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BetterBricks Commercial Building Decision Maker Study

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Executive Summary

The Northwest Energy Efficiency Alliance (NEEA) undertook a qualitative research study to understand the commercial building renovation decision making process, and to guide messaging and resources for its BetterBricks platform. The study involved in-depth interviews with 16 decision makers at commercial real estate firms and businesses owning commercial properties across Washington, Oregon, Idaho, and Montana.

Methodology:
The study targeted upper management roles, including asset managers, owners, partners, facilities managers, and property managers. Participating companies represented a range of portfolio sizes, building types, and geographic coverage areas. Data collection involved semi-structured interviews conducted both in-person and remotely, totaling 26 hours of conversation.

Key Findings:

- The typical Decision Maker Journey follows five main steps: “Identify the Need,” “Make a Plan,” “Approve the Plan,” “Execute the Work,” and “Showcase the Benefit.”
- At each step, energy efficiency considerations must compete with other priorities.
- Decision makers’ top priorities are to secure and retain tenants/residents and address building degradation.
- Providing aesthetic upgrades and amenities also claim precedence because decision makers believe these are what tenants/residents want.
- The impact of energy efficiency on tenant attraction and retention is uncertain, in their view. However, when the tangible benefits of energy-efficient solutions, such as comfort, status, and proven savings, are clearly communicated, the solutions become more appealing.
- Capital planning processes vary widely, from non-existent to highly formalized, making it difficult to integrate energy-efficient improvements consistently.
- Fast, high-yield improvements are preferred, both to minimize risks, and to keep returns attractive compared to other investment options.
- To pay for renovations, decision makers minimize debt by using capital reserves. When they must borrow, they turn to trusted lenders with whom they have long-standing relationships, prioritizing smooth transactions and confidence in the partnership.
- Key influencers and advisors along the Journey include other executives in upper management positions, tenants, large local contractors, lenders, industry associations (BOMA, IFMA, NAIOP, IREM), utility companies, real estate brokers, energy consultants, and building inspection firms.
- Where Building Performance Standards have come into effect recently, like in Washington State, decision makers find compliance disruptive, financially and operationally.
- Impartial guidance is needed to help these decision makers recognize the advantages of acting without delay to incorporate relevant milestones into their plans.

Recommendations:
Following are themes that capture essential recommendations presented in Chapter 5 of this report (which includes 27 recommendations).

1. Target two audiences: a) CRE firms interested in energy efficiency, termed "Bridge-Builders" in this report, and b) corporate tenants committed to sustainability.
2. For both audiences, curate and build awareness of accessible tools, templates, and guides to support planning and demonstrate the value of energy-efficient improvements to others in upper management.
3. Help lower costs and increase transparency for the audits and inspections that inform the crucial first steps toward energy efficiency.
4. Assist commercial real estate development and management decision makers in communicating about the tangible benefits of energy-efficient solutions. Encourage reinvestment in these solutions by helping decision makers measure attraction and retention.
5. Arm leasing managers and agents with compelling tools and templates to showcase efficiency benefits and foster tenant engagement. Centralize access to these resources.
6. Popularize diverse financing options (C-PACE, utility incentives, green loans, etc.) and streamline access to them.
7. For the corporate leaseholders, help decision makers quantify progress reaching their companies' publicly stated sustainability goals.
8. Cultivate strategic partnerships with key industry groups and influencers to co-develop resources and keep messaging authoritative.
9. Amplify and publicize peer forums that help decision makers navigate Building Performance Standards and related laws.

By implementing these recommendations, NEEA and BetterBricks can help encourage commercial building decision makers to consider energy efficiency, while also supporting them as they navigate new regulatory pressures.

1 Introduction

The BetterBricks program of the Northwest Energy Efficiency Alliance (NEEA) is a branded information and solutions hub dedicated to helping commercial building owners compete in their markets by incorporating energy efficiency into their business practices and buildings. Through BetterBricks, NEEA is expanding its focus from individual product categories like HVAC, windows, lighting, water heating, and controls to a whole-buildings approach to energy efficiency.

To inform its whole-building approach, NEEA sought to better understand the typical steps and decisions involved in commercial building upgrades. The need for this understanding has gained new importance in light of recent laws in some states targeting climate change and greenhouse gas emissions, which have put pressure on commercial real estate owners to invest significant capital in making their buildings more energy efficient.

Washington State, along with several cities across the country, including Seattle, have passed laws, commonly referred to as Building Performance Standards, that require owners of medium- to large-size buildings, typically 20,000 square feet and over, to assess their energy and/or carbon usage, establish targets, and reach those targets by specific dates, or face hefty fines.

At the same time, many decision makers in the commercial office sector have faced additional challenges from elevated interest rates, increased construction and supply costs, and worrisome vacancies as white-collar employees continued to work from home. In this increasingly pressured environment, NEEA is tasked with demonstrating convincingly that energy efficiency provides practical, viable solutions with solid financial justification.

NEEA began its investigation into the decision making journey by conducting an intensive literature review, which identified potential decision makers, steps in planning and implementation, financing methods, and barriers and opportunities for energy-efficient improvements. Next, NEEA engaged the research firm ETHNO to conduct interviews with commercial real estate decision makers, to map out the building renovations journey, and to identify potential areas to make a meaningful difference.

This report presents the results of ETHNO's research. Its purpose is to equip NEEA and BetterBricks with the insights needed to identify the key moments at which to offer relevant support and guidance.

2 Research Objective

The study's key research objective was **to understand and describe the typical commercial building renovation journey** in order to support decision makers.

Within this larger objective, ETHNO explored the following sub-questions:

1. What are the **steps** in the building renovation journey?
2. Who owns the **decision** to proceed with the renovation?
3. Why do decision makers **decide to renovate** their commercial buildings?
4. Why might decision makers **not consider energy efficiency** when considering renovations? With what other priorities does energy efficiency compete?
5. Why do the decision makers **opt to include energy efficiency** in a renovation project? Which arguments do they find most compelling?
6. How do businesses **plan and pay** for renovations?
7. Who are the **influencers** and conduits for relevant information? To whom are decision makers likely to turn for advice about energy-efficient solutions?
8. Who are **prime candidates** for energy efficiency solutions, and what kinds of assistance might they value?
9. What role can organizations like NEEA play to help decision makers observe **Building Performance Standards/Laws**?

3 Methods

To address the research objective, ETHNO conducted intensive interviews with 16 decision makers at commercial real estate firms and other businesses owning commercial real estate in Oregon, Washington, Idaho, and Montana.

Sample

In planning the study, the NEEA + ETHNO team chose to find commercial real estate professionals who demonstrated a realistic grasp of operational details, as well as some level of authority to influence decisions at an executive level, including decisions requiring large outlays of capital. In practice this meant focusing on upper management roles, including asset managers, owners, partners, facilities managers, and property managers.

Roughly half of the participants in this study hold the title of asset manager or perform a similar set of functions (N=8). The rest includes owners (N=2), property managers dealing with day-to-day building operations (N=6), and heads of sustainability (N=2).

Additional criteria for companies selected included the following:

- Ownership of commercial office & apartment buildings 20,000 square feet and over.
- No short-term owners (that is, no property "flippers").
- Some owner-occupants (N=3).
- Some market leaders, who own at least one building that performs in the upper percentiles of building rating systems such as ENERGY STAR, LEED[1], or BREEAM[2] (N=3).

Table 1 on the next page enumerates key characteristics of the companies participating in the research.

The Interviews

ETHNO interviewed representatives from 15 companies. In one case, two participants from the same company were interviewed, bringing the total number of interviewees to 16. Interviews were semi-structured, individual sessions, conducted on-site and in-person in 10 cases and remotely in five cases. Conducting on-site interviews provided an opportunity to tour the buildings discussed, which supplied useful context and additional observations. Each interview lasted between 1.2 and 2 hours, producing a total of 26 hours of conversation. See **Appendix A** for the full interview protocol.

[1] Leadership in Energy and Environmental Design is a green building rating system.

[2] Building Research Establishment Environmental Assessment Methodology is a system for certifying a building's environmental sustainability.

Table 1: Characteristics of Participating Companies

Location of Headquarters	Companies
Seattle, WA	7
Eastern WA	2
Portland, OR	3
Western OR	1
Idaho	1
Montana	1
Total	**15**
Building Types Owned	**Companies**
Commercial Office, Retail, and Multifamily	5
Commercial Office Only	3
Commercial Multifamily Only	2
Commercial Office and Retail	2
Light Industrial and Multifamily	1
Institutional Multifamily (Senior Living Facility)	1
Institutional Office and Housing (Community Technical College)	1
Total	**15**
Reach	**Companies**
National	5
Regional	4
Local	6
Total	**15**
Number of Buildings in Company Portfolio	**Companies**
Small Portfolio (2 – 5)	2
Medium Portfolio (6 – 20)	3
Large Portfolio (21 – 50)	5
Very Large Portfolio (51 or more)	5
Total	**15**
Maximum Building Size (in square feet)	**Companies**
Under 20,000	2
20,000 – 50,000	5
50,000 – 100,000	4
Over 100,000	4
Total	**15**

4 Findings

4.1 The Decision Maker Journey.

The study results supported creating a visual map of the building upgrade Journey, as depicted below in **Figure 1,** "Typical Decision Maker Journey: Renovating a Commercial Building." To view the full size graphic please click here.

The Journey is a chronological map illustrating the basic process for undertaking a commercial building renovation. It captures decision makers' general objectives as they pursue commercial building upgrades over time, including objectives that may or may not include energy efficiency. Its intent is to enable NEEA and BetterBricks to identify forms of strategic assistance to offer at moments in the Journey when decision makers are likely to find this assistance helpful.

The Journey depicted is "typical" in that it outlines steps that occur often (though not always) in the order described. It is a composite, however, distilled from diverse sources of information. In practice, each manifestation of the process is slightly different and unique to the individual decision maker. Readers should remember that this framework is based on data from a series of qualitative interviews, not from a quantitative survey.

To retain a manageable focus in this report, the default reference is to the commercial real estate office market. Notable distinctions exist among the CRE office context and residential and institutional contexts—including lease structures, lease durations, unit sizes, the extent of renovations to leased spaces, as well as the stakeholders involved and their mindsets. These distinctions and their implications will be emphasized in the report's narrative when feasible, but they are not specifically addressed in the overarching Journey framework.

In this report, the Journey Framework will also be used to orient readers to the general sequence of decisions discussed. This report pays especially close attention to the crucial early and middle steps of the journey, where decision makers identify needs and make plans that lead up to the approval of projects.

Figure 1, below, depicts the entire journey at a schematic level, along with legends explaining the icons.

Figures 2 – 6 detail the five main steps in the Journey. Each step includes the decision maker's over-arching goal, sub-goals, and specific actions they take to meet that goal. Actions are categorized in three ways (from top to bottom): general actions, actions relating to leaseholding, and actions that pertain to regulatory matters such as Building Performance Standards.

To acquaint the reader with the overall logic and flow, a narrative of the transition from step to step is also provided. Subsequent chapters will describe the Journey in more detail.

TYPICAL DECISION MAKER JOURNEY

RENOVATING A COMMERCIAL BUILDING

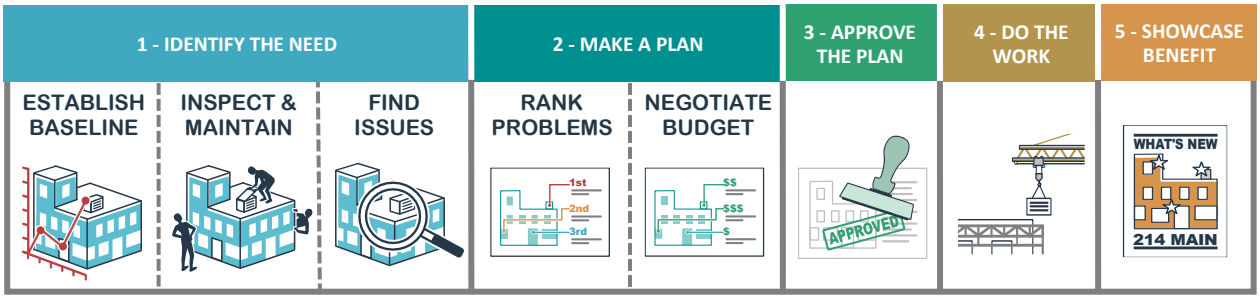

Figure 1: Overview of the Journey.

INVESTMENT MANAGEMENT

- Bank
- Board
- Investment Officer
- Investor
- Owner

ASSET MANAGEMENT

- Asset Manager
- Consultant
- Financial Officer
- Industry organizations

PROPERTY MANAGEMENT

- Architect, Builder
- Building Inspector
- Engineer
- Equipment Supplier
- Leasing Manager
- Property Manager
- Real Estate Broker
- Tenant/Resident

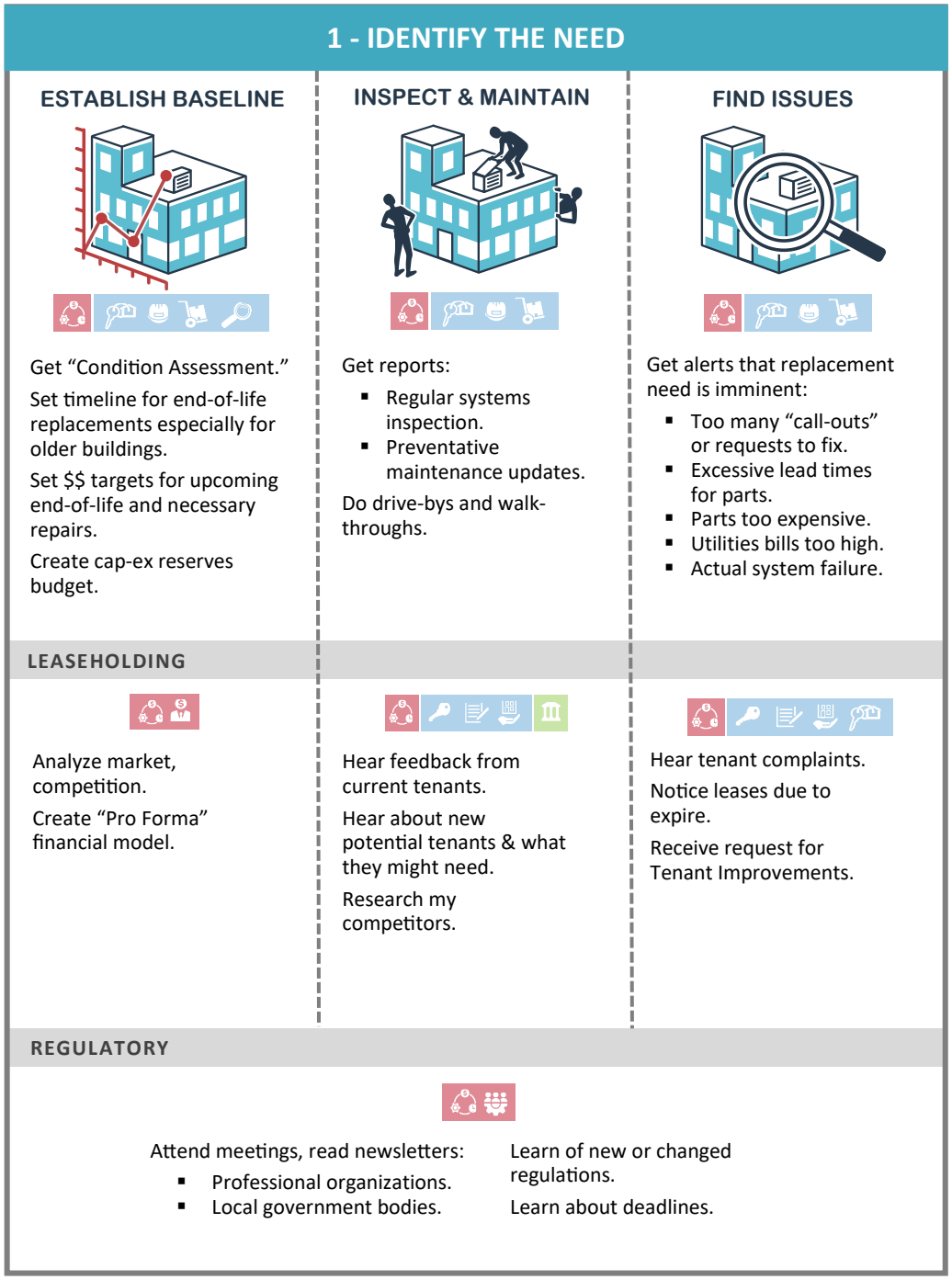

Figure 2: Step 1 of the Journey (and its three sub-steps).

4.1.1 Identify the Need.

This initial phase begins with recognizing the building's needs through required inspections and any resulting plans and budgets. Typically, capital plans do not emerge immediately, but some years after the building's completion. The buildings "in need" tend to be older. This phase initiates processes for regular inspection and maintenance, addressing not just the physical structure but also whatever steps might be needed to ensure the building can compete successfully in its market or otherwise fulfill its purpose, both for its occupants and for its owners.

