THE HIGH PERFORMANCE PORTFOLIO:

SCOPING

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Bottom line thinking on energy.

SUMMARY:

Scoping assesses building performance, identifies technical opportunities, and vets those against lease terms and tenant requirements. Once you have benchmarked your portfolio and selected properties that merit an in-depth analysis, scoping studies identify likely areas for improvement tailored to each building type. An information gathering process and a physical inspection of each property are necessary to complete a scoping study.

IN DEPTH:

Where to begin? Faced with multiple properties, each with unique building characteristics, climates, energy prices, and tenant demands – the challenge for many portfolios is focus. Every building has opportunities for energy savings, scoping offers a straightforward approach to identifying and prioritizing the most promising courses of action. Start your analysis by selecting a set of properties for a more in-depth study. In general, findings from a sampling of your properties can inform improvements throughout the portfolio.

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TENANT REQUIREMENTS

Examine the selected buildings' tenant dynamics, and determine how their expectations and behaviors may limit or expand the options available to you. Property managers and engineers together should map out the range of occupants' activities, answering questions such as:

- What type of lease – gross, net, fixed-base, or a variation – is generally used?
- What operating hours do leases define?
- Are there tenants that have long operating hours or frequently request overtime HVAC (and do they use them)?

- How do leases affect building performance?
- Are any leases up for renewal, and when?
- How is each space being used?
- Do any properties have special considerations such as large data centers using unusual amounts of energy?
- What minimum requirements exist for power density (Watts per square foot) and power reliability? Do tenants actually use or need these minimums?
- Where and when do comfort complaints typically occur?
- Is there an opportunity to negotiate changes to any of these variables?
- How are utilities metered and billed among tenants and owners, and how might that impact decision-making?

This information will guide the scoping activities, putting potential action items into the context of day-to-day realities of building use.

SCOPING STUDIES

You've narrowed down your portfolio to a list of high-priority buildings, and understand the intricacies of tenant requirements in those buildings. Now, conduct a scoping study in these buildings to identify opportunities for improvement through an on-site review. Examine operational procedures, building systems, documentation, and equipment conditions.

The person or team performing the scoping study should develop a strong understanding of the building's systems and use, existing O&M practices, occupants' needs, desired operating performance, and any ongoing problems that have already been identified. Existing staff may be qualified to perform this assessment, but an outside consultant or contractor can provide a fresh perspective and expertise gained through experiences in other buildings.

Consider hiring a third-party engineer or service provider to manage your scoping activities, working in conjunction with building operators to conduct an objective and thorough examination. In addition, see if local utilities and associations offer free or subsidized assessment services. If so, make sure the scope of work and reporting format match your expectations and needs. In general, the cost of a scoping study should be on the order of 2-3 days time for the scoping agent, typically around $3,000 for an average office building.

To begin, issue an RFP for scoping services, if necessary, and select a qualified firm to perform the studies. The scoping process will generally follow the process outlined below:

- Gather data and develop a plan for site visits: Prior to on-site visits, collect and examine utility billing data and other information on energy consumption. Identify major areas of energy consumption within the property, unusual usage or demand patterns, and other characteristics that might merit further examination while on-site. Be sure to disclose any relevant tenant requirements to the individual heading up the study, as well as any perceived problems. Then schedule staff interviews and physical site visits.
- Conduct on-site reviews: Commence examination of the building, identifying opportunities improvements to consider. The on-site review should include the following steps:
    - Interviews with building operations and maintenance staff, who can provide insight into what's really behind low or high building performance
    - Examination of the property's as-built drawings and sequences of operations
    - Review of general operations and maintenance practices and procedures – do typical or standard practices enhance or detract from building performance?

- Inspection of building systems and equipment, identifying any old, malfunctioning, or inefficient systems that might be good candidates for retrofits and replacements
- Flagging of potential problem areas within the building

- Analyze data and make recommendations: Roughly quantify the overall potential savings from addressing the flagged problem areas and opportunities identified. The opportunities may be very specific (e.g., "poor economizer operation") or broadly characterized (e.g., "inefficient equipment schedules"). Recommended appropriate follow-up activities, including diagnostic work to tune-up specific systems and equipment, development of enhanced operations and maintenance practices, or further analysis of equipment replacement opportunities.

With scoping studies completed for all the selected properties, you should have a representative menu of findings that represent significant opportunities to improve efficiency in your portfolio. From this, begin to build your portfolio-wide implementation plan.

THE BOTTOM LINE:

- A scoping study involves data analysis and an inspection of a property to identify technical opportunities for improvement and courses of action
- Examine lease terms and tenant requirements prior to on-site assessments, forming a background for the scoping studies
- Third parties bring a fresh perspective to building analyses and supplement in-house expertise
- Through physical site visits and interviews with building operators, scoping identifies areas within buildings that present opportunities for improved building performance, in three general categories:
  - Enhanced operations and maintenance practices
  - Energy tune-ups
  - Equipment replacement
- The findings from scoping act as a focal point for further diagnostics leading to specific improvements in building operations.

LEARN MORE:

The High Performance Portfolio Framework
www.betterbricks.com/office/framework

Sample Scoping Study
www.betterbricks.com/office/briefs

Sample RFP for Scoping Services
www.betterbricks.com/office/briefs

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