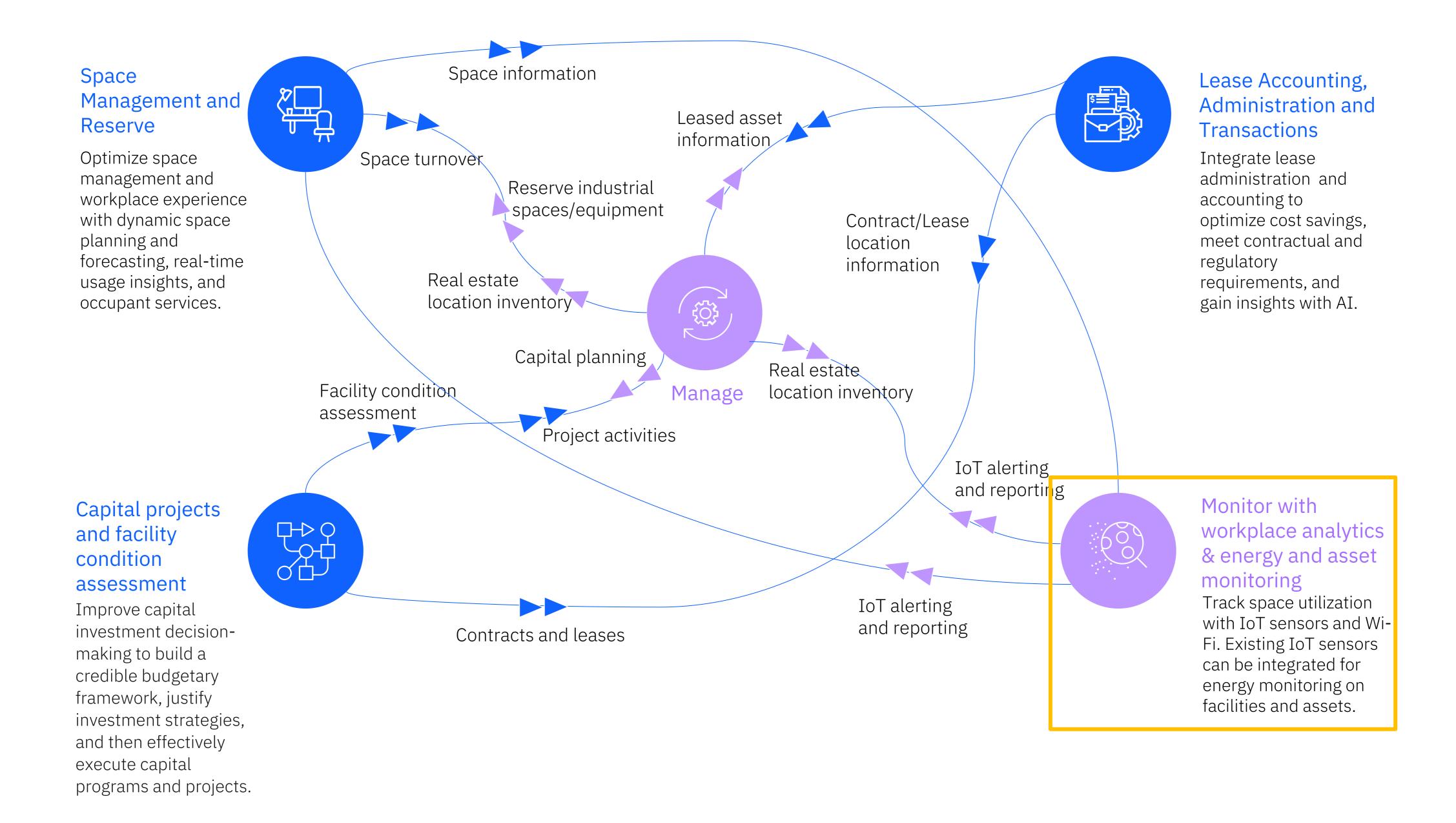


Meeting Room Panel

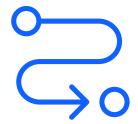
- Fast and responsive booking
- Visual display of current room status
- Enables user check-in
- Integration with Exchange enables seamless resource scheduling



