



How to Recognize the Right Facilities Maintenance Plan for You





THE BENEFITS OF INTEGRATED PLANNING

Changing Roles

THE ROLE of traditional architecture is rapidly changing thanks to a deeper integration of engineering services with building design.

This integrated approach has led to a revolution in how buildings are created, maintained, and improved.

Advances in building materials, building systems, technology, and energy incentives now offer incredible potential to improve the functional life, performance, and purpose of modern and legacy buildings.

The search for the best approach to facilities maintenance planning starts with a comprehensive assessment of advances, uses, conditions and costs. Key items to consider are:

- The condition & measured state of the facility.*
- Use of new technology, systems, & materials.*
- Potential or planned use changes.*
- Energy efficiency and sustainability.*
- Short-term vs. long-term cost savings.*

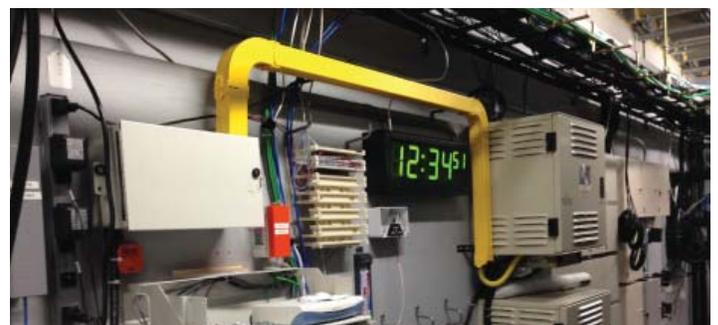
Owners should consider decision-making and planning tools that help them assess and plan for their facility maintenance requirements along with improvement opportunities that lower operating costs and result in higher performing facilities.

How to Recognize the Right Plan for You

MOST FACILITIES maintenance plans are static documents outlining a scheduled maintenance program that attempts to anticipate necessary upkeep, repairs, and replacements over a fixed period of time. Other plans merely set aside funds to address issues as they arise creating a “break-fix” approach to repair and maintenance.

Each approach uses the current state of a building as a baseline to respond when problems are likely to arise or actually occur. Either approach can keep buildings safe and functional, but not much more.

These approaches fall short when it comes to making informed decisions about potential cost savings, improvements or upgrades to facilities. That’s where a dynamic high performance facilities maintenance plan provides critical insights on how to improve efficiency, sustainability and maintenance.



High Performance Facilities Improvement Plans

TO DO a better job of facilities maintenance and improvement, it is important to work with an integrated team of architects and engineers that have deep knowledge of the built environment and advances in technology, systems, materials, and available energy incentives.

A high performance facilities plan helps you identify many types of opportunities by assessing:

Technologies in use versus deployable technologies.

Changes in user needs and behavior that affect building use and life.

Conditions of material and equipment that affect building performance.

Performance benchmarking of like-kind facilities.

This approach creates a better understanding of a building's future potential and delivers a comprehensive and dynamic decision-making tool. It also opens doors to potential cost savings through analysis of the operational efficiency of a building or campus.

How High Performance Facilities Improvements Plans Work

A high performance facilities improvement plan

leverages the integrated expertise of architects and engineers to arm caretakers and stakeholders with comprehensive information about the mechanical, functional and aesthetic potential of their buildings.

This comprehensive approach enables owners to analyze everything from the rough magnitude of prospective projects all the way down to specific costs, timing and potential efficiencies of integrated, planned improvements.

A key benefit of this approach is the alignment of key maintenance and improvement priorities. This helps owners and facility managers identify projects that can be done simultaneously to make repairs or upgrades more efficient and affordable.

The K4 High Performance Facilities Improvement Plan



A K4 High Performance Facilities Improvement Plan (K4 Plan) is designed to help clients continuously improve their facilities and is a critical step towards producing high-performance buildings. The goal is to create buildings that are sustainable and cost-effective over their entire life cycle. Klu-

ber A + E constantly researches changing standards and new or improving technologies.





Kluber Architects + Engineers serves clients in government, education, health services and commercial markets in a broad range of projects and budgets, scope and scale

K4 Plan (cont.)

The expertise required to deliver a K4 High Performance Facilities Improvement Plan relies on the observations, learning, and expertise that Kluber A + E has gained, documented and benchmarked across the four stages of a building's life cycle:

PLAN—assess needs, requirements, uses and limitations then apply expertise, best practices, data, and tools to determine design options

DESIGN—integrated architecture and engineering to deliver the best design solutions

BUILD—assure the physical structure is as-designed, on-time and on-budget

OPERATE—manage, maintain, expand, and improve the original structure

Benefits of a K4 Plan

Integrated approach

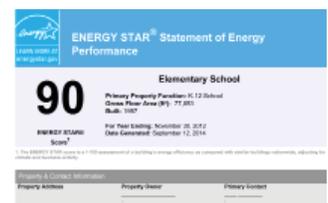
The K4 planning process is based on continual engagement in the world of facilities improvement and enhancement. Our integrated architecture and engineering team serves clients in the government, education, health services, and corporate markets.

Practical Solutions

Our projects span a broad spectrum of scope, budget, delivery method, and complexity. As a result, we offer insights that are not available from architecture or engineering firms that operate from an isolated perspective or only serve specialized markets.

Knowing a facility from the inside out with insight from an integrated team of architects and engineers makes operational planning and maintenance far more efficient and effective.

On a tactical basis, a K4 Plan helps owners minimize and plan for mechanical or structural breakdowns.