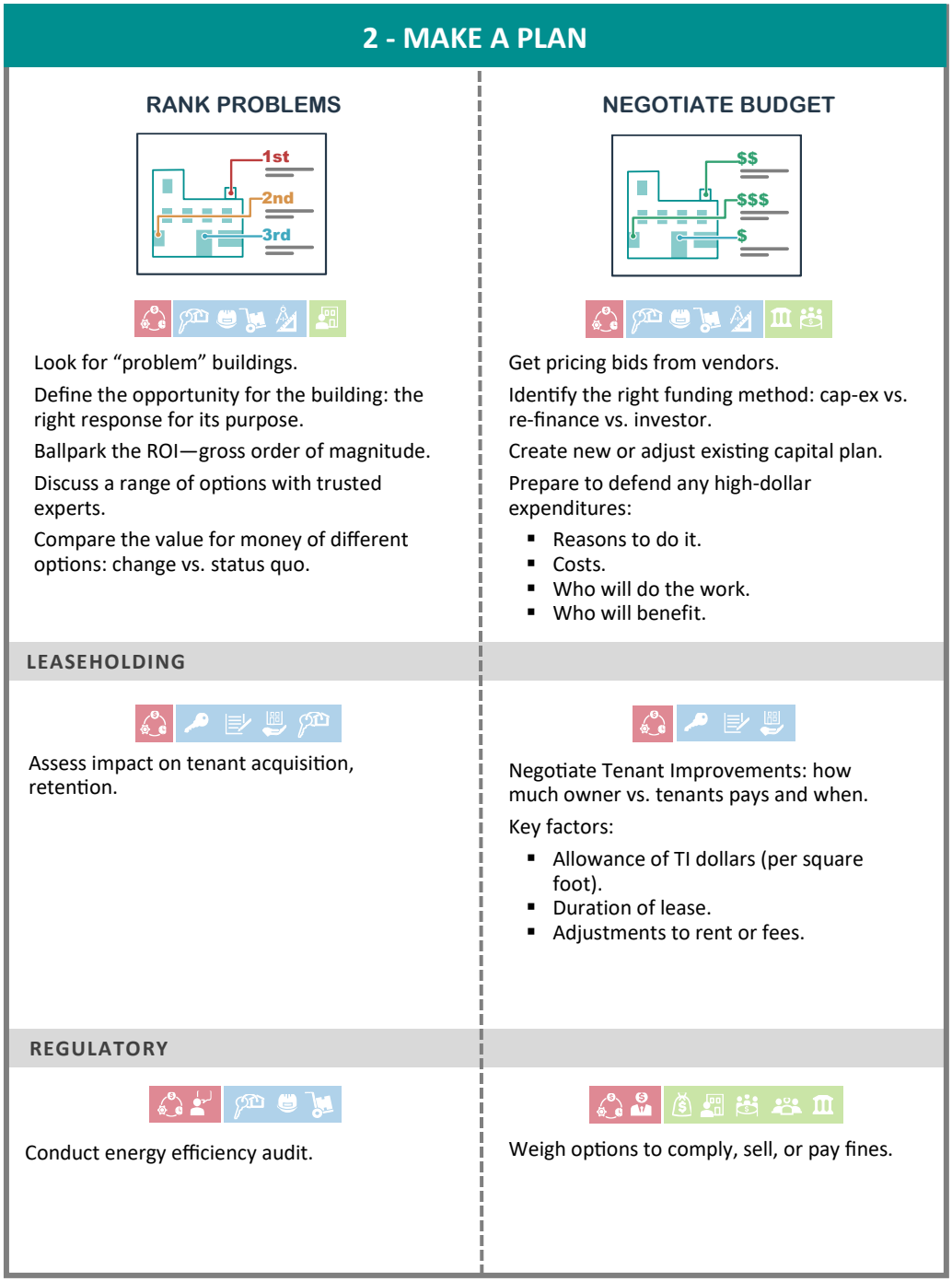

Figure 3: Step 2 of the Journey (and its two sub-steps).

4.1.2 Make a Plan.

Any challenges, concerns, or shortcomings the building exhibits that emerge from the first phase can trigger the need to create or revise an annual capital plan to allocate funds for addressing these issues. Asset managers set the priorities, negotiating with stakeholders, as needed, across finance, facilities, operations, legal, leasing, and building trades and professions, to achieve a balanced solution. A revised annual capital plan, incorporating new priorities, is prepared for company officers to consider for approval.

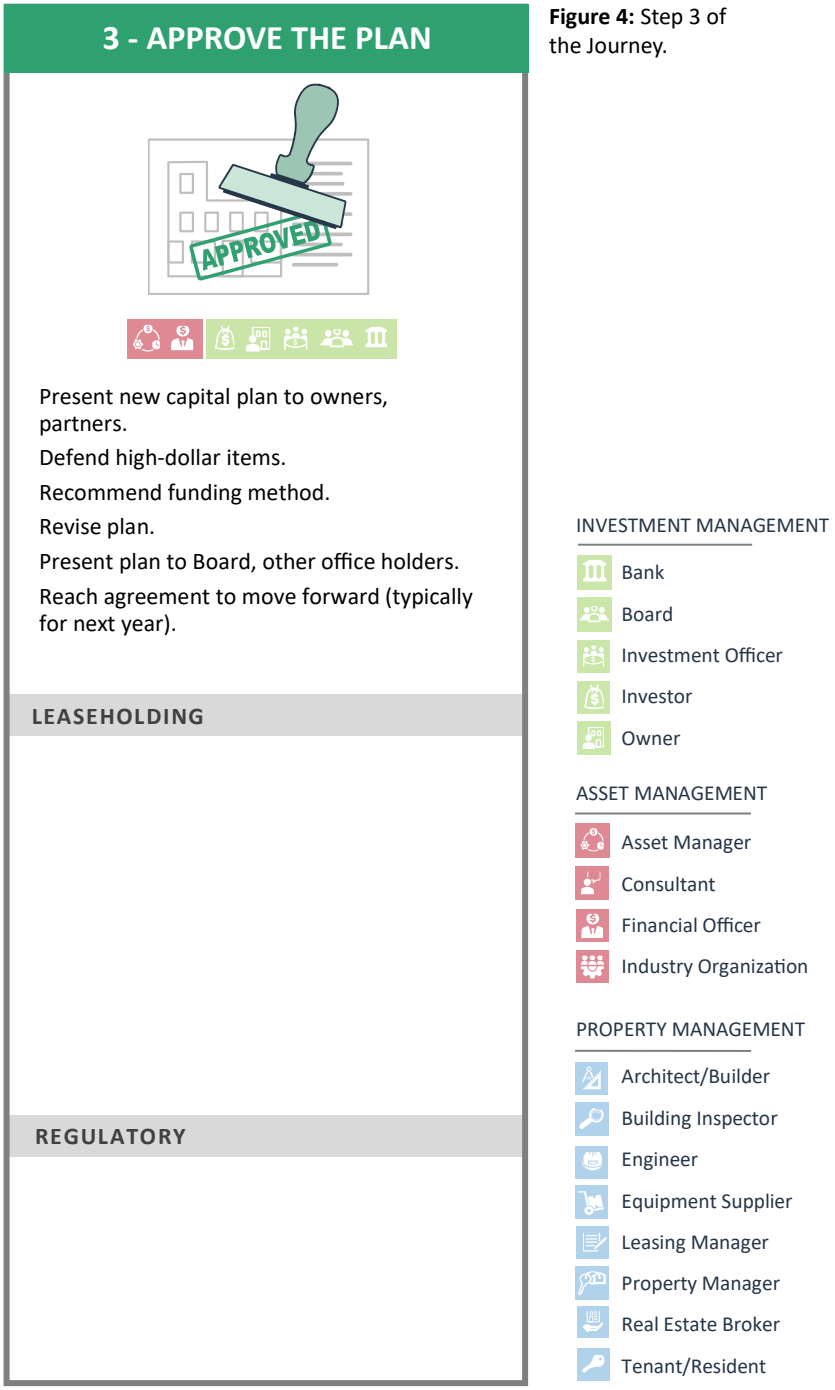

Figure 4: Step 3 of the Journey.

4.1.3 Approve the Plan.

Decisions often come swiftly. To increase the odds of approval, the asset manager or other responsible decision maker will have prepared a thorough capital plan, consolidating the relevant perspectives and justifications. The plan, presented to owners, partners, and officers, includes rationales for new expenditures. Large expenditures may meet with resistance and must be fully justified in terms of expected Return on Investment (ROI) within a time frame that matches agreed goals for the building. Revisions occur as needed, sometimes requiring additional presentations to board directors or other company officers.

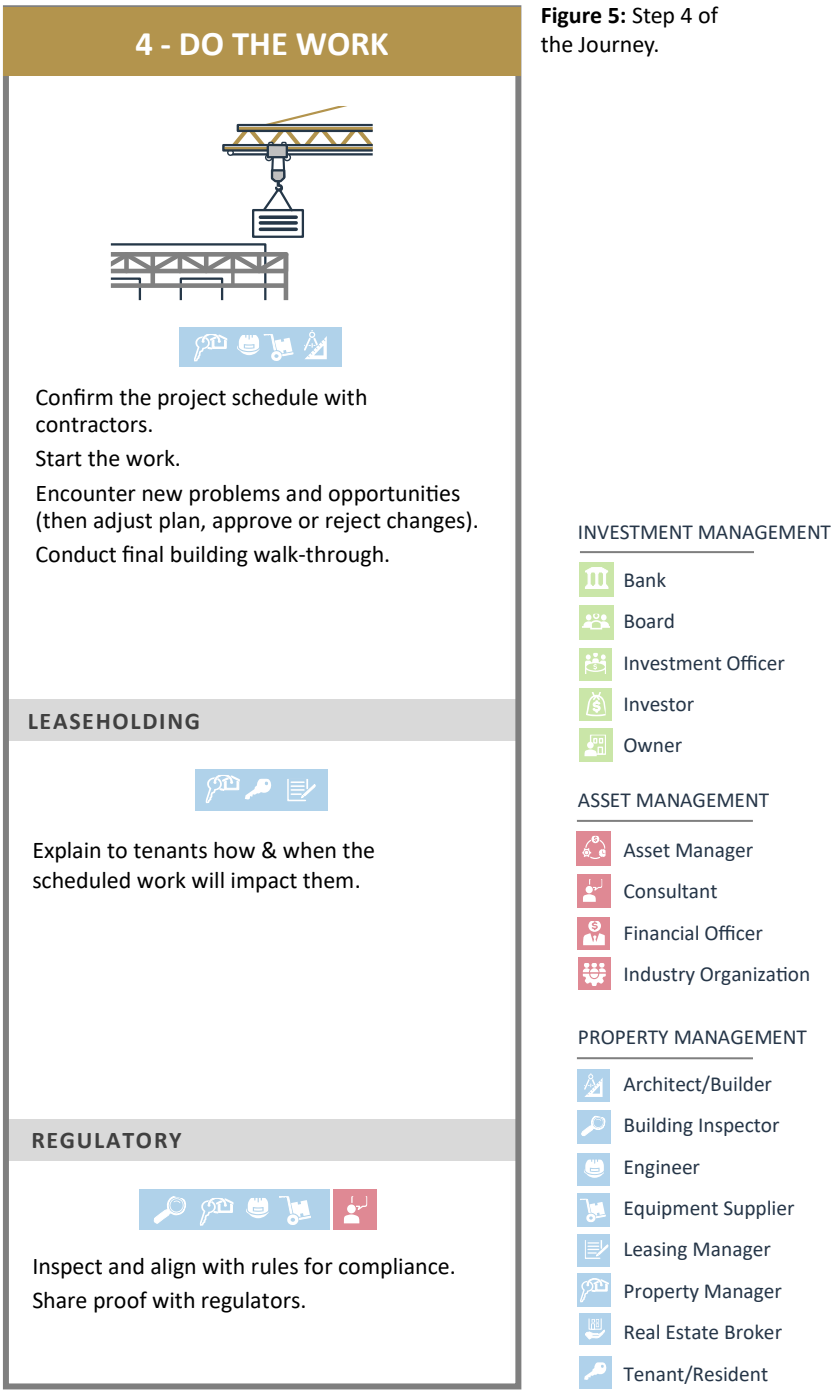

Figure 5: Step 4 of the Journey.

4.1.4 Do the Work.

With the plan approved, property managers can schedule the work, depending on the availability of their trusted construction teams and contractors to undertake the project. Once they commit, a property manager can inform tenants or residents about the schedule and the expected disruptions to their business routines or living habits. The asset manager monitors the project for emerging challenges that might affect the project's budget or impede (or enhance) its prospects for success. These lead potentially to budget modifications and new approvals for any significant shift in course. The phase concludes with a final walkthrough and the provision of warranties.

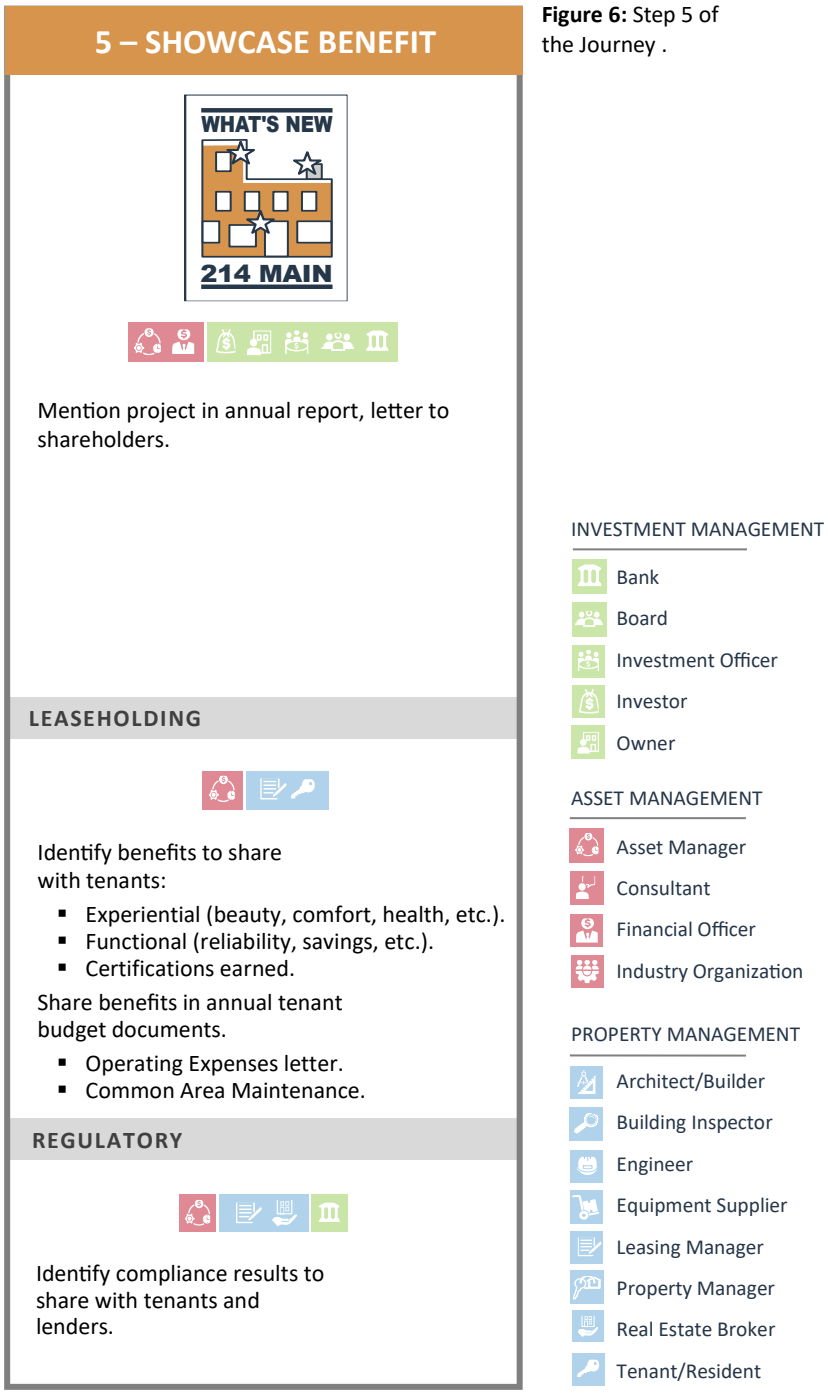

Figure 6: Step 5 of the Journey .

4.1.5 Showcase the Benefit.

The final phase involves communicating the renovation's benefits through various channels to both current and prospective tenants, as well as to the general public. Despite its key importance, this phase may receive somewhat less attention than it deserves from the decision makers. Highlighting specific, tangible benefits of value to tenants and residents—which in the energy efficiency context include comfort, safety, system reliability, lowered utilities bills, lowered maintenance costs, compliance achievements, and enhanced market status—can strengthen relationships with current tenants and attract new prospects.

4.2 The Structure of Decision Making.

Numerous roles are involved in the pursuit of goals outlined in the Journey. To help illustrate the basic relationships among them, the Journey Framework aggregates these roles into three tiers, each represented by a different color. These tiers link related roles through "role icons" that appear throughout the Journey framework. These three tiers reflect how decisions are made based on data from the interviews and secondary sources.

An authoritative discussion of real estate principles and processes, published through the Urban Land Institute and in its fifth edition, suggests that the decision making structure consists of a "triad" (Miles et al., 2015). This conclusion aligns closely with the overarching impression from interviews, which points to three management levels. One may imagine the levels forming a pyramidal structure, as depicted below (**Figure 7**). From top to bottom, the decision making levels are as follows:

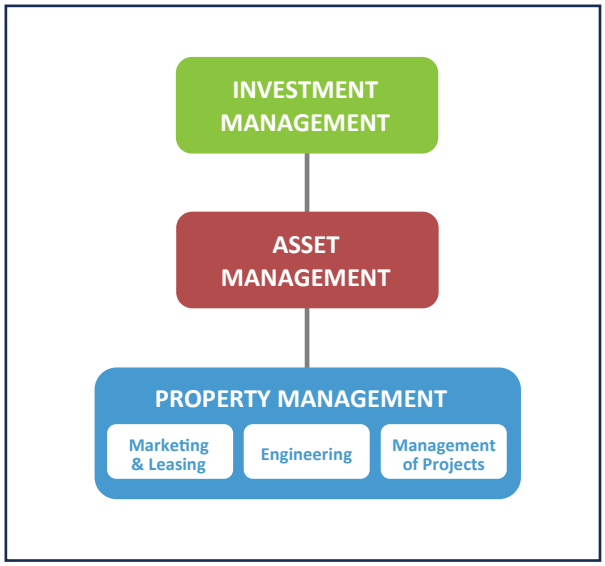

Figure 7. Commercial real estate decision structure.

4.2.1 Investment Management.

At the pinnacle of the organization stands the owner, or owners, as well as partners and others who possess an ownership stake. **Owners have ultimate decision making authority over large financial or strategic initiatives.** Surrounding them are roles relating to their investments and financial operations. Roles mentioned in the interviews included "portfolio managers", "investment teams," and "investment officers" as well "owners" or "ownership."

4.2.2 Asset Management.

Asset management, while sometimes a job title, is more of a role. An asset manager from a national asset management company summarized the complexities of this role by saying, **"I'm responsible for how the building is performing financially, the condition it's in, how it competes in its market, how it's being used, and its long term-value to the organization."**

Asset managers define the needs and opportunities arising from property management and operations (at the tertiary level, below). Accordingly, asset managers do much of the work to shape the capital plans for buildings. As compared to property managers, asset managers have oversight of many buildings, not just one or two of them.

The role of asset management can be a position, a component of a position, or a set of responsibilities split across multiple positions in the ownership structure. For example, at least two of the asset managers interviewed were partners at their firms.