Monitor with workplace analytics & energy and asset monitoring



Monitoring with AI-based anomaly detection at enterprise-scale



Solution

- Enterprise scale monitoring
- AI-based anomaly detection



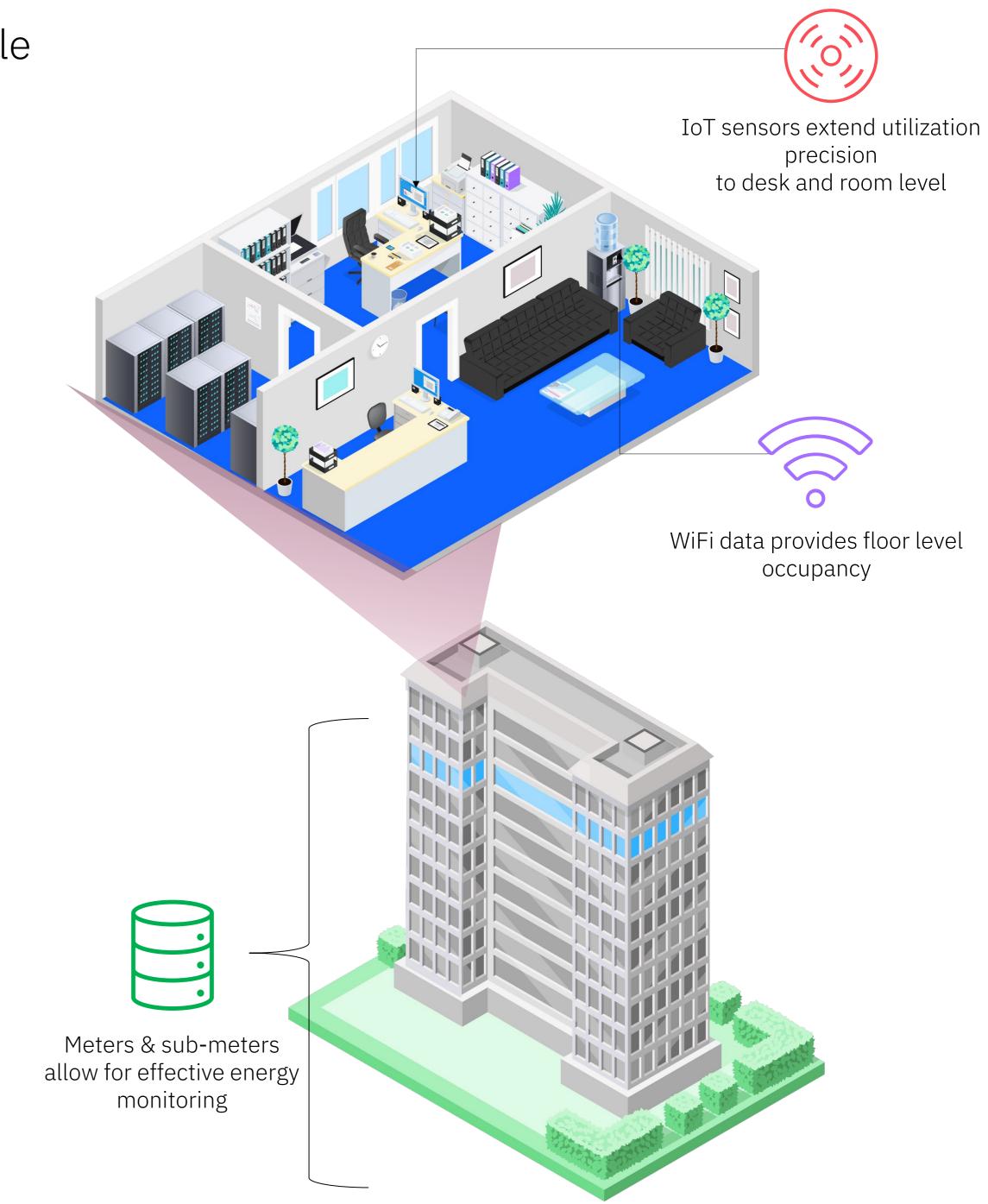
Capabilities

- Ingest data from Scada, IoT, BMS, OT and WiFi sources
- Easily configurable dashboard: no-code widgets
- Enterprise-wide view of operation
- Shared asset hierarchy
- Feed data to condition-based maintenance
- Generation of service requests