On a strategic basis, a K4 Plan can help owners improve energy efficiency, extend operational life and increase the overall performance of their facilities.

Delivering Cost Savings and Efficiency

One of the key factors in facilities improvement over the last 10 years has been the advent of government incentives to improve efficiency in energy use and lighting.

Our continual research and application of solutions that qualify for incentives puts us at the forefront for advising our clients on intelligent, sustainable ways to use government credits to save money in the short

Cost Savings and Efficiency (cont.)

term and build operational efficiency for the long term. Having this level of extensive information in-hand while assessing the potential for your building is absolutely key to cost savings and facility improvement.

We know how to minimize environmental impact when projects require tear-down or site engineering. Our multiple LEED certified buildings are testament to this. We are experts in energy code and benchmarking from local levels to national standards. A K4 Plan can help owners compare their energy consumption with these standards and create a roadmap for improvement.

Certifications and Implementations

As a Department of Commerce and Economic Opportunity trade ally, Kluber A + E is equipped to work with the Smart Energy Design Assistance Center (SEDAC) on energy audits for public clients.

Having a certified energy manager on staff provides clients with an opportunity for direct and measurable savings. For example, one of our clients recently received energy audit rebates totaling more than \$100,000. Kluber A + E worked collaboratively with owner representatives through DCEO to update mechanical equipment to high efficiency systems.

K4 Case Study

Kluber A + E was recently commissioned to assist in the preparation of a 5-Year K4 High Performance Facility Improvement Plan and Energy Audit for 27 schools and facilities in a large school district in Northern Illinois. The overall objective was to provide a primary planning tool for maintaining and improving the District's facilities.

The District's K4 Plan Goals:

Anticipate the District's facilities maintenance requirements over the next five years.

Establish a more proactive approach to facilities maintenance and improvement.

Develop a plan to move District facilities to a higher-performing state.



The District's K4 Plan Objectives:

DEVELOP a list of current and projected work items for maintaining and improving District facilities over the next five-year planning window, and establish costs for those items.

LEVERAGE the considerable knowledge and experience of District maintenance staff to assist with development of the list of maintenance and improvement work items.

PERFORM an energy audit of District facilities and make recommendations for moving buildings to a higher-performing state.

PROVIDE an opinion as to the relative potential eligibility of each District facility for Certification under the current USGBC LEED EB rating system.

SECURE buy-in and broad-based consensus of District stakeholders in the 5-Year Plan.

K4 Plan Information

Gathering and Collaboration

Kluber A + E worked with key District facilities staff and met with current District vendors to obtain information regarding the condition of District facilities and current maintenance activities. Kluber A + E also met leadership teams and building engineers at each District facility, listened to the stakeholder comments and conducted a walk-through of each facility to observe first-hand the condition of the facilities and discuss specific stakeholder concerns.

Gathering & Collaboration (cont.)

As part of the overall facility assessment process, Kluber A + E facilitated the involvement of the SEDAC to provide energy assessments of each District facility.

As the list of maintenance and improvement items was developed and Kluber A + E met with key District facilities staff to review, discuss, and vet each work item. The vetting process was vital to producing a plan that met the needs of the District. It involved owners throughout the process and assured them that the K4 Plan would provide the guidance necessary for informed decision-making.

K4 Current State Assessment

Kluber A + E provided the District with a full assessment of the current state of all 27 District facilities and encapsulated our findings in the K4 Plan documents.

District facility conditions ranged from very good condition to poor condition and in need of immediate attention. The District's facilities maintenance staff had done a good job of prioritizing and addressing maintenance issues as they arose, but limited funding forced the operations and development teams to adopt a reactionary approach to facilities maintenance.

The K4 Plan is a living document that the District updates as projects are created and completed and as unforeseen things happen. Their customized K4 Plan documents contain all building systems information, condition, priority and estimated costs. It contains a set of recommended priorities and opportunities to converge projects where cost savings can be gained and interruptions minimized.

The K4 Plan is dynamic. When conditions or priorities change, the District is in control. They simply input the information that has changed and the K4 Plan documents automatically update key decision-making, scheduling and planning information.

Energy Consumption and Moving Towards a High Performance State

The District's K4 Plan was designed to do more than just maintain a status quo of building performance.

It was designed to move the District's facilities to a higher performing state. Higher-performing buildings consume less energy and require less maintenance, both of which equate to long-term

reduced spending by the District. The K4 Plan analyzed the current energy use of each building in the District, identified those buildings that had achieved Energy Star certification, and provided recommendations for moving District buildings to a higher performing state. Those recommendations included building envelope and infrastructure systems improvements and offered specific examples of steps that could be taken to improve overall building performance.

Conclusion

Choosing the Right Partner

Kluber Architects + Engineers is an integrated architectural and engineering firm. We help create inspiring new buildings and provide guidance and design solutions that improve the performance of existing buildings.

A K4 High Performance Facilities Improvement Plan is designed to help clients continuously improve their facilities, create buildings that are sustainable, and help owners operate and maintain their facilities in the most cost-effect manner possible.

The Kluber A + E Difference

People...

Highly qualified, integrated team of trusted, licensed professionals that meet or exceed our client's expectations as partners in their success.

Knowledge...

Decades of learning in the "built environment" and continuous learning in new technology, building systems, and materials translates to design solutions that improve performance and reduce costs.

Results...

Expertly engineered building systems integrated with inspiring design results in consistent on-time and on-budget projects every time.

Relationships...

Enduring business relationships built on mutual respect, accountability, and commitment to success.



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