Miles, Netherton, and Schmitz (2015), investment and asset managers themselves, describe the asset manager as having an especially critical role in strategic decision making, bearing responsibility for "major decisions, such as expenditures that lie beyond the contractual authority of the property manager, larger leases, and changes to the operating plan." **Critically, the asset manager "carries a fiduciary responsibility to the investors in the asset and is the de facto property owner**" (Miles et al., 2015: 324, emphasis added).

Straddling the asset management and investment management functions are financial officers ("CFO," "Treasurer"), who collaborate closely with asset managers, and may in some cases serve as their managers or superiors. Financial officers focus on such issues as budgeting for expenditures, predicting cash flows, and addressing tax implications, where asset managers pay attention to a broader array of performance measures, including competitive landscape, physical building conditions, and tenant usage.

4.2.3 Property Management.

At the tertiary layer stands property management, also described as "day-to-day operations." Its "primary goal," again according to Miles, et al. (2015), "is to ensure a continuous cash flow for the owner by managing the property efficiently and at an appropriate level of quality for the tenants." People at this level are the ones who create and administer lease agreements, market the properties (in conjunction with real estate brokers), collect rents, maintain the building, and repair or replace equipment.

Property management roles include titles such as "property manager" (overseeing all building operations), "engineer" or "maintenance manager" (responsible for physical plant, preventative maintenance, and equipment replacements), and "lease administrator," "leasing agent," and "marketing manager" (these latter being tenant-facing, or resident-facing, roles). **Property managers are the first line of defense, and the most likely to notice problems at the property or changes in tenant interests and demands. They are also likely to act as the tenants' advocate up the line to ownership.**

4.3 Why renovate?

Having outlined the basic steps in the Journey and described the patterns of decision making, we can now describe those steps in the Journey at which decision makers might be open to conversations about energy efficiency.

One step in the Journey that will reward close inspection is when decision makers first surface the critical needs that they will choose to address. (See Journey map section: "IDENTIFY THE NEED" /"Find Issues").

4.3.1 Usually Fixing Problems vs. Seizing Opportunities.

Decision makers typically invest in renovations only when they must, preferring to address emergent problems rather than proactively optimizing, though this is somewhat more characteristic of managers of leased space rather than owner-occupants (as will be discussed later).

The participants in this study are primarily financial decision makers, and they speak at length about "the bottom line" and "dollars in pockets" when discussing renovations. "I don't think people disagree with sustainability," an asset manager in Idaho says, "…but in our market, the intrinsic benefits are not as well received as savings to the bottom line." "It's business," says another, based in Washington. **"If the efficiency isn't providing dollars back in our pockets, and my tenants are comfortable, then why am I doing it?"**

From their perspective, the biggest reason to spend money on improvements is because they are forced to do it, generally because of some emergent problem—whether a broken pipe, the threat of a fine, or the prospect of a tenant choosing a competitor's building over one's own. It is the problems, more often than the opportunities that seem to take precedence.

> *"Which assets will I look at first? You're going to look for the problem children."*
> (Asset Manager, national asset management company)

Thus, the triggers to renovate typically come to the decision maker in the form of alerts, complaints, notices, or other kinds of bad news. No single trigger necessarily leads to action unless it presents acute or immediate dangers; the bigger and more expensive renovations happen because of several events combined, often accumulating over time.

Examples of such triggers include the following.

- **Vacancy warning signals.** Tenants/residents mean income. Therefore, any clues that a property may not attract the numbers of occupants needed, or keep its current occupants sufficiently satisfied to renew their leases, or earn from them the rental rates appropriate for the building in its market, will command attention. Such clues range from informal communications, where a property manager overhears tenant conversations, to actual complaints received, to formal evaluations by industry data providers and real estate brokerages.
- **Service or performance problems.** Field staff who monitor systems flag a building element that has failed, will fail, or can no longer be serviced (lighting; heating/cooling; hot water; irrigation, toilets, faucets).
- **Resource usage problems.** Property or facilities managers in charge of utilities notice that consumption of electricity, gas, or water "spikes," or surpasses historical thresholds by some noticeable percentage.

- **Compliance notices.** Notice about a new compliance concern, such as Building Performance Standards, comes to the decision maker through a government agency or by word of mouth from a professional network.
- **Decreased occupancy rates.** Decision makers continuously evaluate occupancy rate. Precipitous drops in occupancy can be a powerful motivator to act. Fear of potentially losing tenants/residents is also a potent driver.

4.3.2 Pursuing Sales Through Tenant Improvements.

The psychology is more ambiguous when it concerns renovations known as Tenant Improvements (or TI). Tenant Improvements are changes to space or equipment that an owner might either fund directly or implement on the tenant's behalf to close the deal on a long-term lease.

The tenant could be a long-standing, established occupant whose lease is due to expire, in which case the TI investment is imperative and once again a solution to a problem (that of an impending vacancy). However, the tenant can also be a wholly new prospect, in which case the investment is regarded as a sales opportunity.

For example, a property manager at one real estate development firm in downtown Seattle describes "walking the space" with a tech company and tracking the company's specifications for air, wattage and cooling to run electronics. The management firm will agree to give the tech company an "allowance" or "TI dollars" to pay for the many changes they require. In exchange for this allowance, the management firm will expect to receive a lease agreement from the tech company that will extend for 10 or more years.

The total value of the new lease, some tens of millions of dollars, outweighs the relatively modest short-term investment of a few hundred thousand dollars that the real estate company will provide for tenant improvements.

4.3.3 Improving Work Environments in Owner-Occupied Spaces.

Owner-occupants, while just as concerned with fixing problems first and foremost, seem more alert to positive opportunities than firms that manage, but do not occupy, the space. Owner-occupants use "different math" than investment owners to assess building improvements, according to the asset manager of a national asset management company. They also have a "different mindset" regarding both acquisitions and improvements.

> *"As owner-occupiers, (they) consistently look at whether the organization is using the building to its highest and best use.... I laugh when brokers come with pro-formas for buildings to purchase that have a big appreciation number at the end. I'm like, just—take that off. They don't care about it. Because, at the end of the day, they're not in it to sell it. (Their attitude) is more about, 'Does this serve our mission well? Does it line up with our strategic goals? And, you know—can I afford it?"* (Asset Manager, national asset management company)

Owner-occupants may invest in building improvements not just to fix things or freshen them up, but to better achieve their company's mission: to accommodate a new division, say, or to help dispersed teams collaborate better after a merger. One owner-occupant considered replacing a number of smaller buildings, which previously housed separate three-doctor practices, with a single, larger medical office

building in order to reduce the number of administrators serving the various practices. A facilities manager at a pharmaceutical research company made comparable investment choices when creating new space for one of the lab's more successful new processes.

> *"Right now, they're working in probably 60 square feet. And I'm going to give them a lab that's 250 square feet. We're able to remodel this little, tiny lab and give them eight times the square footage."* (Facilities Manager, pharmaceuticals research company, WA).

The owner-occupant's approach, pro-active and deliberate, can often be a response to perceived opportunities to tailor space to their company's needs.

RECOMMENDATIONS

- **In awareness campaigns, consider avoiding the use of language such as "helping you upgrade" or "helping you find efficiencies" that assume a shared belief in the intrinsic benefits of energy efficiency.**

  Such language is often inconsistent with decision makers' actual priorities. NEEA may experience more success by conveying its shared interest in finding solutions that solve immediate practical problems. An example of an appropriate stance is: "If you've been worrying about ___ for a long time, here is your chance to fix it."

- **Explore ways to show how energy efficiency helps solve routine, practical problems.** Fixing these problems is the baseline.

4.4 Why Not Switch to Energy-Efficient Solutions?

Moving along in the Journey to Step 2, or "MAKE A PLAN," decision makers must rank the various problems which vie for their attention to choose the ones to pursue. "It's always a multi-variant problem," as the Vice President of Real Estate at one large commercial real estate firm says. **To make these critical decisions, they rely on various "rules of thumb" to help them quickly decide among a large number of very difficult and complicated choices.** This section discusses three of these rules of thumb that decision makers described to the research team.

4.4.1 "Use What You Have as Long as You Can."

Replacing something before its end of life, decision makers say, might "leave value on the table," and simply waste invested capital. "Use it as long as you can," says an Asset Manager in Idaho, "because to replace something that still has useful life left in it (means) you're not maximizing the value of the capital you've already invested." "Why remove a piece of equipment that still has useful life?" asks an Asset Manager based in eastern Washington, who then goes on to say that would be like junking a perfectly good older car.

Replacing an aging, but salvageable, HVAC system with a more energy-efficient alternative, for example, would be difficult for the decision maker to justify financially to partners if the current one can be repaired or refurbished to any extent. Typical roof top units (RTUs) are relatively easy to service and there are many vendors (even small companies) who have people who know how to fix them (McCabe 2022). Some owners avoid putting in more efficient systems that may rely on computers and specialized servicing.

4.4.2 "Preventative Maintenance is Your Best Friend."

Instead of replacing systems before their end of life, decision makers fairly commonly mitigate the risks of system failure by conducting vigilant preventative maintenance. Over time, some of the property managers get to know their buildings' systems so intimately that they feel they can comfortably drive them to near-failure.

> *"HVAC is one of those things where we're going to try to push it to its full lifespan—as (far) as we can. We take really good care of our stuff. We're not just letting it run and seeing how long it lasts. We're doing specified maintenance 'plus.'…Now if it's a life or death situation, we'll gear up for it. The HVAC techs will let us know, 'Hey, we need to start thinking about this'. …Our best friend is preventative maintenance. And having eyes on everything."* (Building Manager, commercial real estate development company, OR)

At the same time, all of the decision makers acknowledge the exceptionally high risks that attend the prospect of failure for critical systems such as HVAC, as well as the major systems of plumbing, roofing, and electrical equipment. Failures in these systems could jeopardize the health and safety of tenants, damage tenant-owned equipment, or leave tenants unable to do their work. Such breakdowns expose landlords to legal liability, as well.

Their insistence on extracting all value while guarding against failure amounts to a difficult balancing act. "We try to walk that tightrope, to be honest, where we try to get out ahead of when things are absolutely functionally obsolete, and we can't stand the costs of failure on the tenant satisfaction," reports an Idaho-based asset manager.

4.4.3 "We Want What Our Tenants Want."

By all appearances, one might suppose that decision makers prioritize fitness centers, spacious atriums, and gleaming lobbies a good deal more than improvements for energy efficiency. But they indicate that these priorities merely reflect those expressed by their tenants.

As an asset manager in Washington, reflecting on his company's portfolio, puts it, "If you're looking to impress your workforce, you'll go for the brand new office space, and floor to ceiling windows, and a café and restaurant all on the first floor that you can go and hang out in." The significance of these factors to tenants, a topic to be examined more closely in the next chapter, is a common theme among decision makers.

One asset manager describes the influence of tenant preferences as a "waterfall effect," where the values flowing to management come ultimately from the tenants' employees, who are at the top of the waterfall.

> *"These days, where the office experience has to compete with work-from-home, our true clients are the employment recruitment and retention (offices)…. Our customers are the tenants, and the tenants' customers are their employees. And so, the waterfall of priorities really comes down to: What do the employees of the company value? Because that will flow up to the management and their decision about facilities choices."* (Asset Manager, commercial real estate development company, ID)

Surface appearances matter a good deal in that dynamic, because they drive the rental rates. Or so the markets would seem to suggest. The speaker continues:

> *"If I get people continually coming into a building, and my leasing manager says, 'This feels like my dad's office space, not mine,' then I really want something a little fresher and more contemporary. So, if feedback is that the building is of an age and stage where it doesn't feel appealing, I can't drive the rent rates that we need."*

Sometimes "fresh" means a coat of paint, and a change of carpeting, which are relatively inexpensive. But refreshing a space can also require much more costly upgrades, such as replacements of flooring, fixtures and structures, or even of some of the most expensive items of technology that are visible to tenants: the building's elevators. All can seem outdated and in need of replacing to better attract tenants.

> *"The elevators here are great. But if you go (to another of our high-rises), you can just tell the elevators there are more modern and up to date. So, part of our plan in the next couple of years is to do a complete elevator modernization. That's $3 million. …Not just the interior cabs, but a lot of things people don't ever see. When you walk into (competitive buildings) the elevators make a difference, because it just feels—new. To a tenant who is out in the market visiting all the different properties, there's going to be a different feeling when you walk in."* (Asset Manager, commercial real estate development company, OR)

The elevators in the building described are due for overhaul, from their reported age and according to the advice of the elevator service provider, the Asset Manager reports. **But because tenant attraction is so critical, the aesthetic and sensory dimensions are nearly as important as the functional.** This leads to prioritization of not just the strictly necessary repairs, but a full elevator upgrade.

Sustainability officers at these companies necessarily find themselves looking at things in similar ways. "We look at our market comps," says the Director of Sustainability of a large Seattle real estate management company, focused on multi-family residences. "The features that are drawing people are countertops, flooring, and updated appliances."

To be effective in helping their companies meet business goals, sustainability experts at CRE management and development firms must also prioritize tenant attraction. They see it as a real problem that the value of energy efficiency doesn't seem apparent to tenants yet. The VP of Sustainability at another major real estate development company, also in Seattle, says, "The value proposition (of energy efficiency) isn't widely understood, or acknowledged. It is yet to become a key lever in the decision making process by end users. It still seems to fall flat to the audience."

Market services, like CoStar and Loopnet, award letter grades and scores to commercial buildings, both mirroring and propagating the prevailing emphasis on amenities and aesthetics. While the ratings do include some efficiency metrics, many ranking factors highlight elements such as "the quantity and types of on-site amenities" and "a building's general aesthetic presence and experience… from the exterior materials selection and the character of fenestrated surfaces, to the quality of interior finishes" (CoStar, 2024). Banks may consider these grades to approve financing. Leasing agents and real estate brokers leverage the grades to showcase buildings that are likely to appeal to their clients shopping for space.

RECOMMENDATIONS

- **Help decision makers quantify all the benefits of energy-efficient solutions implemented, including their impact on tenant satisfaction, not just energy savings and upfront costs.** This will help increase decision makers' confidence that such investments are worthwhile, increasing their inclination to reinvest and implement such solutions across other projects.

- **In awareness campaigns, capitalize on the fact that decision makers regard preventative maintenance as a top priority.** Consider providing white papers with knowing titles, such as, "How to patch your HVAC as long as you can (and know when it's time to give up)." These papers could nudge decision makers toward energy-efficient solutions that are small-scale and practical, without being prescriptive. Collecting reader's responses to them could also help NEEA to dial in the guidance offered subsequently.

- **Provide simple checklists to help facilities managers (and ownership) optimize their "drive-bys" and "night walks" (informal visits to their buildings).** Help them add rigor to these visits from an energy efficiency perspective. A starting point is the BetterBricks article, "Night Walks (BetterBricks 2024) and programs related to Strategic Energy Management (SEM) (semhub 2024).

4.5 Why Choose Energy Efficiency?

This chapter examines efforts to uncover benefits that decision makers already perceive in energy-efficient solutions, absent mandates. (The response to Building Performance Standards will be addressed in a later Chapter.)

Data to answer this question come from conversations with decision makers about energy-efficient solutions they have opted to undertake. All of those interviewed for this study were able to mention at least one or two such initiatives. The place in the Journey to which these decisions refer is Step 2, "MAKE A PLAN" / "Rank Problems").

Decision makers perceive two main areas of potential benefit to energy-efficient solutions: a) cost savings, and b) tenant satisfaction (attraction and retention). Between the two, cost savings is seen as simpler to calculate, but smaller in financial impact; tenant satisfaction is harder to calculate, but more impactful.

Their ideal choices—those they indicate are "obvious"—appear to be solutions that offer both of these benefits and more.

4.5.1 Multiple Benefits from a Single Energy-Efficient Solution.

When asked to provide their "best example of a success story in energy efficiency," decision makers usually referred to a lighting replacement program. They argued that replacing their old, electricity-hogging fluorescent or halogen fixtures with new LED setups is, or was, a smart thing for them to do for their companies.

They described replacing lighting as "a no brainer" and a "win-win," because the process was inexpensive, easy to do in small steps, and easy to justify financially.

These lighting replacement projects solved several problems at once. They enhanced the aesthetics of a space, leading to increased tenant satisfaction. They also generated savings in ways that were easy to prove to someone watching the books. Savings included reduced maintenance costs (as fewer hours were required to replace lights), decreased spending on disposable bulbs, and lower monthly electricity bills.

Further, if all that weren't enough, the rebates from utility companies helped sweeten the deal. "It just all made sense. And the rebates were great, to the point where all you were paying was tax to get those lights in there," said an Asset Manager in eastern Washington.

Another energy-efficient upgrade perceived as affordable, visually pleasing, and easy to do in steps, was solar blinds. The Asset Manager in Idaho reported hearing from tenants that they "love the sophisticated blinds on the outside windows, so they can see out through the transparency, but they've lost the solar gain."

4.5.2 Tangible Benefits of Energy Efficiency.

Appealing to the senses is an important way to make benefits of energy efficiency tangible. Many aesthetic upgrades speak to this tactic. Cascading fountains and upscale finishes seem worth the investment to decision makers in part because they are comforting, or stimulating, or otherwise sensorially gratifying, and thereby promise to make the day-to-day experience of working in and around the office more enjoyable.

"A nice bright space, with natural light, and that puts me in a neighborhood where I have some amenities around me, and that feels interesting and stimulating, makes it worth coming into the office," the Asset Manager in Idaho says. "Our scientists need to be in a place that is enjoyable to work, with suitable finishes in the rooms, and with finishes that match from room to room," says the Facilities Manager of a pharmaceuticals research company, in Washington.

Status concerns, and corporate identity affect tenant perceptions, too. Decision makers want to cater to these needs by helping tenant businesses "impress their workforce," and give them a space that "feels like their own company."

A compelling example of how energy-efficient solutions can make their own mark in this area by appealing to the sensory and status needs of prospective occupants, comes from a residential developer in Montana, whose brand-new complex of multifamily residences was nearing completion at the time of the team's visit.

According to its asset manager, his Montana firm invested significantly more money than the market required in order to include energy-efficient features, such as heat pumps, efficient insulation, and premium doors and windows. All of this, he estimates, "cost an extra $8,000 per unit, versus if we did it as cheaply as we could."

But he imagines the investment is worth it because the space gives an immediate impression of physical comfort, as well as a sense of luxury from the smart interplay of building elements. That positive feeling on entering the space will, he hopes, translate to attraction—the signing of new leases. And he is equally hopeful about the prospects for tenant retention.