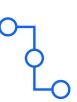


Business Value

- Reduce unplanned downtime
- Shorten duration of outages
- Increase production output
- Decrease wasted time investigating false-positive alerts



Optimize facility operations & utilization through insightful Workplace Analytics



Automatically pulls in the facilities location hierarchy



Connector library to integrate building meter & power data for leading BMS providers



Collect and monitor any IoT data, BMS and WiFi data



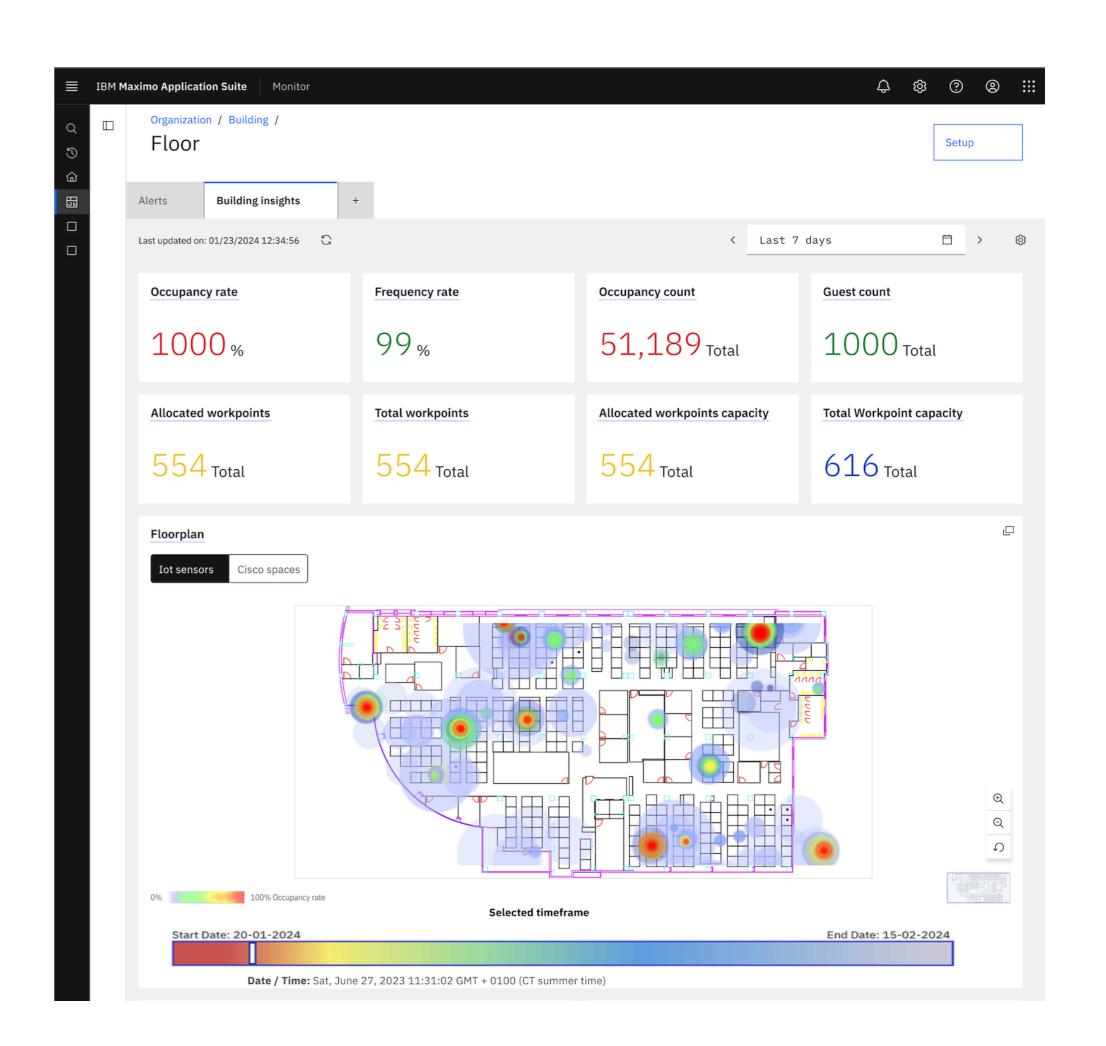
Build your own visualizations & KPIs for displaying building IoT data



