

**FIRST TIME RIGHT:**

# Track the Progress of MEP Systems and Equipment Throughout the Construction Lifecycle



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## Tracking & Managing MEP Throughout the Construction Lifecycle

Building systems and equipment, specifically Mechanical, Electrical, and Plumbing (MEP), are a significant part of any construction project—on average representing [over 30%](#) of the project budget, making them a critical factor in managing costs and schedules. The installation of systems and equipment has a direct impact on delivering buildings that are ready to operate successfully.

# >30%

**average percentage of project  
budget allocated to MEP**

Yet, today, significant time is still spent manually gathering the status of in-progress system and equipment activities, with checklists, test results, and percentage complete data captured in spreadsheets and other do-it-yourself solutions.

Critical details on project health are often trapped within these spreadsheets, disconnected from the project executives' and schedulers' view, exposing project teams to unforeseen surprises and risks, such as costly rework, project delays, and penalties.

It doesn't have to be this way.

By coordinating and collaborating efficiently on the installation of building systems and equipment, it's possible to minimize the need for costly rework and achieve successful project results for acceptance. By maintaining accurate and current information about equipment and system statuses, both project teams and building owners can uncover potential issues and make well-informed decisions before they become problems.

**Let's learn more.**



### Operational Readiness in Three Key Areas:



Systems and Equipment



People



Access Data and Documentation

## Ready to Operate?

Ready to operate on Day One hinges on operational readiness in three key areas: Systems and Equipment, People, and Asset Data and Documentation. These foundational components are vital for meeting project requirements. Achieving operational readiness involves thorough assessments and validations of Systems & Equipment to ensure seamless functionality. Proper training of personnel is crucial for efficient building operation. Lastly, meticulous collection and verification of asset data and documentation contribute to a successful start of operations, addressing key considerations for Day One success.

## Costly Consequences: Miscommunication & Inefficiency

Failure to effectively track, verify, and communicate building systems and equipment's readiness can expose the project to unnecessary risks and unforeseen delays. Adding additional fulltime resources to try to address the problem is costly, challenging to source, and does not address the root of the challenge. The lack of transparency, accountability, and collaboration during the project will lead to painful financial and reputational consequences when readiness fails.



# 84%

of construction projects experience delays,  
leading to an average cost escalation of 20.7%

[Almost 84%](#) of construction projects experience delays, leading to an average cost escalation of [20.7%](#). Rework, a common consequence of miscommunication, incurs median costs ranging from [5% - 9%](#) of the contract value. [Approximately 48%](#) of construction-related rework is due to communication breakdowns, while another [26%](#) is due to poor communication. With thin margins, construction teams, and commissioning providers can hardly afford these expenses.

These issues often result from a lack of real-time project visibility, preventing contractors from effectively monitoring progress and identifying potential delays. It is essential for contractors to know the current status of systems and equipment at any point in time—what's complete, what's on schedule, and what's late. Addressing issues promptly, ensuring documentation is complete, and communicating regularly and clearly with project teams can prevent costly setbacks.





## Unlocking ROI through Efficiency

Managing a multitude of project participants and complex requirements, contractors face challenges in accurately and promptly reporting project progress to project executives and building owners. Manual progress tracking in spreadsheets, communication and meetings with trade partners, on-site validation, and quality control checks consume valuable time and resources.



"Purpose built software is the key to unleashing the full potential of MEP and project executives. It is very common for them to spend 30% - 40% of their time on administrative tasks—duplicating reporting on numerous activities. These professionals are experts in systems and equipment, and their rightful place is in the field, on the job site, actively solving challenges. They shouldn't be mired in the time-consuming process of updating spreadsheets. By eliminating redundancy and improving tracking and communication, we empower them to focus on what truly matters."

**Joe Pascal**

Chief Revenue Officer, Facility Grid

## FIRST TIME RIGHT

# Track Building Assets and Quality Processes Throughout the Construction Lifecycle

The construction industry emphasizes 'first time right' to enhance project outcomes and achieve on-time delivery. Quality assurance programs aim to identify and address issues early, striving for accuracy from the outset. Successful adoption of these programs by contractors and trade partners can lead to seamless commissioning and operational readiness.

Traditional construction management software to support these processes predominantly focuses on document management, requisitions, change orders, and financials. Most of these solutions lack an asset registry for tracking, verifying, and reporting on equipment and systems, leaving teams to use spreadsheets. Fortunately, there are specialized software solutions, like Facility Grid's Operational Readiness platform, available to track and monitor building systems and equipment during construction. Facility Grid's Operational Readiness software offers unparalleled transparency, enabling project managers to track the progress of building systems and equipment, monitor activities status to schedules, and capture asset documentation efficiently.

It ensures accurate, synchronized data, eliminates redundancy, provides real-time updates, and fosters collaboration across teams and stakeholders, ultimately reducing rework, increasing team capacity, and promoting informed decision-making. This unified approach fosters standardization and keeps everyone aligned from design to turnover.

FACILITY GRID

Construction Validation Software

DEPENDABLE

Build-IT

Mr. Robert Bird

Administration

Help

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## Realizing Operational Readiness Success with Facility Grid

Utilizing innovative technology, such as Facility Grid's Operational Readiness software, streamlines building system and equipment tracking, leading to improved project outcomes and facilitating communication with building owners. Its flexible design is configurable to replicate a client's existing processes, so the software does not impose preset workflows or approaches—it works how the client works. The software offers transparency to general contractors, trade contractors, commissioning providers, and building owners, ensuring real-time visibility into the status of building assets where and when they need it. By eliminating disconnects and improving communication and collaboration from design to turnover, it minimizes the risk of costly rework, delays, and penalties.