> *"Just the appearance of the buildings, the feel of the buildings when you walk in them. I want that feeling to be, 'I'm comfortable here.' …Because every time somebody moves out, it costs us money. Reducing the number of turns is a big deal to us: 'Why would I choose to stay here or renew my lease, versus going somewhere else?' These things we feel, over time, do make a difference."* (Managing Partner, commercial real estate development company, MT).

Success over time will mean that the buildings remain fully leased at a level that matches or exceeds competitors in the region; an outcome which will validate his team's general vision for the project.

However, the financial performance of investments in energy efficiency, specifically, will be hard for the firm to gauge with any certainty. The company does not yet track data on resident preferences that would allow them to discern which aspects of the project played a decisive role in tenant retention.

Such data could ultimately provide arguments to help his company, as well as other companies interested in energy efficiency, to take steps to overcoming an obstacle known as the "split incentive."

In a *split incentive* scenario, tenants are seen as the primary beneficiaries of energy efficiency investments, since they pay the utility bills and thus directly experience the financial savings, even though the landlord covers the initial capital cost (NYC.gov, 2024) (see the Glossary at the end of this report for definitions of this and other terms appearing in underlined italics). The incentive of operational savings is considered split or misaligned because the investor does not receive as immediate or substantial a benefit as the user.

The Montana Asset Manager, however, does anticipate a substantial benefit—retention. The problem is that he will not be able to verify that the investment in energy efficiency actually provided this benefit, unless he starts tracking related tenant satisfaction measures, such as perceived comfort, indoor air quality, and recognition of consistently low energy bills.

His leasing agents on-site are using cost savings as a sales tool to attract tenants. On tours of the new apartments, they claim to prospects that "the mini-splits get you a $60 /month electricity bill, cheapest in the Valley." And they report that this pitch resonates.

4.5.3 Cutting-Edge Technology in Energy-Efficient Solutions.

Some decision makers believe that equipment or systems that are "new" will be inherently more efficient, simply because of the recency of their manufacture. Sometimes the perception is well founded but not always. "I could tell by the graphical interface that the Building Automation System (BAS) was better technology," explains one Facility Manager. "Of course, this new HVAC is going to be more efficient than our current system," says another, "just because it has more computer monitoring inside."

The appeal of "new" technology can be both good and bad. The downside is that it can hide the special benefits of energy efficiency. When two new products compete, the cheaper new product often wins, even if it uses much more energy than the best available option.

The upside is that energy-efficient solutions can leverage the halo effect. Equipment or building elements that highlight features demonstrably more "advanced" or "better designed" can rightly justify a higher cost. The concept of "smart solutions," for instance, connotes both innovation and efficiency. Automated lighting systems—occupancy sensors ("occ sensors"), Building Automation Systems, and HVAC sub-systems that "don't need to run full speed, full time," as one manager says, have been in the market for decades, and have made the principle of *adaptive controls* both intuitive and desirable.

Other principles of innovation in energy efficiency, such as thermal optimization and air flow dynamics, might also leverage the appeal of cutting-edge technology and thus make it easier for decision makers to choose energy-efficient options.

4.5.4 Enhancing Safety through Energy Efficiency.

Efficient solutions can make sense to decision makers for reasons of safety, as well. For example, decision makers cite, the longevity of LED lighting systems and the redundancies built into HVAC systems that help to prevent system failure.

One of the drivers for switching out lights is the worry that they might go out in dark hallways or parking lots at night, when tenants or residents most need them to be able to move about safely. **Energy-efficient lighting options rise to the top in these situations because they last, so there is less risk they will fail to work when needed**. "I can buy whole light fixtures that have 50,000 hours life expectancy on them, while that T12 (fluorescent) maybe lasts a year," asserts the property manager of a senior living facility.

Safety also looms large for aging HVAC systems, whose risks are well recognized and much discussed, with good reason. Their failure threatens other building systems (plumbing in winter), and possess the risk of disrupting the normal operations of business tenants. According to one Asset Manager, "The biggest single reason people don't stay satisfied in office space is they're uncomfortable when they're doing their work. So we'll tend to over-invest in heating and cooling capacity."

Landlords also face legal risks when putting off HVAC repairs, as another Asset Manager points out. "You've got a legal risk there that you're not providing the services you agree to in the lease, and **there's financial risk associated with that."**

Some decision makers report that lead times for replacing HVAC equipment are growing intolerable, even stretching to a year or more. These long lead times add to the existing risks of pushing equipment to near failure, underscoring the benefits of replacing them, when the time comes, with systems that promise exceptionally long life and reliable performance.

The redundancy achieved by "modularization" of energy-efficient HVAC systems, such as Variable Refrigerant Flow (VRF), is an example of a system that can credibly claim to guard effectively against system failures.

System redundancy was a driver for investing in an efficient "fan wall" system that a Portland asset manager shows the team at a Portland skyscraper. The Asset Manager describes spending $1.7 million on the multi-fan system to prevent the near loss of the building's three-fan, 20-year-old HVAC system. "The main driver was redundancy, and not to lose the building," meaning the entirety of heating and cooling functions.

A second notable side benefit of the fan wall installation was its potential to attract tenants interested in reaching sustainability goals. One prospective tenant, a financial institution committed to "building a sustainable future" according to their website, asked the Asset Manager, "What capital projects have you completed in the last two or three years to make the building more comfortable and efficient?" The asset manager was able to showcase the company's recent investment in the fan wall system.

4.5.6 Tenant Value Perception and Cost-Sharing in Energy Solutions.

Finding tenants who share the landlord's interest in energy efficiency and then offering them effective ways to share in its risks and rewards, is another reason that some decision makers chose to move forward with relevant projects. Leasing strategy, in other words, is another way to confront the problem of split incentives.

The same asset manager who described the waterfall effect of employees' influence has, partly out of an interest in energy efficiency, developed a "modified gross" leasing strategy to provide tenants with opportunities to share in the benefits (and risks) of investing in his building's infrastructure over the long term. The *modified gross* is a lease agreement where the tenant pays a base rent at the beginning, but then takes on a share of some of the other costs associated with the property as well (see Glossary). It is a variation of a structure called the Triple Net, common in the commercial office context, so named because it passes through to the tenant (at a minimum) three major payments: taxes, insurance, and maintenance costs.

> *"If we pay for an energy efficiency program, the savings typically all go to the tenant, even though the capital came from us. So, the financial mechanics to recover that capital take negotiating with a tenant. I'll charge you an extra $2 a month, because I bought the lights, and you'll save $3 a month in your electricity costs. And I'll do that for five years until I recover what I put into it. After that, the savings are all yours. But that conversation requires you (the tenant) to be interested in the idea that in the long run, you'll reduce your own operating costs. …And if that wasn't part of your original lease, I've got to have (an alternative) platform to have that conversation, and a willingness to modify the deal."* (Asset Manager, commercial real estate development company, ID)

Tenant businesses and their employees may not have full visibility into the lengths building ownership will go to keep tenants satisfied, which include investing in energy-efficient improvements that would prove mutually beneficial. Introducing them to a platform that enables owners to jointly negotiate the risks and advantages of energy efficiency might help the market evolve further in positive directions.

RECOMMENDATIONS

- **Help decision makers quantify the impacts of any efficiency solutions in which they have chosen to invest.** In particular, help them track data on tenant/resident perceptions regarding energy-efficient measures (comfort, indoor air quality). The data will help them determine which aspects of their project played a decisive role in tenant retention. They would also provide definitive numbers to prove to ownership, as well as to lenders and investors, **that past investments in energy efficiency had succeeded, increasing the likelihood they can expect future investments to succeed, as well.**

  In addition, these data could be compiled as case studies, which NEEA could distribute and amplify, to help change local markets.

- **To help attract tenants, create full marketing toolkits that leasing agents can use to sell energy and non-energy (experiential) benefits to prospects.** Include sample messaging, talking points, and testimonials from residents and tenants.

- **To foster connection with existing tenants, provide letter templates highlighting improvements and benefits that leasing agents can share in annual notices** (Operating Expense letters, Common Area Maintenance letters).

- **Provide other campaign materials for use when building improvements are actually underway to stoke excitement—and sense of stewardship—over the in-progress improvements.**

- **Help tenants at sustainability-oriented companies find resources to discuss leasing options supporting energy efficiency.**

- **Provide financial valuation data for completed energy efficiency improvements.** Asset managers and owners could include these data in their corporate annual reports to justify expenditures.

4.6 How Do Businesses Plan and Pay for Renovations?

Moving further along in the Journey, to Step 2, “MAKE A PLAN / “Negotiate Budget,” decision makers must fashion concrete plans for which renovations should be done, when, and how to pay for those deemed urgent enough to pursue imminently. To some extent, they may also refer back to previous steps. This chapter outlines their main approaches.

Renovation planning is complicated, and highly varied. The moment and circumstances of the plan’s origin, how long it extends, and how to fund it, all differ widely—not only from firm to firm, but from building to building. Each building has its own unique history, its own staff and roster of preferred contractors, its own peculiar combination of systems, and its own financial plan for handling all of these things.

Two decision makers from different commercial real estate management firms, each overseeing 60 or more buildings, describe capital planning processes across their portfolio identically: "It's all over the place."

Interviewees describe everything from having no capital plans whatsoever (even in some of the larger firms), to informal “wish lists,” to highly detailed capital improvement plans requiring thorough annual reviews, revisions, and formal approvals by ownership and boards of directors.

4.6.1 Establishing Plans by Anticipating Problems.

Some general contours seem consistent, however. For new construction projects, like the residential developments described earlier in Montana and Seattle, capital planning kicks in once warranties expire, usually five years post-completion. As buildings age, and systems begin to deteriorate, planning intensifies—in response to triggers or combinations of triggers (as discussed previously in Step 1 of the Journey, “IDENTIFY THE NEED”/ “Find Issues”).

If an older building is being purchased, a certain level of planning is mandatory. The purchaser must start forming rough plans to repair systems as part of a “due diligence process,” the purpose of which is to help the buyer to understand comprehensively all the strengths and weaknesses of the building so as to factor its needs into the negotiations with the seller (Step 1, “IDENTIFY THE NEED” / “Establish Baseline”). These needs can include not just its physical condition, but its financial performance and any regulatory compliance challenges. An Engineering Director confirms the importance of such due diligence inspections to planning.

> *“When we buy a building, we already have a cap-ex budget built. (The due diligence inspections) give us an understanding of what kind of money we're going to be having to spend during those first 10 years to keep the building where it is or improve it.”* (Director of Engineering, commercial office real estate development company, WA)

The part of the process relating to the building’s physical condition is called a **“Property Condition Assessment”** (PCA) or simply “Condition Assessment” (American Society for Testing and Materials 2024). To complete this assessment, a building inspector must come to evaluate the building and estimate necessary replacements as well as the timing of those replacements, for each of the building’s various systems. The resulting milestones for repairs and replacements inform (or in some cases create the foundation for) the new owner’s capital plan.

These condition assessments start when a building is first purchased but they can recur periodically, particularly in connection with insurance requirements. Some asset managers described inspections of high-value buildings occurring for insurance purposes on an annual basis.

Lenders can also require these assessments from time to time of buildings currently owned. When decision makers seek to refinance a mortgage (to accomplish a renovation, for instance), lenders can mandate set-asides for specific future repairs. "Your lender needs that information if you're getting any kind of financing on it. They are going to make you set aside that money," according to the asset manager working for a national company.

4.6.2 Adhering to a "Three to Five Year ROI" Rule for Investment Planning.

In the commercial real estate world, a common time window for gauging ROI is "three to five years." The time period can be longer when making investments in building systems with longer life spans, but even then it is surprisingly short: effectively 10 years at most.

This finding is striking, considering that the present study specifically sought decision makers who state that they "prefer to be long-term owners," not those buying properties only to fix and sell quickly at a profit.

A strong preference for shorter periods appears to stem from the need to limit financial risk. The longer the time required to recoup the money, the greater the risk. "Too much can change," decision makers insist.

Any number of events could threaten the value of a long-term investment: a recession, new regulations, changing interest rates, new purchase opportunities, new competitors on the scene. Or the building itself might be sold, making it harder to realize the full value of costly renovations.

An asset manager working with a national asset management company sums up his perspective in the following way:

> *"Let's say you're going to replace all of the light fixtures so they're LED. We're going to want to see a break-even within a window of three to five years. …Because beyond that, there are too many variables: Will we still own the building? Who gets to realize that investment? Will I renovate the building anyway (later) and rip all those light fixtures out? Then if you start to look at bigger systems, now you're talking about 10 years. Am I going to see a visible impact over a 10-year period? After 10 years, there's too many unknowns. If I can't see SOME impact in the first 10 years of this—it's too long.*" (Asset Manager, national asset management company)

An argument for a "five-year payback" can be made on investment principles alone, according to another asset manager. One must begin, he explains, with the goal of beating the stock market (10-12%). Then add a "risk premium" for a smaller market like his with relatively few sales transactions. After that, add points for "erosion," since one or two of those early assumption might later prove to have been wrong. And the resulting figure is an annualized return of roughly 20%—a "benchmark" or "hurdle rate," which translates to break-even in five years.

At the other end of the spectrum are institutional owners—publicly funded non-profits—who although willing to tolerate far longer payback periods, are often more resource constrained. In settings such as a subsidized senior living facility the team visits (under a ceiling showing signs of recently repaired plumbing leaks), as well as a state funded college, the owners are primarily interested in using what buildings they already have, or expanding their campuses, not in improving asset value. This can sometimes mean overlooking the growing risks of deferred maintenance, as well as the potential benefits of proactive improvements.

> *"Health systems (nonprofit) that have been around for a long time can kind of lose track of the real estate they own. They really don't understand what they have. And my job is constantly holding up the mirror and saying, 'Okay, here's what you got. What's your plan? How does this stuff fit in? And, oh, by the way, here's some risks that you've got right now. And here's some opportunities to fix them.'"* (Asset Manager, national asset management company)

Ambitious "master plans" for public institutions can span decades, though not always at the level of detail that includes component or equipment specifications. "Our (college's) master plan literally goes up through the next 50 years, 10 years at a time," says the Facilities Director of a technical community college in Washington.

In some institutional contexts, reserves are quite limited. Publicly funded institutions face multiple competing needs—and political realities—that may have nothing to do with the building itself. In the case of the aforementioned state community college, these include the various interests of faculty and students, as well as the bargaining abilities of a specific public entity (the Department of Enterprise Services) that is charged with conducting all private vendor negotiations.

For other institutions, minimizing costs is the mission, or closely linked to it. A senior living facility's property manager emphasizes that providing secure, affordable housing for seniors has always been their top priority, which means keeping a tight lid on expenses.

> *"The owners' vision has not changed. It is to provide quality homes for seniors, a place to call home, to be their last home. Some are literally dumped off here by family. The owners wanted them to have a place that's affordable and good quality and run properly, so they're not treated poorly."* (Property Manager, senior living facility)

So long as tenants or residents are not at risk, or don't complain, and staff are able to maintain systems with available parts, decision makers in such settings sometimes push systems well past end-of-life estimates.

4.6.3 Reducing Costs: Expecting Lower Utilities & Maintenance Expenses.

Two areas of measurable gain that decision makers often consider as constituting "returns" on energy-efficient solutions include the amounts saved in utilities costs, and the amounts saved by no longer having to maintain failing equipment ("fewer people have to touch it").

Other areas of potential, measurable gain—such as preventing system failure, or mitigating utility cost inflation—receive far less attention in the capital planning calculations discussed with the research team.

Discussing how he might budget for future increases in electricity costs, the asset manager in Idaho concludes:

> *"That kind of analytics gets so granular that the time it takes to do that in our sized company (40 buildings) doesn't make sense. If I'm a shopping center developer that has 120 of these across the country, you might look at it differently. Our partners at (grocery chain) do this at thousands of places. So, we'll piggyback on their ideas (instead): "Hey, you guys think this light fixture is good for your section of the shopping center parking lot? Then I'm going to buy that, because you guys have done the math, and found this to be the right fixture."* (Asset Manager, commercial real estate development company, ID)

A different asset manager at a CRE company similar in size (40 buildings), echoes the sentiment when discussing hypothetical HVAC renovation scenarios:

> *"The equipment costs you $500,000. And then over the next five years, every year, you're saving $100,000 on your utility bill. That will pay you back in five years. So that would be worth it to me. You could get deeper and (into) more detail and look into (the decrease in) call outs you have from your HVAC vendor to come fix something. Or less filters you have to use in the equipment. Or lower cost of chemicals. All that kind of stuff. You could really go very deep into that. But on a basic level, I would look at it from: the equipment cost this much, and how much am I saving on my utility bill."* (Asset Manager, commercial real estate development company, WA)

The impact of energy savings, of course, is expected to be much greater where (and when) energy costs are higher. As the asset manager working for a national company notes, a recent spike in electricity costs in one region led directly to his firm's considering a new energy efficiency initiative there.

> *"Last year, we saw a 15% increase in energy cost. Tenants are very sensitive to that, because they get it passed on to them. They'll say, 'Oh, I want to see the usage.' That led us to do a study on whether or not we could add solar panels to one of the buildings."* (Asset Manager, national asset management company.)

4.6.4 Utilizing Cap-ex Reserves to Avoid Debt for Planned Renovations.

Decision makers look at four main sources of money to finance renovations, in this order (more or less): a) unspent excess income; b) capital expenditure reserves (cap-ex); c) bank loans, especially through the refinance of existing loans; and d) loans from private investors. They may, of course, tap their investment specialists to identify other options as needed, but these four are top-of-mind.

They prefer to avoid taking on more debt, if possible (options 'c' and 'd'), since that can limit their ability to borrow more money in future years and can also make borrowing more costly. They point to the scrutiny banks apply to their Debt Service Ratio, or the balance between income and debt, as a key measure of investment risk. Generally high interest rates, such as those they are seeing today in 2024, make the owners even more hesitant to borrow.

In lieu of extra cash on hand from rental income, decision makers will look first to their cap-ex reserves. These reserves consist of a separate pool of money with unspecified uses that do not count as operating income.

The owner of a residential complex describes cap-ex reserves as "like a piggy bank," to which the business contributes a percentage of income, at regular intervals, to fund more expensive projects that go beyond regular maintenance and utilities. An asset manager for a commercial office development enterprise says much the same thing: "They are the safety blanket for the break-fix."