Pre-built dashboards for space utilization



Make informed decisions on office layouts, desk allocations and optimize space usage



Energy Monitoring through data collector interfaces



- Quickly understand energy performance of buildings across the portfolio
- Data contextualized with occupancy data to improve operational efficiencies
- Edge data collector allows for fast and easy data acquisition from HVAC and power meters
 - Vast library of pre-configured device connectors to cut down rollout time
- Ensure device data is uniform and comparable regardless of the source

Examples of device OEMs supported in the data collector library































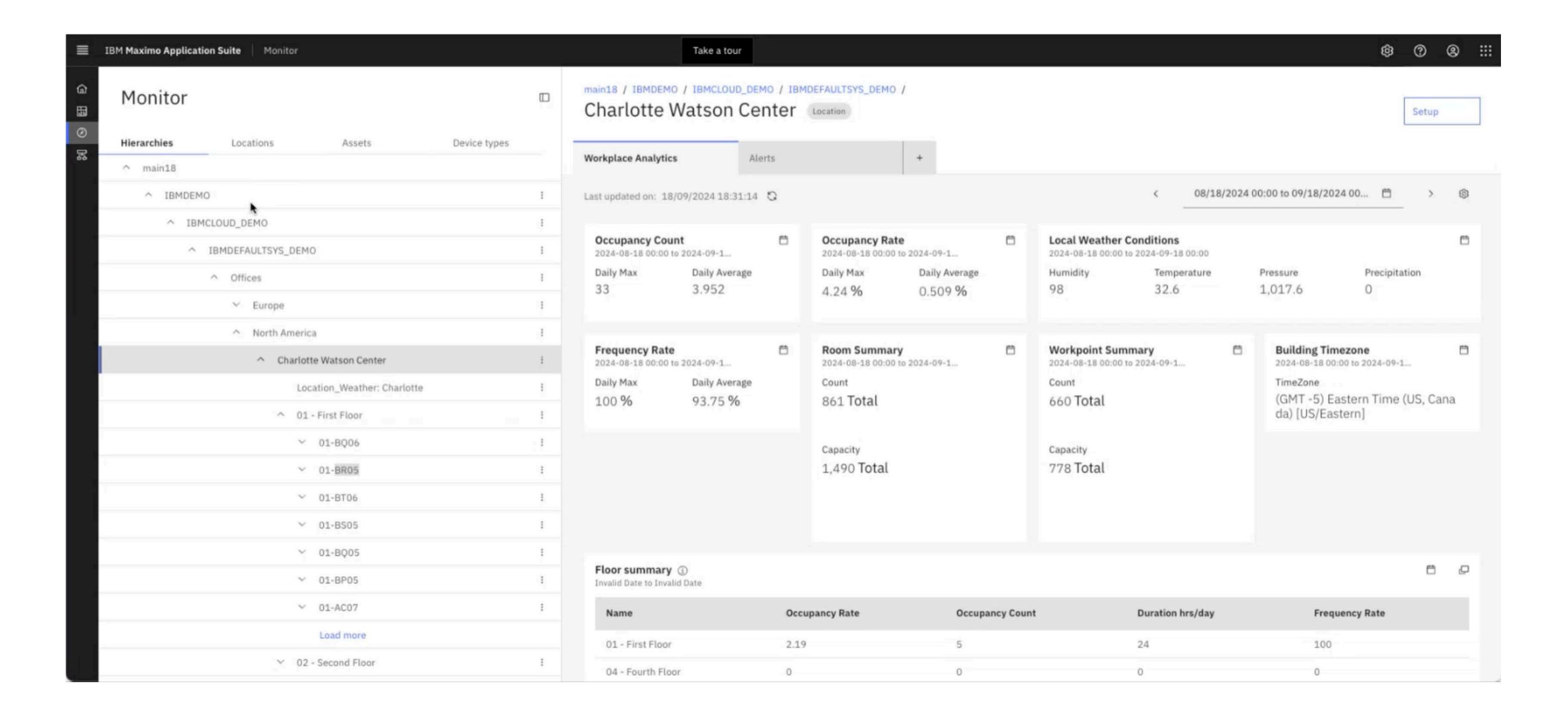




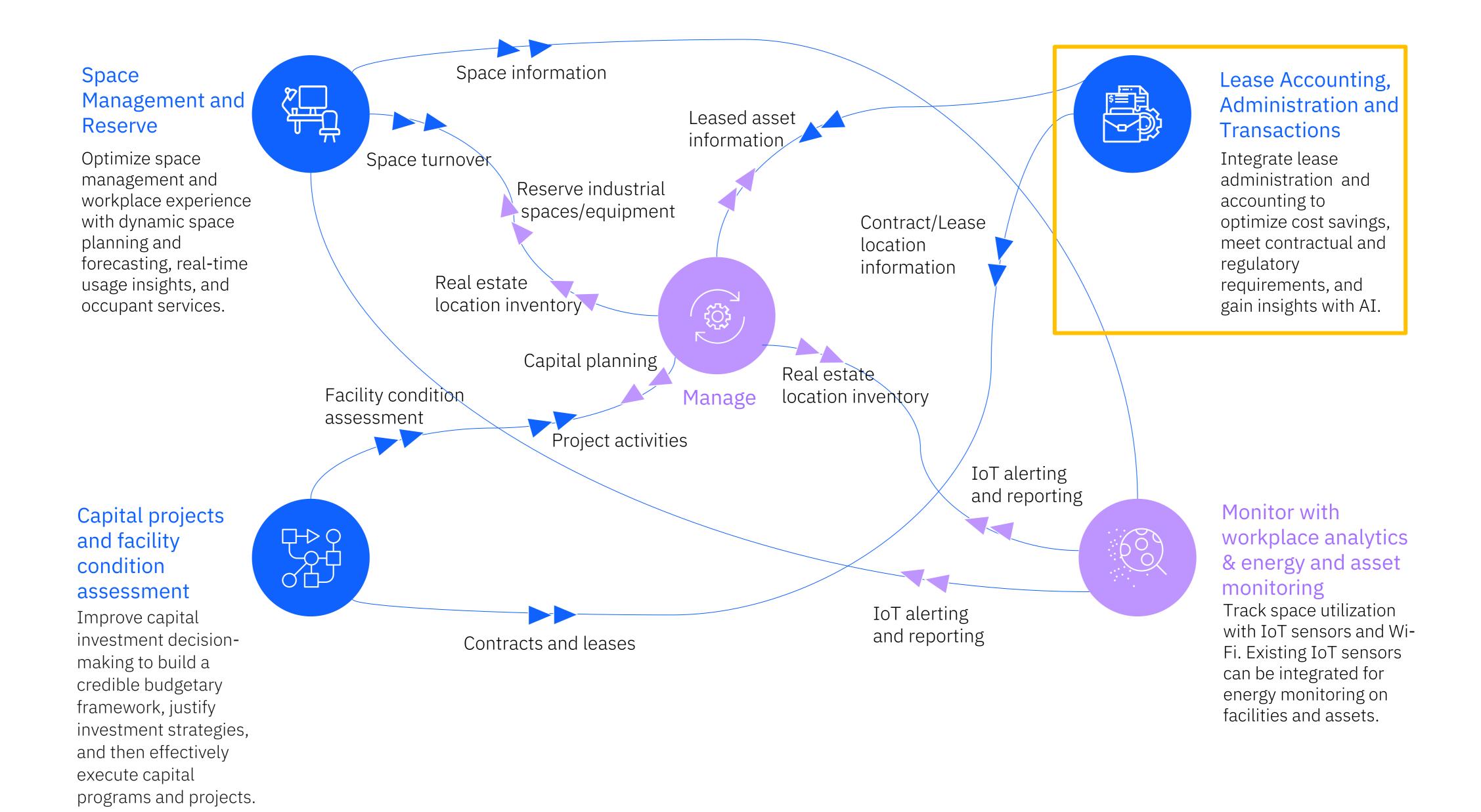




Combine IoT, BMS and external data sources in a single dashboard



Lease accounting, administration and transactions



Delivers a complete solution for compliance and real estate portfolio performance

Helps Lease Management executives comply with and administer standards including IFRS 16, ASC 842, GASB 87, GASB 96