David Powell, Associate Principal of ARUP, observes, "In terms of value, Facility Grid enhances efficiency and early communication with general and trade contractors. Utilizing the Operational Readiness features, we align deliverables with expectations, provide timely updates on progress, and offer insights into potential impacts. This empowers project executives with key information to make critical decisions regarding project timelines, ensuring a smoother path to success."



## Mitigate Risk

Facility Grid provides transparency and accountability by revealing actual project progress versus timelines, confirming receipt of checklists and tests, and allowing contractors and project executives to identify and address weak spots early. Late-stage issues not only inflate costs but also expose projects to penalties and liquidation damages, jeopardizing future opportunities.

## Standardize Processes and Scale

Facility Grid allows users to create and leverage standard workflows and templates incorporating lessons learned to ensure consistent quality and greater efficiency. Standardized checklists, tests, inspections, reviews, etc. can be shared across teams improving transparency, collaboration, and outcomes while positioning for scale.

## Address Resource Constraints

Within today's job market, highly-skilled resources are hard to find and expensive. Facility Grid removes spreadsheet management, captures participant's progress on activities and documentation, and automates project reports. By removing administrative tasks, Facility Grid expands the bandwidth of existing team members giving them more time to focus their projects, and reducing the pressure to hire additional employees.

## Strengthen Relationships

Facility Grid increases trader partner participation in Quality Assurance programs and enables general contractors to track and document quality control information, creating full transparency and a clear audit trail. Documentation submission quantifies project status and performance, improving team communication and ensuring a shared understanding of building readiness as teams approach the commissioning process and turnover.

## A Central, Structured Repository for Day One and Day Two Operations

Facility Grid consolidates and structures critical information in a central repository, offering a single source of truth for construction and operations teams. This transferable asset data supports sustainable ongoing operations and facilitates facility management. QR codes and applications serve as invaluable guides for facility managers, allowing them to access equipment's original setpoint operation parameters.





“Facility Grid provides building owners with a wealth of essential information for effective building operation.

For example, we export asset information we collect during the commissioning process from Facility Grid into a CMMS, giving operations staff an early start on populating their maintenance database. Additionally, the platform gives them easy access to required test sheets and forms for regular maintenance, helping them maintain the building.”

**David Powell**

Associate Principal, ARUP

Facility Grid extends its usability beyond the construction phase into ongoing maintenance. For example, it can be used as an inventory and collection tool, which allows for end-of-useful-life studies as well as for maintenance updates. Powell says, “We go into the building, get a full list of assets, load them into Facility Grid, then conduct the conditions surveys. Once that information is collected, we remedy some of the issues that will affect the end of useful life. We also print QR codes from Facility Grid that contain vital asset information. Those QR codes are then attached to individual pieces of equipment so maintenance staff can scan the codes and access the information. We really see Facility Grid living up to its name—it’s not just a commissioning tool, but one that is useful throughout the life of a building.”



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## CASE STUDY

### \$4 Billion Airport Renovation Project

During the \$4 billion dollar renovation of a large terminal at one of the busiest airports in the northeast, coordinating across multiple teams, projects, and stakeholders to ensure the initiative stayed on track for completion was of paramount importance. The large construction project included 21 sub-projects, over \$70 million of construction work per month, and several multi-disciplinary teams. Additionally, the complex work had to be completed in an active facility.

Facility Grid's Commissioning and Operational Readiness software was the ideal solution to address the complexities of this vast project. It provided visibility and transparency regarding the precise status of building equipment and systems throughout the lifecycle of construction. Additionally, the use of libraries, checklists, and test forms facilitated standardization

across the Cx and construction teams, ensuring consistent quality and greater efficiency. By leveraging its workflow-based organizational structure, Facility Grid enabled the management of the entire Cx program, which included not only typical MEP and FP equipment but also such complex airport systems as baggage handling, passenger boarding bridges, horizontal and vertical transportation, and wayfinding.

With multiple teams and systems involved in the projects, Facility Grid's APIs and integrations created a seamless environment for information sharing. Facility Grid was extensively integrated with Procore, the projects' construction management software, as well as the Cx program manager's proprietary project management solution.



## Boost Success through Real-time Tracking, Verification, and Reporting of Building Systems and Equipment

The link between quality and rework costs and delays is undeniable. If you're still relying on spreadsheets for critical project management, you're taking on unnecessary risk and additional expenses. With project complexity, costs, and scarcity of resources on the rise, manual, disjointed, decentralized processes just won't work. Fortunately, Facility Grid's Operational Readiness software offers a cost-effective alternative, increasing capacity of the team while significantly reducing the risk of rework, delays, and penalties.

Purpose-built to eliminate redundancy and administrative overhead as well as to help teams optimize and scale their processes, Facility Grid provides a single source of truth for project teams. Facility Grid streamlines communications and bolsters accountability, positioning teams to work collaboratively and successfully to deliver a building ready to operate.

To learn more visit [facilitygrid.com](https://facilitygrid.com).



Used by the world's largest construction companies, commissioning providers, and building owners, Facility Grid allows users to track, verify, and manage data on building assets throughout the installation, quality control, and commissioning processes. The platform helps the field capture and share data efficiently, increasing the capacity of high-value resources. Facility Grid provides real-time updates to schedules and stakeholders, keeping teams on track and delivering transparency, accountability, and quality throughout the construction lifecycle.

[Learn more](#)



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