For example, decision makers can draw upon cap-ex reserves, and excess income when available, to replace a building's lighting, or to repaint its interior. However, when considering more costly renovations—such as replacing an HVAC system, a roof, or a series of large atrium windows—they may choose or be forced to borrow money, generally through refinancing an outstanding loan already attached to the building.

Setting aside some income to put into reserves is particularly important to these businesses, given their general resistance to "replacing anything that still has useful life left in it." Owners know they will need to draw on the funds to make such replacements and repairs at some point; but they just don't know the exact timing.

The amounts in cap-ex are not considered part of the property's operating expenses. They accumulate from regular contributions of income until actually spent, so they can eventually add up to quite large numbers in big firms.

Debt is for the biggest jobs. The tendency is to draw upon existing cap-ex reserves to the extent possible. The most expensive repairs, like replacing an HVAC system, or a roof, or elevators—if they can't be delayed any further or broken into phases—might have to await the opportunity for a loan refinance.

"Typical" loan maturity dates mentioned to the team are five to ten years. Another option is to seek a new loan from private investors, but few decision makers think loans are the most prudent choice in the high-interest rate environment of 2024.

Taking on debt for big renovations can be scary, especially if a new tenant is not already waiting to occupy a vacated space. While vacancy might seem to be the best time to make big improvements, the loss of income entailed by space lying empty means having to borrow more at precisely the time when decision maker is "already suffering economically," which makes for "a hard swallow."

4.6.5 Rebates: Softening the Financial Impact of Renovations.

Rebates for energy-efficient solutions, while appreciated, are not typically a key motivator. An exception reported to NEEA comes from the owner of one of the smaller properties discussed, a multi-family complex in Oregon, who, in search of rebate opportunities, conducts regular outreach to his power company and to a county commissioner friend, in order to time his upgrades to take advantage of any "new programs on the horizon".

The more common attitude is one of understated appreciation: “Well, it wasn’t nothing.” Rebates come after the work is done, not before, so they don’t help with the obstacle of high up-front costs. Also, the sums offered typically amount to a tiny percentage of the total outlay, making it hard for decision makers to see them as game-changing.

Still, rebates can make a bitter pill less so. In the context of Building Performance Standards and laws, early adopter incentives of $.85 per square foot help to “leave less of a bad taste in the mouth,” as one Sustainability Director puts it. “Clients (building owners) are surprised: ‘Oh, we could get that much! Yes, explore that, tell us if we're qualified or not. …When you’re (thousands) of square feet, that adds up really quickly.”

4.6.6 Shaping Renovation Approvals Through Annual Reviews.

The data also provide a glimpse, if limited, into the negotiation tactics and processes that occur at Step 3, “APPROVE THE PLAN.” Negotiations can be complex, as stakeholders in the approval process include not only managers of physical systems, but of tenant relations, and officers in finance and investments. Big-ticket items receive special scrutiny.

The asset manager of a commercial real estate company in Washington provides the following thumbnail sketch of his firm’s approval process:

> *“We adjust our five-year capital plan every year before budget season, starting in August. The Operations Director presents me with their plan and priorities, and then I review it to see if I agree. I then present (the revised plan) to ownership with dollar amounts, and argue my case for each item. After that, ownership usually says yes, or no, or asks if we can hold off for another year. We then get the approved list of capital work that ownership has said we can do. After that we present to the Board, who generally approve it because they trust the review by ownership. And then we do the work in the following year.”* (Asset Manager, commercial real estate development Company, WA)

It is worth emphasizing that just because something doesn't get approved at the time doesn't mean it won’t be approved later when the budget climate is more favorable, the strategic goals better align, or the case is more clearly presented.

To persuade stakeholders to act immediately, compelling communications can make the difference. One asset manager mentions using photographs to convince stakeholders that inaction could damage their corporate image:

> *“Do I want to come into a building whose quality makes me question the quality of the healthcare? We promote (that message) visually with pictures. ‘Here's what YOU look like. Here's what the 17 other clinic buildings around you look like. You are the red-headed stepchild.”* (Asset Manager, national asset management company)

The approval process in institutional settings can differ altogether from CRE development/ management and corporate tenancy situations. The Director of Facilities at a technical community college in Washington describes a state-wide biennial review process, where condition assessments are performed every two years, and inspectors assign scores to specific needs and problems. **State monies for improvements are then allocated to all colleges, systemwide, based on those relative scores.**

Similarly, the Property Manager of a senior living facility in Washington describes receiving state funds, contingent on biennial inspections, from the Washington State Housing Finance Commission (WSHFC).

RECOMMENDATIONS

- **Offer a capital plan template to help decision makers cross the bridge from "planning" to "approval."** The template would help reduce their effort in collecting relevant data. It would also ensure that projects involving energy efficiency include fair estimates of their promised value.

- **Provide a package of "last mile" resources to help decision makers build the case for energy-efficient solutions to others in upper management (as well as potentially, lenders).** The package could include "white label" report templates, which produce finished results from the data supplied by the decision maker. Consider offering through a third-party organization already trusted within the real estate industry (such as the organizations IFMA, BOMA, NAIOP, and IREM, cited in the next chapter).

- **As part of the package, or as a standalone offer, provide a "rough order of magnitude" ROI estimator tool.** Decision makers could use such a tool to assess the financial value of both energy- and non-energy related benefits of solutions. Craft the tool to produce clear, succinct communications with others in upper management.

  Include tactics to draw comparisons between solutions vividly—such as showing "before and after" illustrations, or "glamour" photos of energy-efficient solutions in modern buildings of the same or higher grade.

- **Consider outreach to help popularize C-PACE and other sources of low-cost funding for energy efficiency projects.** Enable easy comparisons of financing mechanisms. A good start is the collection of funding resources appearing in McCabe (2022: 45-47) for NEEA. **The tools directing commercial real estate decision makers to these low-cost capital options must focus on reducing friction.** (See Chapter 4.8.7 for additional context about these requirements. Such requirements include: whether their project(s) will qualify, any usage restrictions that attend the loan, case studies involving companies of their size in markets with similar characteristics, real-time rates, and individuals in their area to contact for information.)

4.7 Who are the Influencers and Advisors?

Trusted information about trends and tools in real estate management, such as helpful ideas related to energy-efficient products and approaches, comes to the decision makers through trusted sources, including colleagues, professional organizations, vendors and consultants. Among the most reliable sources are the following:

4.7.1 Asset Managers.

Asset managers, and the CFOs they work with, are some of the most influential people in the renovations planning and approval process from the perspective of owners and others at their companies. When they gather and disseminate information for their organization, others listen to what they have to say. They craft recommendations and present them stakeholders at the primary decision making level in order to get plans approved. Their conclusions about energy-efficient solutions make a difference, as may their recommendations about the external partners they believe can help them.

4.7.2 Tenants and Residents.

The tenants and residents of leased space are also critically influential. This study's interviews are replete with references to their importance. Tenants are "at the top of the waterfall of influence" (Asset Manager, ID); they're "our number one priority; we need to make sure the tenants are happy and that they stay" (Property Manager, OR). "We need to provide what tenants are looking for" (Asset Manager, OR); it's important to "get (residents) to say they like the building and get other people into it" (Sustainability Director, WA).

At present however, when it comes to energy efficiency their influence remains largely a latent potential, not a reality. "**People want to see the (LEED) plaque," the VP of Sustainability at a one of the largest real estate companies consulted for this study, says. "Once they see it, that's all they need. …We need to develop an ethos of understanding, a change of attitudes, that's maybe a generation away."**

There might be more movement here among corporate tenants themselves than in CRE. In at least two owner-occupied settings represented in this study, a major shipping company, and pharmaceutical research company, "sustainability" is an explicit KPI and part of the company's mission. This commitment, according to their facilities directors, has made it easier for them to push for solutions such as an improved BAS, and LED lighting, and to get these innovations approved, also finding support for their own forward-leaning responses to Building Performance Standards and laws.

4.7.3 Contractors and Distributors: Large, Local, and Loyal.

As previous NEEA studies have shown, local contractors, sub-contractors, and their suppliers command great trust when it comes to advice for solutions that will be "practical," "realistic," as well as up to date, despite a degree of skepticism when following their advice means purchasing services. The primary reasons for this trust, is that they are thought to:

- know the climate in the region (temperature, weather)
- know the local market (who owns what, and which efforts have succeeded or failed)
- have hands-on experience with products
- have a demonstrated history of success with the owner

- possess reputations (and future business) to protect
- work at a scale that requires them to have learned effective approaches from large manufacturers, and from trade organizations

*"The contractors we've used have helped build these buildings in the beginning, every single one of them. So, they know those buildings like the back of their hand. And we usually have the same contractors do improvement or tenant rebuild projects. We don't bid it out, we just use the same ones because we know we get quality service, and they know how we like it. And they shoot us pretty straight and we shoot them straight." (*Property Manager, commercial real estate development company, OR)

"We have been fortunate in our community to have a pretty regular set of mechanical and electrical design-build partners. …There will be functional or subject matter expertise in electricity and heating and cooling, mechanical electrical, that we will rely on." (Asset Manager, commercial real estate development company, ID)

"We have a unique relationship with our builder (construction contractor), where we have made him a partner in our business for these projects here in the state. And we've got architects in town that have done every project with us." (Managing Partner, commercial real estate development company, MT).

4.7.4 Lenders.

A notable finding from the study is the strong influence in CRE of commercial banks. Two of the asset managers report having regular conversations with their banking representatives about their plans for their buildings, and that they rely on such dialogue for insight. Banking officers evaluate the viability, costs, and even unit makeup for new developments, for example, sharing helpful conclusions and guidance about potential market performance (and implicitly, about competitors).

> *"I have routine meetings with lots of lenders in this town, just to get their feel on what's going on. ... It's an open dialogue, you know, 'Have you considered this? What if you did this? What if you did more one-bedrooms, because we're seeing—.' Those conversations happen all the time. …Or really generally, 'We think your costs are pretty high.' And then I can infer, well there's a reason they think that! (laughs) They had to get that from somewhere."* (Managing Partner, commercial real estate development company, MT).

Receiving guidance from bankers on how loan rates are changing, and when, can also be essential for budgeting. "I'm making an assumption about what money is going to cost me when I have to go borrow it in April, hoping it's going to come down to 7% by then. So, there's a lot of information exchange that does go on, on a regular basis." (Asset Manager, commercial office real estate development company, ID)

4.7.5 Building Owners and Managers Association (BOMA) and its Members.

BOMA is often mentioned. One asset manager, perceiving the organization to be operations-related (as opposed to investment related), and says he would be likely to send his facilities manager to meetings rather than attend himself. Yet several others point out the pivotal importance of the organization, especially in the areas of education and networking.

> *"The biggest network in (our area of Washington) is BOMA. …They brought a lot of information back from Olympia on legislation. …And I reach out to other property managers directly that I trust within (the region), to find out about what they are doing, and what their ownership is requiring, and allowing them to do. A lot of them I know through BOMA."* (Asset Manager, commercial office development company, WA)

> *"I have a certification from BOMA, and have started working my way towards a couple other certifications through BOMI, the institute (for commercial real estate education)."* (Director of Facilities, community college, WA)

4.7.6 Utility Companies.

Decision makers look to utility companies for rebates, incentives, and in some cases project proposals that include estimated ROI. The property manager of a commercial real estate company in Oregon mentions that "EWEB (Eugene Water & Electric Board) is really good at helping us with return on investment equations that they provide us." Note also that rebates can make energy efficiency changes more palatable to decision makers, as previously discussed, which helps foster the favorable impression of utilities.

4.7.7 Energy Consultants.

The consulting companies specializing in the design of energy-efficient building systems bring value, too, particularly to the very largest and most sophisticated firms, who know how and when to bring them into a project. "They help us see the big picture and to understand interventions that we could build in strategically," says the VP of Sustainability at a large commercial real estate company in Seattle.

But mid-sized and smaller companies are unsure such consultants provide enough value for the expense. Several decision makers report hiring such firms and getting little for their money apart from a costly inspection. "They're not attuned to the pain of high upfront costs," as the asset manager in Idaho puts it.

4.7.8 Building Inspection Firms.

As mentioned in the context of Property Condition Assessments PCAs, building inspections and the documents they produce can have lasting and consequential effects on development. Property Condition Assessments, and ASHRAE Level 2 Energy Efficiency Audits (American Society of Heating, Refrigerating and Air-Conditioning Engineers) can provide key inputs to renovation plans. Annual equipment inspections by HVAC companies on the status of systems also carry weight. Communicating with such firms could significantly influence decisions to move in the direction of energy efficiency.

> *"Lenders will do a site inspection when we're doing a refinance. We had one recently, and the report was very positive. They could tell how much we care about the building. Their decision whether to refinance or give money all plays into it (our ability to make improvements)."* (Asset Manager, commercial office real estate development company, OR)

> *"On a pretty frequent basis we get a third-party consultant evaluation, where they'll walk through the building and provide what they would recommend as a 10-year capital plan. We try and do our own condition assessments. But we like to have that additional opinion that helps back up whatever we're presenting."* (Sustainability Director, commercial multifamily residential management company, WA).

4.7.9 Real Estate Brokers.

Brokers come to the decision makers with sales leads—prospective tenants—who can turn into paying customers when the developer is able to meet their needs**.** Money is at stake for all concerned.

> *'Brokers will usually come to us with a tenant in tow. And so, we have good relationships with those folks… They will bring prospects to us saying, 'Hey, I heard these guys are expanding, they're looking around.' It's a lot easier to research the needs of a known user than it is the hypothetical user that might someday come to town."* (Asset Manager, commercial real estate development company, ID)

4.7.10 International Facilities Management Association (IFMA).

A facilities director at a national shipping company in Washington mentions relying heavily on IFMA for information, networking opportunities, and continuing education credits, including workshops and conferences on energy efficiency. On learning of Washington's Building Performance Standards legislation, IFMA came to mind as his first stop to learn more about what the new rules will require.

4.7.11 National Association of Industrial and Office Properties (NAIOP), and Institute of Real Estate Management (IREM).

An asset manager at CRE development company in Portland mentions looking to the newsletters and emails from NAIOP and IREM for advice on issues like energy efficiency benchmarking. "BOMA, NAIOP, IREM—they're all over this type of thing."

4.7.12 Local Economic Development Commission (EDC).

The asset manager in Idaho turns to a local EDC to find out about new companies likely arriving to the area, and to learn what their priorities might be when seeking new workspace.

4.7.13 Public Policy and Regulatory Authorities (WA).

Decision makers in jurisdictions affected by Building Performance Standards look to their government agencies, like the State Department of Commerce, and the City of Seattle, to supply them with critical education about these new rules. These bodies are profoundly influential—but because the requirements are perceived as financially disruptive and sometimes hard to follow, their actions are regarded with some ambivalence. (Please see the final section of this report for additional details and clarification.)

Knowledge of established building codes, per se, was not regarded by the decision makers consulted in this study as part of their purview, but rather fell to their builders and architects.

RECOMMENDATIONS

- **Consider strategies to reach tenants committed to energy efficiency.** (Detailed recommendations on this topic will appear in sections 4.9.1 – 3 of the next chapter).

- **Provide guidelines and checklists to integrate into regular building inspections (Condition Assessments)**. Or provide technology demonstrations to help spot energy efficiency solutions in buildings that are feasible and affordable.

- **Promote adoption of ASHRAE Level 2 inspection capabilities among inspection firms.** ASHRAE Level 2 audits are already comprehensive for energy efficiency. But not all firms advertising energy audits offer the same quality of service (US Department of Energy 2011:9). Consider targeting inspections firms in non-metropolitan areas where such expertise may be limited.

- **To help deliver energy efficiency guidance judged persuasive, enlist the support of third-party organizations with strong industry credibility, such as BOMA, IFMA, NAIOP, and IREM.**

- **Conduct outreach to real estate brokers. Share information on potential tenant companies that publicize their sustainability goals and metrics.** Familiarize them with any data showing how specific energy-efficient solutions have attracted such tenants.

- **Continue/intensify existing NEEA efforts to inform and educate influential regional contractors.**

- **Regarding lenders, see Recommendations in the previous chapter, 4.6.**

4.8 Choosing Key Candidates for Energy Efficiency.

The final two chapters of this report adopt a more prescriptive approach, which distinguishes them from the earlier sections. These chapters respond to challenges that seem to call for more advisory input. The first challenge is to identify ideal targets for energy efficiency outreach, and the second challenge is to suggest ways to help decision makers navigate Building Performance Standards. Both questions seek guidance, as well as factual synthesis. Accordingly, the next two chapters, while they present new information, offer this new information in support of a distinct viewpoint about strategic targets and the forms of assistance they need.

Turning now to the potential targets. **Two main candidates emerge:**

1. **Commercial real estate decision makers who have shown openness or interest in energy efficiency.**
2. **Tenants at private companies who have already committed publicly to the energy efficiency path.**

4.8.1 Audience #1: Interested Supporters at Commercial Real Estate Companies.

A natural target is individuals at CRE firms interested in testing the market reception to energy efficiency. They could use some help solidifying support for energy-efficient solutions at their companies.

A name that suggests their capacity to facilitate adoption by others is the energy efficiency "Bridge-Builder." Bridge-Builders are identifiable by (among other characteristics) talking about energy efficiency in positive ways. **Those interviewed here say things like, "I have more of a natural instinct towards sustainability than others," and "to me energy efficiency means quality" and "we'll pursue sustainability if we can offset its costs."**

In addition to their expressed openness to energy efficiency, a second strong indicator of their receptivity is that they are likely to point to at least one building as an example of steps they have taken towards energy efficiency, generally to attract tenants interested in sustainable buildings. The building may have won an award or received a certification (several businesses recruited successfully on this basis are represented in this study).

Not all such experiments in energy efficiency necessarily produce certifications. A decision maker at one of the companies represented here, for instance, is experimenting with ideas for an "all electric building" by rebranding electric resistance heating—despite the method being an inefficient approach in practice. Their approach demonstrates a keen understanding of the marketing context, and with some additional rigor to ensure the incorporation of energy efficiency principles, can build upon the initial idea and generate measurable returns, encouraging future reinvestments.

4.8.2 Demonstrating Their Market is Ready for Energy Efficiency.

To be confident they can invest in energy efficiency, CRE Bridge-Builders need convincing evidence that their market is ready for it. They need to know that the tenants they seek care about the specific energy-efficient solutions they might propose.