Helps Real Estate executives' chart and transform the future course for institutions with the confidence of their stakeholders



Contract Management

- Contract Abstraction& Creation
- Contract Maintenance
- Lease Administration

Payment

Adjustments

Notifications

Critical dates

Alerts and

- Payment Processing
- OPEX
 Management
- LeaseContractReview



Lease Accounting

- Supports the provisions, accounting treatment & disclosure reporting requirements
- Activations & subsequent accounting:
 - Adoption & Look Back
 - Lease Term
 - Lease Liability& ROUA
 - Lease Receivable & DIOR
- InterestExpense &Amortization
- LeaseRevenue
- Roll Forward Reports & Audit Support
- Disclosure Reports



Portfolio Management

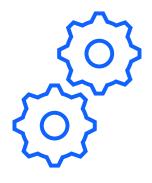
- Portfolio planning for Real
 Estate strategic plans and goals
- Transaction Management
 - Create implementation plans with financial targets
 - Create action plans
 - Create transaction plans with market data, contacts, project tasks and CTQ dates
 - Create action requests



Strategic Real Estate Management

- Sustainability, energy and environmental management
- Facilities maintenance
- Capital projects
- Facilities and space optimization

Uncover lease information using GenAI



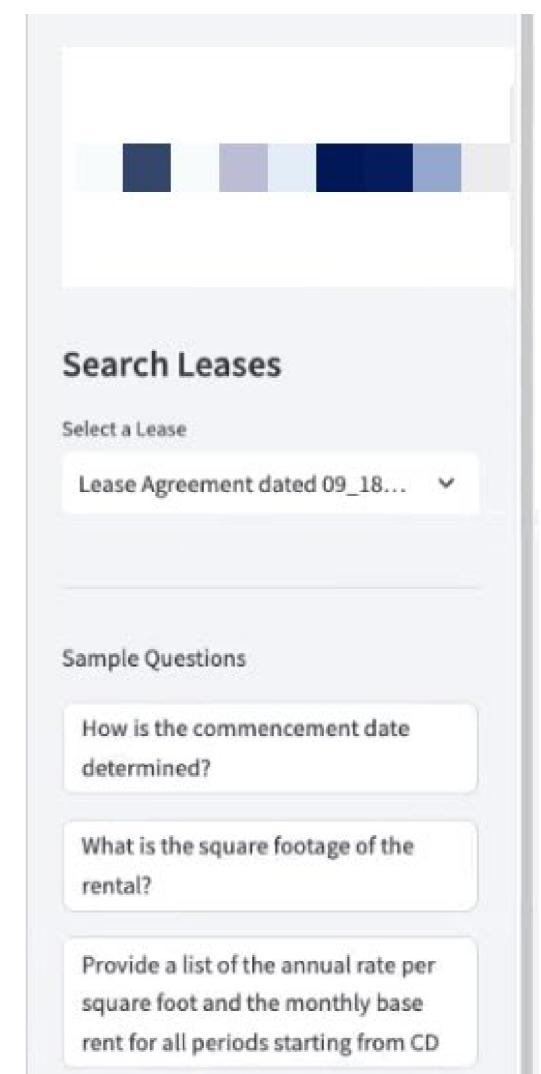
Leverage natural language to discover information related to the leases managed in TRIRIGA



Query unstructured source documents to uncover lease details not normally abstracted during the lease abstraction process



Save time and money leveraging Gen AI to assist with lease abstraction activities



Com

ease File: Lease Agre	ement dated 09_18_2012.pdf
ease Type: Lease	
andlord:	LLC
enant:	Inc.
ssignor: Not assigne	d
nter your question	
Can the tenant have	early access to the premise?
Contact.	

Yes, the tenant can have early access to the premises, but it is sevidence of compliance with insurance obligations, and the early paying for any other Building services requested during the dated 09_18_2012.pdf", page_numbers: [7, 7, 7])

Interfaces

Space Management and Reserve

Optimize space management and workplace experience with dynamic space planning and forecasting, real-time usage insights, and occupant services.

Space information Leased asset information Space turnover Reserve industrial spaces/equipment Contract/Lease location information Real estate location inventory Capital planning Real estate Facility condition Manage location inventory assessment Project activities IoT alerting and reporting IoT alerting and reporting Contracts and leases

Lease Accounting, Administration and Transactions

Integrate lease administration and accounting to optimize cost savings, meet contractual and regulatory requirements, and gain insights with AI.