"Carbon footprint?" the asset manager in Idaho asks (a strong example of a Bridge-Builder by the above definition). "No, it's 'Show me the rent level.' A subset of our market resonates with it, but we have struggled to find a consistent caliber of renter who will choose that over other priorities."

Another Bridge-Builder frames this challenge in the following way.

> *"I want to think that maybe I can charge more for rent, because people appreciate that we do have an energy-efficient building here. But that isn't the case. They still want all the modern amenities and the newest thing out there. It seems they don't really care if this building (LEED certified) is energy efficient or not."* (Asset Manager, commercial real estate development company, WA)

Since such forward-leaning decision makers are waiting for signs their tenants will respond positively, one simple source of assistance would be regional data. They need to know which companies in their immediate regions (the populations of current and prospective tenants) are committed to energy-efficient solutions. They also need to know why they are committed, and what types of tradeoffs these prospects might be willing to accept in exchange for solutions.

Additional proof their market is ready could come to them from real-world case studies, if not from their markets, then from markets with similar characteristics (liquidity, size, lifestyles, dominant industries). Finding third party case studies has proved useful in helping justify spending recommendations to investors, according to a Sustainability Director interviewed.

Crucially, such case studies should stive to demonstrate how energy efficiency measures have led directly to increased income, through the metrics of longer leases and higher occupancy rates (tenant retention), or of higher rents (tenant attraction).

At the same time, the often-expressed conviction that each building comes with unique challenges—the objection that, "that's not my building"—can drain these studies of credibility. As a result, the more specifically the cases relate to the kinds of problems decision makers see in their own buildings, the more relevance they can claim. This suggests an approach that compiles a collection of specific, relatable issues frequently encountered in buildings, rather than one that draws broad, theoretical conclusions from intricate case studies.

4.8.3 Steering Decision Makers to Cost-Effective Energy Efficiency Audits.

Several decision makers complain that they face obstacles the moment they start down the energy efficiency path. They can easily spend tens of thousands of dollars just to diagnose a single building's energy efficiency needs. They complain of "getting a bunch of solutions that don't make sense for us" and "getting nothing out of the $60,000 you spent other than some data—**this test, this test, that test, and next you know, you've spent $200,000 but haven't actually upgraded any equipment yet."** Audits by energy efficiency consulting companies can be expensive, not to mention costs of the actual building improvements.

The marketplace of energy efficiency consultants can be a difficult one to navigate. At least one interviewee, in Seattle, cites a surprisingly low figure ($7,000) for an ASHRAE Level 2 energy efficiency audit, the required starting point for compliance with Building Performance Standards and laws. **Energy efficiency organizations can help by guiding interested decision makers through the complicated marketplace of engineering firms offering these services**. An added benefit of spotlighting the marketplace would be to increase competition and potentially help lower rates.

4.8.4 Streamlining Access to Green Funding Dashboards.

Many decision makers would benefit from ready access to low-cost capital for energy efficiency projects. While interviews for this study did not delve into the available options ("green" loans, on-bill financing, and other environment-friendly financial instruments), the absence of spontaneous references to them by the decision makers creates an impression that such options are not top of mind. Some ideal criteria for such funding options are evident, nonetheless, from the body of comments surrounding their use of loans in general.

When considering loans, commercial building decision makers need to know, as quickly and easily as possible:

- **Whether their project will qualify or not.**
- **What other projects they are considering might qualify.**
- **What usage restrictions attend the loan.**
- **Real-time rates.**
- **An individual to contact, preferably in one's region or home state.**

To put these criteria into stark relief, an approach likely to fail them would be a generalized navigator that drops the decision maker into a large matrix of diverse agencies and customer service numbers throughout the US, as do many sites meant to serve as clearinghouses for green funding opportunities.

4.8.5 Supporting Both Attraction and Retention Strategies.

A vital targeting question is whether to focus on owners who tend to prioritize tenant retention, or instead, tenant attraction. Choosing one or the other could help energy efficiency outreach to sharpen its messaging. This study concludes, however, that both are important. Both impact the financial picture to the extent that choosing to focus on one over the other for targeting may be unwise.

According to a Sustainability Director at a commercial property management company in Seattle, a firm operating more than 90 buildings in Washington and Oregon, the distinction between "retention" and "revenue" (or attraction) is between two different and equally valid definitions of success for financial performance. The Sustainability Director frames this as a difference in mindset.

> *"Some owners prefer retention of tenants. Their goal is that the building succeeds, rents are stable, and people are happy. They are more about stabilized revenue. They're willing to accept slower growth. They just don't want to have loss of revenue from just not being occupied. We have other clients that will look specifically at increasing revenue. And that is <u>their</u> goal for determining the building is successful….They want to see revenue growth year over year, and for them, renovations are a way to bump up their rents to increase with the market."* (Director of Sustainability, commercial real estate management company, WA)

Some decision makers interviewed here would agree with the distinction without necessarily attributing it to individual preference in the way the Sustainability Director does. For instance, an historic building awaiting a new elevator and lobby might require a retention strategy for years, until the day funds come available to make the improvements; then the strategy shifts to attraction to capitalize on the higher rates the improvements now justify. However, the distinction pointed out usefully puts the spotlight on a nexus of related consequences that each strategy implies. Here are the differences in mindset, in distilled form.

In a "retention" strategy, success means:

- No vacancies
- Consistent revenue
- Stable rents to keep people in place

In a "revenue," or growth strategy, success means:

- Temporary vacancies tolerated
- Revenue increase progressively, year over year
- Rents are high, to match the market

The prudent choice might be to take a two-pronged approach, pitching energy efficiency differently to owners in a "revenue" mode, focusing for instance on innovative benefits and sensed comfort; while to owners in a "retention" mode, emphasizing safety, reliability, and costs savings.

4.8.6 Audience #2: Tenant Companies Committed to Sustainability.

The decision makers consulted for this study repeatedly point to the influence that tenants exert upon them in setting priorities for upgrading the buildings. This emphasis suggests that energy efficiency initiatives may do well to target the private companies that will eventually become the buildings' occupants.

The "low-hanging fruit" among these companies would appear to be those that have publicly committed to sustainability, and whose efforts include at least some record of initiatives in energy efficiency.

Companies publicly committed to act will be open to recommendations, whether these recommendations are for energy-efficient solutions and strategies for the spaces they already own, or for ideas on new commercial spaces for them to lease.

On finding such companies, energy efficiency organizations might target facilities managers, asset managers, or sustainability directors, to provide tools for them to choose the right experts, find the right plans, identify appropriate buildings, or identify owners are open to working with efficiency-minded tenants.

Some could argue that companies already committed to sustainability are not a good target because they will ultimately pursue changes for energy efficiency anyway, without support or guidance from energy efficiency organizations. Yet, there is good reason to think that many of them do need help, not to mention the opportunity they represent as thought-leaders and influencers helping to advance the market. Some would be further along in their efforts to promote energy-efficient solutions at their companies were they to have benefitted from such resources.

4.8.7 Assisting the Planning of Energy Efficiency Initiatives.

The experience of the Facilities Manager of a major shipping company in Washington interviewed for the study is illustrative of both the needs and opportunities for providing such assistance. The parent company has made sustainability a Key Performance Indicator (KPIs). It has also recently hired a new VP of Sustainability. Additionally, its senior managers have been publicizing electrification efforts for some its large construction and moving equipment, so the company has made its commitment to sustainability clear.

At the same time, the company is early on in this trajectory. There are signs that the company's Facilities Manager, despite his many years of experience with commercial HVAC and BAS, could use help crafting a comprehensive energy efficiency strategy. Faced with what he describes as "antiquated mechanical systems," and "embarrassingly low ENERGY STAR scores," he reports tackling the issues one by one over the years, hiring and firing different mechanical vendors over "a bunch of solutions that didn't help the problem." An electrician himself, as well as certified facilities manager, he knows from long experience when things are not working—but not necessarily what the ideal solutions might be.

> *"Just over the years of day to day, connecting to the BAS looking how the systems are going, you just get kind of a knowledge of how things are supposed to look and how they're supposed to work better. And, you know, I have tried to do things over the years and to improve the sustainability components on our work. It's something my management's very serious about. I've just tried to anything I could do along those lines that I know that my management is focusing on."* (Facilities Manager, national shipping company, WA)

He has successfully upgraded lighting, and after a false start, two BAS systems. But as he acknowledges, his energy efficiency know-how is self-taught, through hands-on experience, and occasional workshops and sessions offered through IFMA.

He will benefit from assistance that could help him develop a more holistic, integrated strategy to plan for his buildings' energy efficiency needs. His Computerized Maintenance Management System (CMMS), Limble, is used as ticketing system, not as a long-range planning tool.

The company's Treasurer has recently alerted him to Washington's "Clean Buildings Act," which, because one of the buildings is "definitely out of compliance" has him "very worried"; its HVAC may need to be "ripped out and replaced." Though he does not say this explicitly, it seems likely that **an energy efficiency roadmap would have taken him further along the path than he finds himself today. It would have allowed allow him to show his executive leadership the firm's exact next destination and score a professional win.**

4.8.8 Choosing Suitable Real Estate Partners.

A second way that the proponents of energy efficiency can assist companies which have committed to energy efficiency is to guide them during the process of finding viable office spaces to lease.
The need for such assistance emerges from conversations with the Facilities Manager of a global pharmaceuticals research company. Not only is the company committed to a set of "very strict and very aggressive sustainability goals," but the facilities manager, too, is passionate about sustainability, climate change and energy management.

At the time of NEEA's visit, the Facilities Manager is actively researching new locations for the company's labs and offices, subsequent to the acquisition of a smaller company that had been leasing the space. As part of the acquisition deal, the global company assumed ownership and maintenance of the building's HVAC system, which at 35 years old is past end of life—or "dead and should be buried," as the Facilities Manager says. Other factors also make the space unsuited to long term use by the parent company. The current layout is unable to accommodate staff and lab operations in the right proportions.

Energy efficiency experts could help her to solve some of the urgent challenges she now faces, such as identifying a landlord that shares the company's sustainability values—whether or not the landlord has achieved awards or certifications—and articulating specific energy efficiency criteria that should factor into the company's unfolding decisions about where to move.

For despite the company's emphasis on sustainability, there is a risk that during the move, energy efficiency will once again have to compete on the same terms with amenities, and that the company may set aside its commitment to sustainability until the after move, rather than embrace the opportunities afford by the transition to hold course and pursue its stated sustainability objectives.

> *"There's so many variables involved in making that decision: cost per square foot, percentage in tenant improvement dollars, and what amenities are offered on that site. Some sites we're looking at have fitness centers, on-site daycare, doggy daycare, covered bike racks. They're close to public transit. And all of those we have to take into consideration."* (Facilities Manager, global pharmaceutical research company, WA).

The company employs a "scorecard" method to help stakeholders evaluate and rank the options for the new space to be leased, based on "the needs of the company." The Facilities Manager will have a critical voice in crafting those rankings and could use some help deciding what to recommend. **A natural place for NEEA to step in would be to supply energy efficiency criteria for such scorecards, recommendations for how to weight the criteria, and guidance toward landlords who share the company's sustainability aims.**

RECOMMENDATIONS

- **Target CRE decision makers who have taken early steps toward energy efficiency (Bridge-Builders), and mission-driven corporate tenants.**

- **Distill proof-points for CRE decision makers demonstrating that their market is ready to embrace energy efficiency. Case studies should demonstrate how energy efficiency measures have led directly to increased income.** Metrics that matter most include longer leases and higher occupancy rates (tenant retention) or achieving higher rents (tenant attraction).

- **Help minimize friction in accessing low-cost capital options. Jointly publish and cross-promote low-cost financing options with industry organizations that run finance clearinghouses.** Examples of such dashboards include the EERE Funding Opportunity Exchange (Energy Efficiency & Renewable Energy 2024), the Funding Clearinghouse of the Interagency Working Group on Coal & Power Plant Communities & Economic Revitalization (2024), and the USDE Better Buildings Financing Navigator (US Department of Energy 2024).

Facilitate widespread access to these resources and optimize the user experience for decision makers who need agility, flexibility, and seamless integration with their existing plans and trusted regional lenders. Help CRE decision makers know whether their project(s) will qualify, any usage restrictions that attend the loan, case studies involving companies of their size in markets with similar characteristics, real-time rates, and individuals in their area to contact for information.

- **Help lower the barrier to accessing the audits and inspections that crucially demonstrate energy efficiency needs.** Create ways to guide interested decision makers through the complicated marketplace of engineering firms offering audit services. Promote audit pricing transparency.

- **Pitch energy efficiency differently to CRE projects in a "revenue" mode vs "retention" mode.** For revenue, focus on innovative benefits and sensed comfort; for retention, emphasize safety, reliability, and costs savings.

- **Help facilities managers at mission-driven companies quantify their progress reaching corporate sustainability goals.** Supply them with planning tools to help demonstrate to executive leadership that they are advancing the firm's work toward sustainability.

- **Supply input to corporate campus relocation scorecards.** Consider guiding tenants to landlords who share the company's sustainability aims (even if they currently lack formal building certifications).

4.9 Helping Decision Makers Navigate Building Performance Standards.

An opportunity exists for the proponents of energy efficiency to work as honest brokers of practical business advice for compliance. In the context of Clean Buildings Performance Standards and related laws, there is a clear need for impartial go-betweens to help building owners navigate the complex landscape of new rules, dates, and continuous revisions, and to help them craft action plans that are ordered, practical, and affordable.

4.9.1 Adapting to Disruptive Changes.

Washington's Clean Buildings bill of 2019, signed into law as House Bill 1257 and later expanded, aims to "lower costs and pollution from fossil fuel consumption in the state's existing covered buildings and multifamily buildings" (Washington State Department of Commerce, 2024). Owners of buildings with floor areas of greater than 20,000 sq ft are required to benchmark their buildings' Energy Use Intensity (EUI) and to create specific plans to reduce EUI. At the date of this writing, the earliest compliance deadlines are coming into view. The deadline for the very largest buildings, of more than 220,000 sq ft, is 2026. Buildings more than 50,000 sq ft are required to comply with standards beginning in 2028. In 2023, Oregon passed House Bill 3409, modeled after Washington's Clean Buildings law. While rulemaking is in progress, the first compliance deadlines in Oregon are set to begin in 2028.

Today, decision makers at the largest companies are deeply immersed in auditing their buildings to determine which are out of compliance and what to do about it. Those at mid-sized and smaller companies are only now beginning to study the requirements (some of them even learning about these standards from NEEA during the interview).

Decision makers at a large, nationally-operating commercial real estate development company, which faces similar laws in other states, state that Washington's Building Performance Standards will significantly alter how their company does business.

Unlike "Substantial Alteration" work, where the scale of planned renovations triggers mandated improvements, the new laws impose mandates "midway through (the building's) lifecycle, regardless of whether or not a renovation is underway. **This means 'a shift in business,"** the company's VP of Real Estate observes. In response, the company's VP of Sustainability has taken steps to pro-actively inform executive leadership at all levels of the company, including the investment teams and Board of Directors.

"Because we're not talking not simple stuff. I mean we're replacing the circulatory system of a building. So, this is major surgery, with dramatic cost implications that are both financially and operationally disruptive," the company's VP of Real Estate Services says.

4.9.2 Proceeding with Projects Despite the Difficult Timing.

The new standards are coming into view as commercial office real estate companies, especially in the major cities, continue to face high vacancy rates, with many businesses having shifted to remote work. NEEA's conversation with a Director of Engineering at one such firm, in Seattle, takes place at a conference room looking onto historic buildings adjoining empty storefronts, guarded outside by private security.

> *"Listen, we are proponents of making commercial buildings more sustainable. But we've got possibly the worst time in commercial real estate in terms of value. And now the city and state are potentially making us want to reinvest money into a dying asset. It doesn't make sense. …The first set of state deadlines is 2026. So, in the next year we're going to have to make some hard decisions as to what we're going to do in terms of trying to meet those requirements for our buildings that don't already meet them."* (Director of Engineering, commercial real estate development company, WA)

By "hard decisions" the Director means selling at a loss or negotiating potential loan defaults. The VP of Real Estate Services just cited asks NEEA to consider a building whose value has already declined post-pandemic. Then subtract from it the unplanned-for costs of audits and renovations, or alternatively the amounts in annual base fines plus roughly a dollar per square foot if out of compliance, and one can understand how decision makers seem unsettled by the convergence of stiff regulations with ongoing economic pain. Rational owners, who no longer see equity in their assets will, to use the trade's delicate language, "hand them back to the bank."

4.9.3 Addressing the Realities of Sometimes Having to Sell, or Pay Fines.

The VP of Real Estate Services interviewed tells NEEA that in other cities with similar laws, his company has opted to sell, at auction, buildings whose needs were judged too expensive to bring into compliance. On the other hand, he is aware of other owners, in those jurisdictions, who have found it cheaper to pay the penalties rather than comply, essentially treating fines as "just an operating cost you bake into the annual cash flow."

It's unclear the extent to which tactics of non-compliance will prove viable in Washington. The Sustainability Director at a Real Estate Management Company in Seattle doubts that many owners he speaks with will find it cost-effective. **Non-compliance, he notes, "is not a one-time cost but a yearly burden. Which doesn't make sense versus spending the money and getting the ancillary benefits of energy reduction and hopefully, reduced operating costs."**

4.9.4 Overcoming Ambiguities to Prevent Inaction.

Commercial real estate owners in Washington who are aware of the laws associated with Building Performance Standards are anxious to learn more about the relevant details of the rules so they may respond appropriately. **But some find them a moving target, making it hard to take confident next steps.**

Director of Facilities at Community College in eastern Washington feels the State has "put the cart before the horse; let's pass legislation and then figure out the rules." As an entity in receipt of state funding the College benefits from strong lines of communication with state agencies like the Department of Commerce, which is in charge of crafting the rules surrounding Building Performance Standards.

The Facilities Director describes learning of the rules early through outreach from the State Board of Technical Colleges (SBTC) and Operations and Facilities Council (OFC), which has allowed him to learn early about Commerce Department meetings and to observe the rules process unfold over months.

So far, the College has engaged an Energy Service Company (*ESCO*) to implement a high-level audit (at no charge), and at the time of this writing is in the midst of a paid "investment grade audit" of buildings identified as out of compliance, also known as an *ASHRAE Level 3 Audit*. The paid audit is expected to provide detailed a roadmap and financial plan for energy efficiency projects. Others, however, report difficulties choosing the right path in this landscape of audit options and spending significant sums only to receive "just data," but not actionable plans.

Some colleges that have moved more quickly than his have regretted it, he says.

> *"In Wenatchee (at a Department of Commerce meeting), they said, 'You need to put meters on every building, so we can get gas and electricity metered, and establish benchmarking.' Then when we went to another meeting, Department of Commerce said, 'Well, I wouldn't do the meters quite yet, because we're potentially going to change or alter some of the rules to try and make things a little bit easier.' Some of the colleges got in an uproar, because they had already spent hundreds (of thousands) if not up to a million dollars on trying to install some of these meters and get compliance established*." (Director of Facilities, community college, WA).

"Those colleges could have waited on that, and spent their money more wisely," the Facilities Director concludes. Private commercial real estate developers in dialogue with the Commerce Department are also challenged with deciding how and when to act, as the rules continue to be ambiguous. Decision makers have a lot of questions that the State may not be able to answer yet. The VP of Sustainability cited earlier describes approaching the State with a question about how to assess energy usage, equitably, for buildings with anomalous high vacancies (a consequence of the recent downturn in the market that could prove temporary).

> *"Are we okay to submit that building early, because people aren't in the building? And is that building (then) in compliance? Or are we kind of cheating the system that way?...I don't think the state has a strong answer or guidance to help us navigate those questions right now. And so we look at it as, well, here's what the rules are, there's no explanation around that rule. So we're going to find the right path that makes sense for us."* (VP of Sustainability, commercial real estate development company, WA)

4.9.5 Recognizing the Wisdom of Not Waiting to Act.

Energy efficiency organizations can help ensure that decision makers have identified liaisons and submitted questions to commerce.wa.gov that demonstrate good faith efforts to stay informed on changes to rules. They might also advise caution before investing in physical changes or equipment until after the completion of high-level audits. In no sense should they advise decision makers to wait to begin their audits, however.

Those with the largest buildings, facing compliance in 2026, may already be running behind schedule if they have not begun audits and benchmarking. For those "sitting on their heels and thinking they have plenty of time," the College Facilities Director interviewed, warns, "They really don't**. Realistically, to get 12 months of benchmarking data, then run projects over three to six months to get everything done, then collect data over another year, you are right at that clock."**

Moreover, the longer decision makers wait, the higher the costs will be to comply, and the greater the likelihood that they will not be able to do so in time to avoid penalties. The Sustainability Director at the real estate management company in Seattle explains the challenge to client-owners in this way:

> *"I'm telling them, 'Hey, we're not in a good spot. We need you to prioritize this now. So that we can appropriately plan and you're not going to be hitting, in three years, a sudden $200,000 renovation cost versus a gradual $10,000 every year to get this done.* ***The longer you wait, the higher costs get.' There's always inflation. But there's also more demand on our vendors, because if we're competing with everyone else that waited, those vendors are going to charge higher rates to everyone. And we will lose out on any energy savings in the interim****. So, all of that starts to stack up pretty quickly in your ability to offset costs."* (Director of Sustainability, commercial real estate management company, WA)

4.9.6 Finding Honest Brokers for Reliable Guidance.

Some decision makers newly confronting the road to compliance say there is "nobody they can really trust" to advise them. "All these consultants telling me I need to do all this stuff are doing it because they are going to make money from it. I haven't met anyone with my interests or the ownership's interests at the top of their mind," the Asset Manager of a commercial real estate development company in Washington says.

Even the mechanical contractors they normally use could have a dog in the fight. "I don't really trust anybody, per se," the shipping company's Facilities Manager says. "I need to get some training. Because all these companies—nothing wrong with (my mechanical engineering contractor), they're a great company. But they are in business to sell me mechanical upgrades."

Decision makers early on the path to compliance need two kinds of help: first and foremost, clear factual information about the guidelines from government; and second, practical guidance from the professional community. For them, currently, the trusted guidance is sought from peers they know through professional networks, like BOMA and IFMA.

> *"The main thing I want to do is learn what the actual requirements are, so I have a good understanding of them. Seattle is putting out a webinar that's on my calendar. And then I'll probably go to the IFMA people, see how they respond to this thing. So, I am looking forward to this year's energy summit there, and then we'll just see how they're planning on doing this. So, this has only been rolled out a few weeks ago now, so it's on my to do list. But I'm not quite sure. I'm not quite sure*." (Facilities Manager, national shipping company, WA)

RECOMMENDATIONS

- **Adopt a tone for communications that acknowledges the substantial financial consequences of new laws in impacted states.** Suggest that regulations, while both daunting and at times hard to confidently grasp, still should be followed as soon as possible in the best interest of their companies.

- **Advise decision makers simply, "Don't Wait."** Emphasize that prudent commercial real estate owners have found that waiting to respond is more costly because of increased demands on vendors, leading to labor bottlenecks and higher rates for services. Every month waiting postpones the inevitable while only adding to costs.

- **Promote and facilitate peer-to-peer forums advising on how to approach Building Performance Standards.** Co-sponsor regional meetups with WA State Department of Commerce speakers to explain and discuss rules.

5 Conclusions and Recommendations

This research has uncovered numerous obstacles to introducing energy-efficient solutions into renovation planning processes. Previous chapters have offered suggestions for how NEEA may respond to each of these obstacles, in the form of Recommendations at each chapter's end. This chapter offers a distilled summary of these recommendations, aligned to specific steps in the Decision maker Journey.

The main challenges NEEA faces in persuading decision makers to include energy-efficient solutions in their regular building renovation processes are, in brief:

- Tendencies to react to problems rather than proactively optimize building systems.
- Hesitancy to upgrade systems until existing systems approach failure.
- Short periods of time calculating ROI that may impede long-term planning.
- Perception that energy savings have relatively low financial impact.
- Preference for amenities and aesthetic improvements over energy-efficient solutions.
- Low awareness of the sensed benefits of energy efficiency.
- Little proof that energy efficiency attracts or retains tenants.
- Little apparent interest in green funding (and likely friction accessing such funding).
- Capital planning processes that are at times irregular or improvised.
- High expense of energy efficiency audits that could uncover needs and inform plans.

In response to these challenges, following is an inventory of the many opportunities this research has uncovered. To guide BetterBricks in structuring and orchestrating its actions, the recommendations will be positioned at different "moments" in the Journey when decision makers are considering the types of matters that make the recommendations relevant. Much of the potential for NEEA intervention is evident in steps 1, 2, and 5.

Step 1A: IDENTIFY THE NEED / Establish Baseline

1. For general awareness campaigns, as well as other forms of outreach:
   a) Target **tenants committed to energy efficiency,** or **CRE Bridge Builders** (decision makers who have taken who have taken early steps toward energy efficiency).

   b) When communicating with CRE decision makers focus on **the financial rather than intrinsic benefits** of energy efficiency.

   c) Enlist the support of **third-party organizations with strong industry credibility**, such as BOMA, IFMA, NAIOP, and IREM, to be additionally persuasive.

2. Supply corporate facilities managers and owners with input to corporate **campus relocation scorecards**.

3. Provide forums for decision makers to have **peer-to-peer conversations about Building Performance Standards and laws**. Facilitate regional meetups with Washington State Department of Commerce speakers to explain and discuss the rules.

Step 1B: IDENTIFY THE NEED / Inspect & Maintain

4. In campaigns targeting facilities and other managers with energy-efficient solutions, **capitalize on the top priority of preventative maintenance**.

5. Provide simple checklists to help facilities and other managers (and owners) **optimize their "drive-bys" and "night walks"**.

6. Provide **inspection firms with guidelines**, lists, and product technology demos to help them integrate energy efficiency into their regular building inspections.

7. Promote adoption of **ASHRAE Level 2 inspection capabilities** among inspection firms in regions where access to this expertise may be limited.

8. Pitch energy efficiency **differently to owners in a "revenue" mode vs "retention" mode**. For revenue, focus on innovative benefits and sensed comfort; for retention, emphasize safety, reliability, and costs savings.

Step 1C: IDENTIFY THE NEED / Find Issues

9. Help decision makers **solve practical problems** with their buildings and market that may or may not have to do with energy efficiency.

10. Help **lower the barrier to accessing the audits and inspections** that crucially demonstrate energy efficiency needs. Guide interested decision makers through the complicated marketplace of engineering firms offering audit services. Promote pricing transparency.

Step 2: MAKE A PLAN / Rank Problems

11. Distill proof-points **demonstrating to decision makers that their market is ready** to embrace energy efficiency. Demonstrate how energy efficiency measures have led directly to increased income: especially, longer leases and higher occupancy rates (tenant retention), or higher rents (tenant attraction).

12. Toward decision makers newly coming to terms with Building Performance Standards and laws, adopt a tone in communications that **acknowledges the substantial financial consequences** of new laws in impacted states, but that the regulations should be followed quickly in the best interest of their companies.

13. **Advise such decision makers, "Don't Wait."** Emphasize that other commercial real estate owners have found waiting to to be more costly because of labor bottlenecks. Waiting postpones the inevitable while only adding to costs.

Step 2: MAKE A PLAN / Negotiate Budget

14. Help decision makers **quantify the impacts of any efficiency solutions** in which they have chosen to invest, making the case that future investments in energy efficiency will be equally successful financially.

15. Help tenants at sustainability-oriented companies find **resources to discuss leasing options** that advance corporate energy efficiency goals.

16. Help **popularize—by highlighting or aggregating— CPACE and other sources of low-cost funding** for energy-efficiency projects.

17. **Minimize friction to uptake of green funding** by decision makers by specifying up-front any project qualifications and restrictions, providing examples of how similar-sized companies have used the funds, offering real-time rates, and including local contact information.

Step 3: APPROVE THE PLAN

18. Create a **capital plan template** to help decision makers cross the bridge from “planning” to “approval.”

19. Provide a **“last mile” case-building package** to help decision makers leverage their financial data to sell through energy-efficient solutions to others in upper management (and potentially, to lenders). Consider offering through a third-party organization already trusted within the real estate industry (such as IFMA, BOMA, NAIOP, and/or IREM).

20. Provide decision makers with **“rough order of magnitude” return on investment estimator tools** (ROM-ROI) to help them more easily sell-through energy efficiency priorities that may seem especially costly.

Step 4: DO THE WORK

(Note that because NEEA has done extensive work on interventions involving this step in the Journey through its many programs, the current research focused mainly on other steps.)

21. Provide campaign materials to help leasing managers and property managers **stoke excitement and foster a sense of stewardship over the improvements in progress** at their building that will improve comfort and efficiency (with themes such as "Healthy Tomorrow” or “Comfort Revolution”).

Step 5: SHOWCASE THE BENEFIT

22. Give leasing managers and agents tools to **showcase the physical presence (and effects) of specific energy-efficient solutions** in their buildings ("seeing is believing" campaign). Help energy-efficient solutions compete with more tangible amenities.

23. To help attract tenants, create **marketing toolkits that leasing agents can use** to sell energy and non-energy (experiential) benefits to prospects, with talking points and tenant/resident testimonials.

24. To foster connection with existing tenants, **help leasing agents create letters highlighting improvements and benefits** they can share in annual notices (such as Operating Expense letters, and Common Area Maintenance letters).

25. Provide access **to financial valuation data** for completed energy efficiency improvements to help financial and investment teams communicate financial impacts in annual reports.

26. Share information with **real estate brokers on potential corporate tenants** that publicize their sustainability goals and metrics. Familiarize them with data showing energy-efficient solutions that have attracted such tenants.

27. Help facilities managers at mission-driven companies **quantify their progress reaching corporate sustainability goals.**

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Glossary

Adaptive Controls: A system where the control parameters adjust automatically in real-time to maintain continuous control over a variable process (Rao 2024; Åström 1989)

ASHRAE Level 2 Audit. "In-depth analysis of energy costs, energy usage and building Characteristics" (US Department of Energy 2011:2). Follows a Level 1 Audit, which identify no-cost and low-cost energy saving opportunities and a general view of improvement opportunities; and precedes a **Level 3 Audit**, also known as "investment grade" audit, which includes financial analysis for major capital investments (Ibid).

Energy Service Company (ESCO): A business that develops, designs, builds, and arranges financing for projects that save energy and reduce energy costs and energy related maintenance costs. Distinguished from other firms in that their compensation is tied to actual energy cost savings (Federal Energy Management Program 2024).

Full Service Lease, or Gross Full Service Lease: Real estate rental agreement where the landlord pays all building expenses, including utilities. Also called a gross rent lease (CREFC Glossary, 2024).

Modified Gross Lease: An agreement where the tenant pays a base rent at the beginning, but then "takes on a proportional share of some of the other costs associated with the property as well," such as property taxes, utilities, insurance, and maintenance; "the extent of each party's responsibility is negotiated in the terms of the lease"(Chen 2021).

Pro Forma: A projection of a property's cash flow over a defined holding period, including expected income, expenses, and debt service, using historical operating data, growth assumptions, and current market information (First National Realty Partners 2021; Institute of Real Estate Management 2018:60).

Split Incentive, or Misaligned Incentive: "A transaction where the benefits do not accrue to the person who pays for the transaction"(NYC.gov 2024) In the case discussed here the owner of a multifamily residential building pays for the energy-efficient solution (heat pumps), but is not able to recover the savings directly, since the tenant is responsible for paying the related utility bills.

Triple Net Lease, or NNN: "A lease whereby the tenant pays rent, real estate taxes, (and) expenses as well as maintenance fees. This implies no running costs for the owner." (CREFC Glossary n.d.) Also described as meaning "many things to many people," and often includes the landlord being responsible for "maintenance of the roof and bearing walls" (McNellis 2015).

Appendix A: Interview Protocol

Session Duration: 75 minutes

Note for attendees: This protocol is a tool to guide the session. It is not a survey. Its purpose is to guide people to describe and demonstrate their experiences to us as naturally as possible in their own words, so that we can draw inferences about their perceptions, values, understandings, and priorities. Much of the value will come from follow-up probes to statements the participant makes in real time, not necessarily from the questions as currently phrased.

INTRODUCTION

Goal. In this conversation, we'd like to learn about your decision making process when it comes to renovating your building(s). We're working with the NW Energy Efficiency Alliance: an alliance of utilities and energy efficiency groups dedicated to increasing energy efficiency in the Northwest (by creating market changes). But this is not a conversation about energy efficiency. We want to find out what your normal process is like today, as you think about renovations: your vision, your process, and how you make decisions.

What to expect. 75min. Afterwards, you'll receive an honorarium as a thank you for your time.

Your role. Reflect honestly on your experience. No right/wrong answers.

Anonymity. When writing up results, we will keep all statements anonymous. We will not attribute comments to any specific individual or firm. (So you should free to speak openly.)

Recording. You will be describing things that we will want to study carefully. So we'd like to record and transcribe this session. Is this alright with you? Your recording won't be shared outside of the small internal team working on this research project.

[Begin recording.]

1 – BACKGROUND

BUSINESS CONTEXT

- [IF SINGLE BUILDING] Tell us about your building—key features, size, whatever you think is most important to know about it.

- [IF MULTIPLE BUILDINGS] Tell us about the buildings in your portfolio—key variations, commonalities, whatever you think is most important to know about them.

- What's your long-term strategy in the value you seek over time? (e.g., buy to flip ["value-add"], for cash flow & dividends ["annuity"], to build value to sell ["capital appreciation," or just to have a good place to do business, or something else?)

- Any new challenges you face managing a commercial building in today's market? How are you handling them?

ROLE & TEAM

- Tell me a bit about your own role—main responsibilities, what an average day is like for you.

- Tell me about the team you lead—key people (roles) you work with, day to-day, year-in/year out. Whom do you rely on the most?

- When making a decision on major property renovations who are the key players? (Just in brief right now. We'll discuss more as we go.)

2 – STRUCTURE OF RENOVATION PROJECTS

Help us understand your process for taking up major building improvements. I'm interested in the larger renovation projects that tap into your capital expenditures budget.

- Project Categories. How do you categorize such projects? What are the different types of renovations that you might undertake? [Explore as appropriate: By system type affected? / By potential ROI? / By urgency? / By size of likely budget? / By impact on multiple systems? / By something else?]

- Phase Structure. As you think about such projects, is there a typical "framework" or "map" or "phased process" that you try to follow? [Explore: Steps / order / typical length / variations by project type.]

3 – RENOVATION PROJECT WALK-THOUGH

Choosing an example/case study. It will help us to understand your process if we choose a single project to refer to in our conversation. So let's choose an actual renovation to discuss in detail—either one you've done, or one you're considering. Ideally choose one that uses capital funds, and shows your long-term vision for your building(s).

So, with that project mainly in mind—please walk us through each step of your process. (Discuss whether each step is "typical" or not as we go along. Fine to cite other projects, too.)

— A | EARLY ON —
Now let's go through your process phase by phase. How did this project begin?
[Record key steps on index cards, so participant can interact with them.]

Sparks.

- What influenced you to start thinking about the renovation? (One key circumstance? Multiple?)
- How did things come to your attention?
- Whom did you look to for advice—about whether there was a need?

Plans you already had.

- Have a schedule or calendar of upgrades that you plan over time? (What's it called? How used? Who controls it? Who developed it?)
- Issues/conditions that get items onto such a calendar?
- Other plans/calendars of general nature you consult before starting a project like this?
- How far out in time do you plan your capital expenditures?

Goals.

- Which building systems considered? (Single? Many at once?)
- Different approaches considered?
- Which influenced you more—problems, or opportunities?
- What did you hope to accomplish (with the renovation) and what concerns did you have (e. g., choices, process, timing, capital availability, tenant impacts, etc.?)

— B | MIDDLE —
Let's go further along in your process.

Whole building.

- Given all the possible ways to maximize value—new technologies, ways to fund, partners—how do you know whether you're leaving value on the table?
- Sometimes it can be effective to upgrade several systems at once (e.g. better windows let you downsize HVAC). Did you consider anything like that on this project or not? (How so?)
- What mechanisms/processes help you plan renovations together, in an integrated way? (And if not, why not?)
- What would drive a whole building retrofit vs. a single system retrofit?

ROI / Operations.
What are the financial metrics you looked at for the renovation—to decide go/no-go? Did you consider returns in the short run, or long run? [Explore as needed]:

- Lower maintenance costs?
- Savings from preventing a system failure?
- Savings from future utilities costs (electric, gas)?
- Other?
- Did factors like these get quantified & put in your analysis? (Why not?)

ROI / Property Value Overall.
How important was it to consider the impact of renovations on property value overall?
[Explore as needed]:

- Increased rents? (vs. temporary loss of income)?
- Lower tenant churn?
- More tenants?
- Better tenants?
- Brand value?
- Did factors like these get quantified & put in your analysis? (Why not?)