Capital projects and facility condition assessment

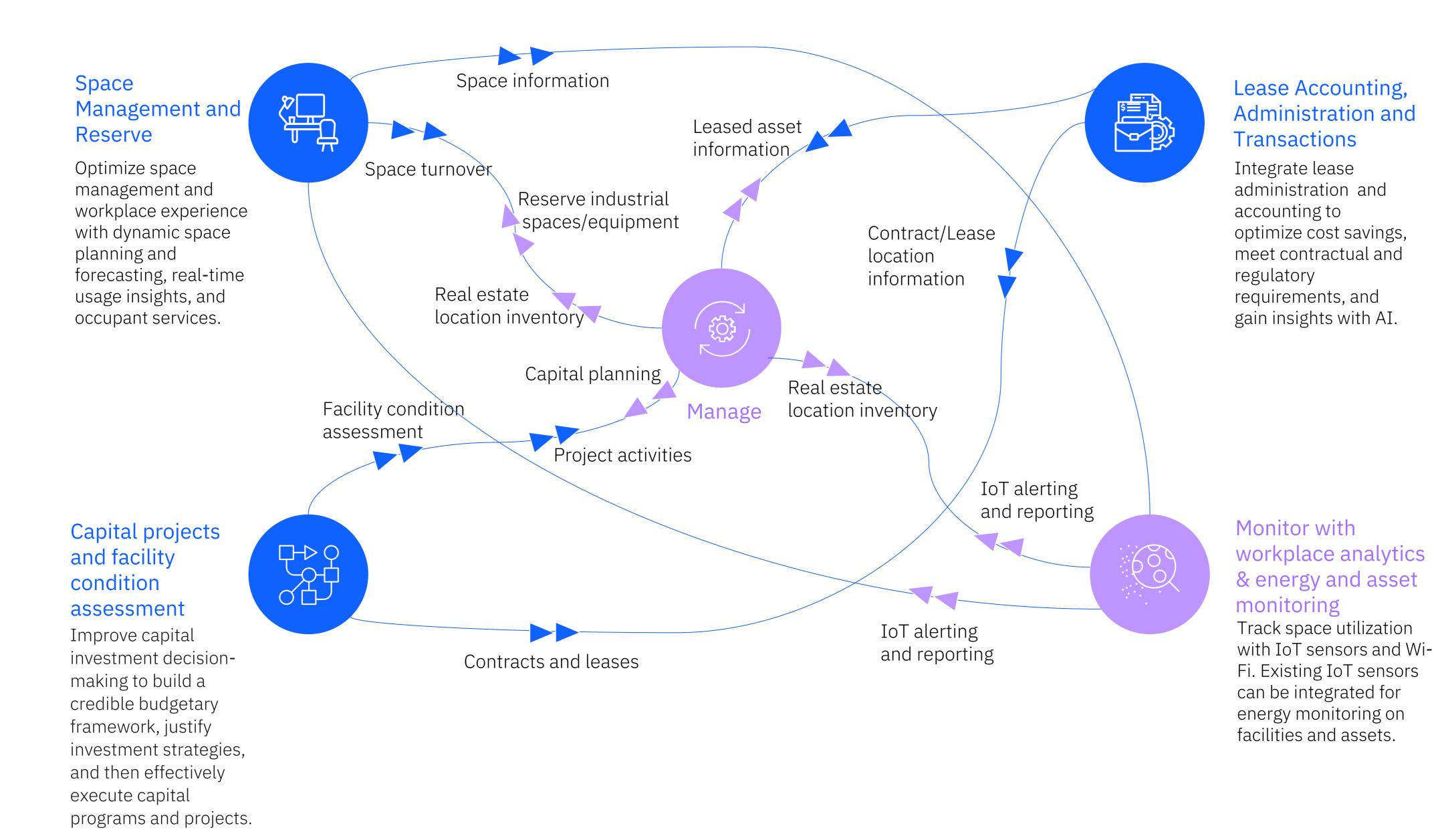
Improve capital investment decision-making to build a credible budgetary framework, justify investment strategies, and then effectively execute capital programs and projects.