Risk.
Which aspects of the renovation seemed risky—if any?

- How did you assess those risks?
- How did you get past them (or not)?

[Explore as needed: funding climate / compliance / codes unintentionally triggered / nascent technologies, etc.)?

How to fund.

- At what point did funding methods come up—early on, or later? How so?
- How did you fund the project?
- Who did you work with to fund it?
- Did you share costs with tenants? How did that impact your decisions to proceed or not?

[Explore as needed: incentives / rebates / loans / grants / tax credits / energy-as-a-service / lease modifications]

Who to do it.

- How much was your planning affected by finding the right people—contractors / engineers / architects / consultants / ESCO reps?

[Explore: available people / people you trust / expertise]

Regulations.

- Any regulations on the project you found tough to implement, or burdensome?
- Ever need to apply for waivers or exemptions?
- In general, how do you keep up to date on regulatory landscape for existing buildings (fed, state, local)?
- How far ahead do you plan/budget for upgrades that you expect new codes might require?
- Who keeps you informed you about whether your building is in compliance at a given time?
- Do you talk with your team about new regulations that are pending? When? In what contexts?

Sustainability goals.

- Do you have any corporate sustainability or energy goals?
- How and when did they emerge as worthwhile goals?

— C | LATER STAGES —
Let's explore some of the later steps you might take.

Deciding.

- Any times you made plans but decided against moving ahead? Describe some examples?
- How about this project? Key factors that determined whether project was go/no-go?
  [Explore: Budget / people / timing / other]

Doing.

- Once you decided to move forward, what were the key factors helping you to complete the project (e.g., money, team, other resources)?
- Anything that stood in your way to completing?
- How did you know the renovation project was "done"? (e.g., work ceases / city inspector sign-off / "commissioning" / never really done?)

Tracking, evaluating, incorporating.

- What did you (and your team) learn from doing this renovation?
- What did you look for as measures of success?
- Did you meet those measures?
- How did you know?
- Any aspects of the project where you think you could have found more value?
- How did you make use of learnings?
- Did the learnings prove useful for subsequent renovations, or not? How so?
- Any mechanisms in place to help leverage learnings for future projects?

4 – YOUR TAKE ON CLEAN ENERGY STANDARDS

[FOR WASHINGTON PARTICIPANTS / & EAST COAST "LEADERS"]

What do you know about WA Clean Buildings Standards? How did you come to know about them, and how do you feel about them?

- Who on your team is most involved with them?
- Impact for your business?
- What are peers in business saying? What are they doing?
- Plans on your calendar (e.g., benchmarking reports)?
- Did you anticipate and account for your response in budgeting?
- To what extent has energy efficiency been a priority for your team up to now—or not? (Would you have adopted any measures without mandates?)
- Does the new law change anything about the way you plan improvements to your building(s)? How?

[FOR OR / ID / MT PARTICIPANTS]

We would like to hear your views on new energy efficiency laws taking effect in various states. Washington, for instance, now requires commercial building owners to track & improve energy performance over time.

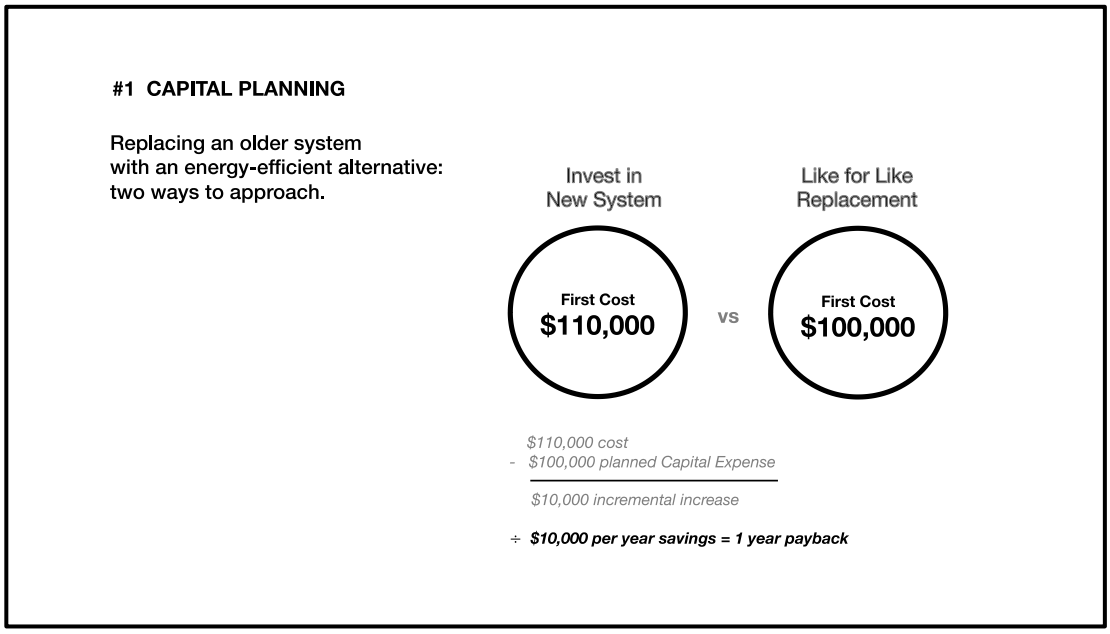
- Do you know much about these developments?
- In general, how do you learn about such changes to policy & law?
- Who on your team is most involved with them?
- What are others (in your business) saying & doing?
- To what extent has energy efficiency been a priority for your team up to now—or not?
- If laws like this come into effect here, what impact on business do you foresee?
- Would you imagine laws like this will lead to changes in the ways you plan improvements to your buildings? How?

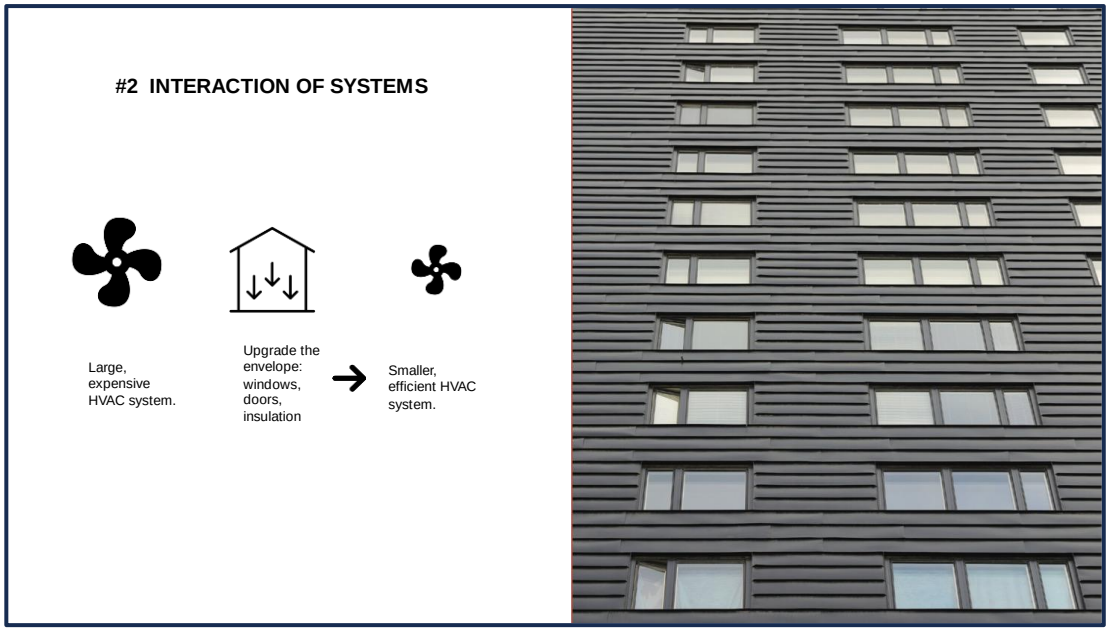
5 – TOUR (OPTIONAL)

We would like to see a physical building in your portfolio that we've talked about. Experiencing the space can help bring to life what we've been talking about. It will help us to better understand your priorities. Might we do that now?

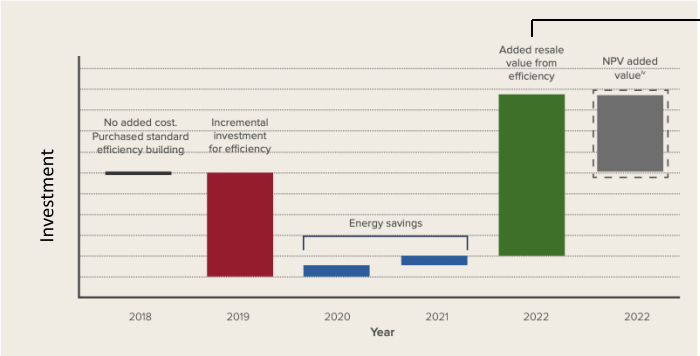
6 – IDEAS (OPTIONAL)

We'd like to show you one or two ideas that the team has been considering. They represent some ways to think about the value of for energy efficiency. We wonder if you think there is anything relevant for you in any of them. (Examples #3 and #4 feature diagrams appearing in Jungclaus, et al [2018:12, 24].)





#3 ASSET VALUATION



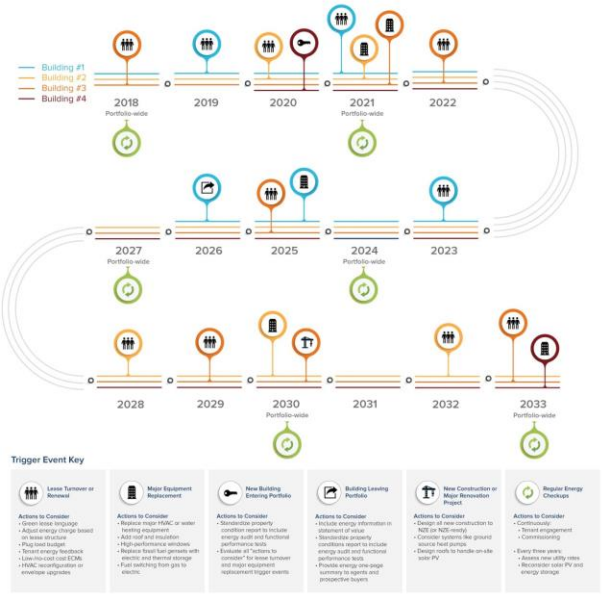
Energy efficiency increases value of building:

- COSTS.
  Lower energy costs.
- RENTS.
  Higher rates.
- OCCUPANCY.
  Lower turnover.
- TENANTS.
  Higher-quality tenants.
- RISK.
  Shields against energy price increases.
- LOAN RATES.
  Attractive to lenders & investors (lower interest rates, cap rates).

#4 ZERO-OVER-TIME

FIRST:
smaller projects,
short-term payback.

PLAN OVER TIME:
bigger energy projects,
synched to major upgrades.



Appendix B: Recruiting Criteria

Participants came to the study through three different avenues: a) Strategic Research Associates, WA, a market research and recruiting service; b) Hayden + Tanner, a NEEA partner in the Commercial Real Estate industry; and c) contacts in NEEA's professional network, especially those from BOMA, and ULI. Listed below are the ideal criteria the team worked to meet.

SUMMARY OF RECRUITING CRITERIA

Sample size.

- Decision makers (N=15).
- Responsible for maximizing a property's value for the owner of the property (or may in some cases be the owner). Mitigates risks, navigates legal and tax rules, oversees lease structure, and plans and oversees large capital improvement projects. In general, has comprehensive outlook and understanding of the owner's property/properties with a long-term strategy in mind, including financial and market conditions over time (ALL).
- Defined by the nature of decision making (as just described) more than by title. However, likely titles include "Asset Manager" or "Portfolio Manager" in larger organizations, or " "Property Director," "Asset Director," or "Owner" in smaller organizations (ALL).

Building sizes.

- Minimum 20,000 square feet (ALL).[3]
- 20,000 – 50,000 square feet (minimum n=4).
- Greater than 100K square feet (maximum N=1).

Ownership Types.

- ***Commercial Office*** (N=5). Leased office space. Owned and operated by private investors for the purposes of generating revenue through leases to one or more tenants (leased office space). Typically occupy less than 10% of the building (e.g., for a management office). EXCLUDED are warehouses, factories, hospitals, and other buildings constructed around specialized equipment or industrial processes.
- ***Commercial Office, Owner-Occupied*** (N=5). Same as Commercial Office except for the owner's occupancy status and purpose. Here the owner occupies at least 50% of the building as their own place of work. Examples include large companies (e.g., corporate headquarters and campuses), government agencies, and businesses leasing parts of a building to other businesses. Exclusions are the same as for leased Commercial Office above.
- ***Commercial Multifamily*** (N=3). Buildings consisting of multiple separate housing units such as rented apartments. Owned and operated by private entities. EXCLUDED are homeowners associations (since decision making is diffuse & shared with numerous unit owners), and management-only companies.

[3] While this was the sampling framework, two participants with buildings below this threshold were included whose self-reported building square footage differed from actual measurements, an issue later rectified by refining the questioning approach.

- ***Multifamily Institutional*** (N=2). Same as Multifamily Commercial, except the building is publicly owned by an entity such as government housing authority or government agency, or a state university. Examples include subsidized housing projects, senior housing, and student dormitories.

Locations of Buildings Owned.

- Seattle, WA, Metro area, including Tacoma, Olympia, Bellevue, Bellingham, and densely populated Seattle area islands (N=3).
- State of Washington: areas outside Seattle (N=3).
- Portland, OR, Metro area, including Beaverton, Hillsboro, and Vancouver WA (N=3, one of which is a "market leader.")
- State of Oregon: areas outside Portland (N=2).
- Montana (N=1).
- Idaho (N=1).
- New York City, Washington DC, or Denver, CO (N=2, both "market leaders" as defined below).

Level of Interest in Possible Upgrades or Retrofits.

- Express openness to considering upgrades to improve building performance relating to energy use (ALL).
- Reject or completely oppose the idea of making upgrades or retrofits to improve building performance as it relates to energy (NONE).
- Are a "market leader" in meeting or exceeding Building Performance Standards as they relate to energy usage (N=3). Definition: Can demonstrate two or more of the following:
    - ENERGY STAR score of 75 or above.
    - Energy Use Intensity: lowest 25% compared to national median.
    - LEED Score (Leadership in Energy and Environmental Design): Gold or Platinum.
    - BREEAM Score (Building Research Establishment Environmental Assessment Method): Excellent to Outstanding.
    - Applied for Early Adopter Incentives (WA State).
    - Have performed audit and determined their building meets Building Performance Standards (but have not completed paperwork).

TYPICAL DECISION MAKER JOURNEY

RENOVATING A COMMERCIAL BUILDING

IDENTIFY THE NEED

ESTABLISH BASELINE

Get "Condition Assessment."

Set timeline for end-of-life replacements, if older building.

Set $$ targets for upcoming end-of-life and necessary repairs.

Create cap-ex reserves budget.

INSPECT & MAINTAIN

Get reports:
- Regular systems inspection.
- Preventative maintenance updates.

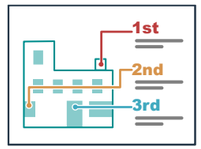
Do my own drive-bys and walk-throughs.

FIND ISSUES

Get alerts that replacement need is imminent:
- Too many "call-outs" or requests to fix.
- Excessive lead times for parts.
- Parts too expensive.
- Utilities bills too high.
- Actual system failure.

MAKE A PLAN

RANK PROBLEMS



Look for "problem" buildings.

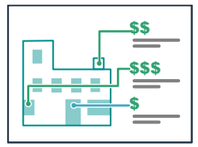
Define the opportunity for the building: the right response for its purpose.

Ballpark the ROI—gross order of magnitude.

Discuss a range of options with experts I know.

Compare the value for money of different options: change vs. status quo.

NEGOTIATE BUDGET



Get pricing bids from vendors.

Identify the right funding method: cap-ex vs. re-finance vs. investor.

Create new or adjust existing capital plan.

Prepare to defend any high-dollar expenditures:
- Reasons to do it.
- Costs.
- Who will do the work.
- Who will benefit.

APPROVE THE PLAN

Present new capital plan to owners, partners.

Defend high-dollar expenditures.

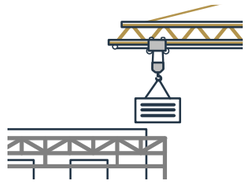
Recommend funding method.

Revise plan.

Present plan to Board, other office holders.

Reach agreement to move forward (typically for next year).

DO THE WORK



Confirm the project schedule with contractors.

Start the work.

Encounter new problems and opportunities (then adjust plan, approve or reject changes).

Conduct final building walk-through.

SHOWCASE BENEFIT

Mention project in annual report, letter to shareholders.

LEASEHOLDING

Analyze market, competition.

Create "Pro Forma" financial model.

Hear feedback from current tenants.

Hear about new potential tenants & what they might need.

Research my competitors.

Hear tenant complaints.

Notice leases due to expire.

Receive request for Tenant Improvements.

Assess impact on tenant acquisition, retention.

Negotiate Tenant Improvements: how much owner vs. tenants pays and when.

Key factors:
- Allowance of TI dollars (per square foot).
- Duration of lease.
- Adjustments to rent or fees.

Explain to tenants how & when the scheduled work will impact them.

Identify benefits to share with tenants:
- Experiential (beauty, comfort, health, etc.).
- Functional (reliability, savings, etc.).
- Certifications earned.

Share benefits in tenant budget documents.
- Operating Expenses letter.
- Common Area Maintenance.

REGULATORY

Attend meetings, read newsletters:
- Professional organizations.
- Local government bodies.

Learn of new or changed regulation.

Learn about deadline.

Learn how to comply.

Conduct energy efficiency audit.

Weigh options to comply, sell, or pay fines.

Inspect and align with rules for compliance.

Share proof with regulators.

Identify compliance results to share with tenants, brokers, and lenders.

INVESTMENT MANAGEMENT
- Bank
- Board
- Investment Team
- Investor
- Owner

ASSET MANAGEMENT
- Asset Manager
- Consultant
- Fin. Officer
- Industry Orgs.

PROPERTY MANAGEMENT
- Architect, Builder
- Building Insp.
- Engineer
- Equip. Supplier
- Leasing Manager
- Property Manager
- Real Estate Broker
- Tenant/Resident