Monitor with workplace analytics & energy and asset monitoring

Track space utilization with IoT sensors and Wi-Fi. Existing IoT sensors can be integrated for energy monitoring on facilities and assets.



Maximo Real Estate and Facilities complements Manage for facility maintenance



Our clients realize significant business value across their real estate portfolio through our integrated solution.

Capital project and facility condition assessment

Reduction of annual capex at steady state.

7.8%

Lease accounting, administration, and transactions

Reduction in Accounting Close Cycle Time.

63%++

Space management and reserve

Increase in employee productivity through access to integrated workspace reservation system.

7.1%

Real estate lifecycle reporting

Reduction in report turnaround time.

85%+

Operations and maintenance

More productive technicians

26%+1

Facility sustainability

Reduction in energy consumption.

12%

Client case study: IBM Global Real Estate

600+ locations worldwide 50% office 50% specialty - data center, R&D, production and manufacturing

20%

Legacy apps retired in 2023, with another 30% in 2024

12%

Time savings per maintenance technician per year

20%

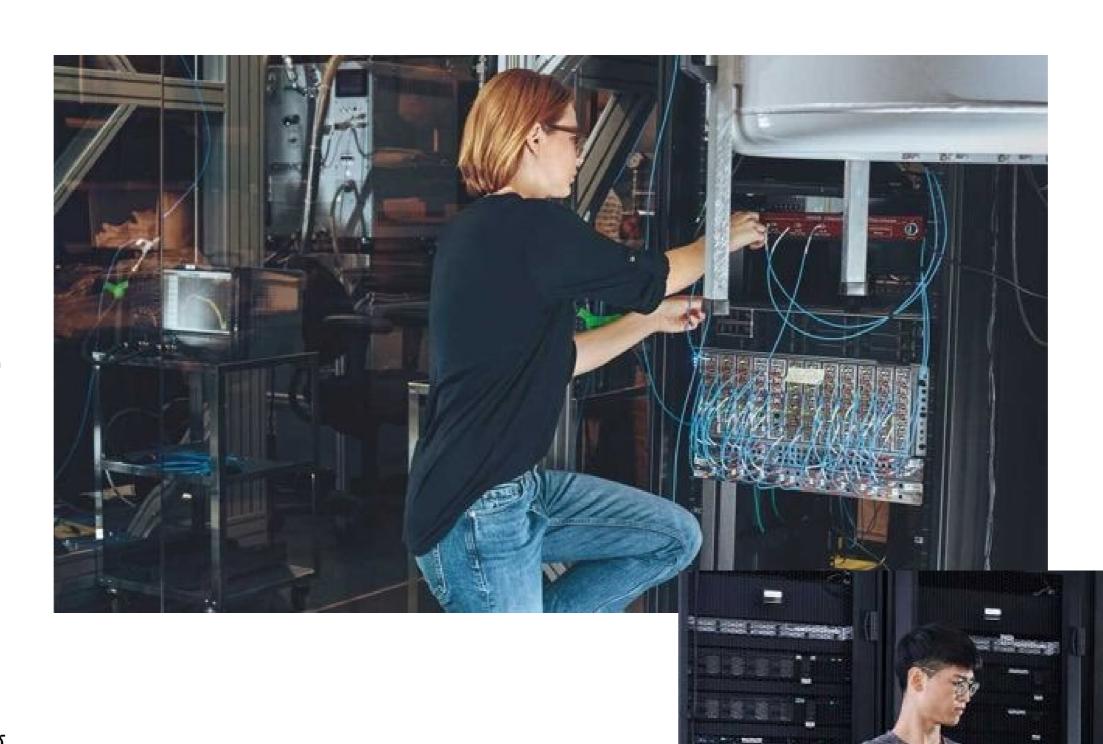
Time savings per person per year in duplicating and reconciling capital project approvals

25%

Improvement in small lease renewal cycle time

"Tech is the agent of change. We need to be agents of transformation...."

IBM Executive



Call to Action

- 1. Come to the IBM booth to learn more!
- 2. Join us for the TRIRIGA roundtable to give us your feedback and review some of our designs for the new solution
- 3. Tell your colleagues in real estate and facilities management about what's coming next year and the value your organization could realize from adopting additional capabilities





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