white paper

Facilities & Infrastructure Capital planning

Best practices for world-class multi-year, performance-based investment planning

DECISION LENS

in facilities management, the capital planning process is rapidly evolving beyond routine operations and maintenance (O&M) budgeting to a more strategic focus on performance-based, multi-year investment planning that supports the overarching objectives of the organization. t his whitepaper provides an overview of the world-class best practices for assessing, prioritizing, and funding capital projects to optimize resources and align with the organization's most critical immediate and long-term goals.

Challenges of Facilities & Infrastructure Capital Planning Decisions

Multi-year investment planning is one of the most critical challenges in facilities management. The sheer scale of the existing portfolio of assets, all in various stages of disrepair, can be daunting. Add to that the plethora of requests to fund completely new, transformational projects, and the planning process can become overwhelming.

There are many competing objectives that must be reconciled in the capital infrastructure plan, including short-term vs. long-range investments, geographical vs. population-based project distribution, community demands vs. legislative requirements, and perhaps the most common, emergency repairs vs. preventative maintenance. The Director of a New England capital planning team recently quipped, "We struggle every year with deciding whether to fix what's "most broken" or to keep what's "good" good."

There is also national momentum for greater transparency and accountability in long-range capital planning. "Performance based budgeting" has become the industry standard and now finalized capital investment plans must be clearly defensible, proving that the most beneficial projects have been put forth and the greatest value has been extracted from limited public funds. In the rush to justify capital planning decisions, facilities management organizations are often relying solely on a facilities condition index, such as "state of good repair", as the single point of justification for capital investment priorities. Yet this metric alone doesn't fully represent whether the proposed capital investments align with or support the overarching needs or values of the organization.

Compounding the complexity is the fact that investment planning decisions have significant and lasting impact that can often span years. Especially in today's tenuous economic and political environment, where uncertainty is the only absolute, multi-year budget allocations must be flexible and dynamic enough to:

- adapt to shifts in priorities,
- reflect the realities of funding constraints and project dependencies,
- demonstrate, real-time, the impact of potential changes to schedule dates and resources available to execute the plan.

Despite this precept, capital planning tends to rely on very manual processes, feeding complex spreadsheets with data from disconnected sources. The process is generally unsuitable for simultaneous multi-stakeholder participation. All of which result in a slow and cumbersome budget process.

So where to begin? Streamlining and optimizing the multi-year investment planning process requires your organization to link its strategic needs and capital assets in an effective and efficient manner. A structured, disciplined, and repeatable decision-making framework will ensure the portfolio of assets is prioritized to achieve performance goals and objectives with minimal risk, lowest lifecycle costs and greatest benefits. And input from multi-disciplinary stakeholders is absolutely essential to incorporating needs and considerations from across the organization into the long-range plan.

Are you currently able to:

- Define objectives and make the tough trade-offs to determine the relative benefit of each capital investment project to the strategic objectives?
- Identify key differences among the projects in order to make the "best value" decision?

  Know if the project's cost is justified by its benefits?
- Elicit input from and drive consensus across the capital-planning evaluation team?
- Focus the discussion for efficiency in the evaluation process, while also elevating the group from the hidden agendas and inherent biases that others are bringing to the table?
- Best defend the decision with senior management and with the stakeholders?

The Better Way— Build a repeatable, streamlined process that adapts to change

STEP 1: START WITH COLLABORATION

A common pitfall of the planning process is relying on a very small team, or even one single expert, to lead the capital investment decision. This small team, typically assembled from the engineering, planning, and finance functions, is relied upon year after year to evaluate the portfolio, in order to ensure a consistent assessment process and because they are most knowledgeable about the condition of the assets and the available pools of budget from which to allocate funds. This group is truly invaluable to the process.

Yet, once the draft investment plan is complete and being socialized with other stakeholders, the time-consuming and ad-hoc negotiating process begins. For example, the sustainability specialists express concern that environmental stewardship was not considered in the plan. Or the local community advocates argue that the importance of economic development has been ignored in the strategy. Because such a limited range of stakeholders tends to spearhead the capital planning process, getting buy-in on the final plan fractures relationships and wastes time.

Instead, strive for broad inclusion and collaboration from the start, leveraging "tribal knowledge" for a more accurate and comprehensive view of the organizational values. Multi-disciplinary representation from across the organization will yield a credible capital plan that reflects the collectively defined vision. And even if consensus on the vision is not expected or required, expanding the discussion to include a variety of viewpoints will at least ensure that a broad range of perspectives have been considered.

STEP 2: DETERMINE YOUR STRATEGIC OBJECTIVES AND ESTABLISH THEIR RELATIVE IMPORTANCE TO THE CAPITAL INVESTMENT DECISION

With the broad team of stakeholders in place, devise a set of decision criteria that will be used to assess how well individual investment projects in the capital planning portfolio satisfy the organization's strategic objectives. It is important to take a fresh look at these objectives, not assuming that what has worked in the past will continue to suffice.

Key questions to consider:

- What are we trying to accomplish through the projects we fund?
- What overarching strategic objectives have we leveraged in the past?
- Which are obsolete or no longer critical to our planning process?
- What new objectives should we consider based on the latest organizational focus?
- What specific criteria will we use to assess whether we're meeting these goals?

Figure 1 depicts a typical set of decision criteria, derived from our work with a team of planning executives at a military health organization. Notice that criteria are presented in a hierarchy, allowing for sub-criteria to provide greater clarity.

Figure 1 *Develop criteria to direct the prioritization process and anchor stakeholders from the start*

When making capital investment plans under uncertainty, it is very helpful to have a decision framework that couples both quantitative criteria (hard data) and subjective criteria (gut intuition). For example, the facilities condition index or "FCI" is a criterion for which there is verifiable supporting data, while the perception of a project's "Impact on Economic Standing" is a judgment-based criterion. The judgment of your team is just as valuable, and may be more precise, than the information stored in your databases.

Even more important to establishing the decision framework is the task of prioritizing the strategic objectives in relation to one another. For example, in the figure below, how does the importance of "Impact on Current State and Use of Infrastructure" compare in relation to "Impact on Safety and Security"? Or how does "Project Feasibility" relate to "Public Regulations"? Treating all objectives equally would be a mistake, as it is unlikely that each strategic objective has equal weight or influence in the capital plan.

Have your stakeholder team complete a set of tradeoffs with the criteria, in terms of their relative importance, and a clear picture of their value systems (and, indeed, how they may differ between the groups) will come into view. When thoughtfully facilitated, this exercise can bridge the perspectives of stakeholders that previously held disparate views on priorities. Yet, it is important to note that consensus is not required for this exercise to be successful. A rich and thorough discussion of the various viewpoints of the stakeholders is a unique and valuable benefit of the process. Figure 2 provides an example comparison of two strategic objectives to illustrate how the comparison process works. Through this tradeoff process, the relative importance of each criterion is derived.

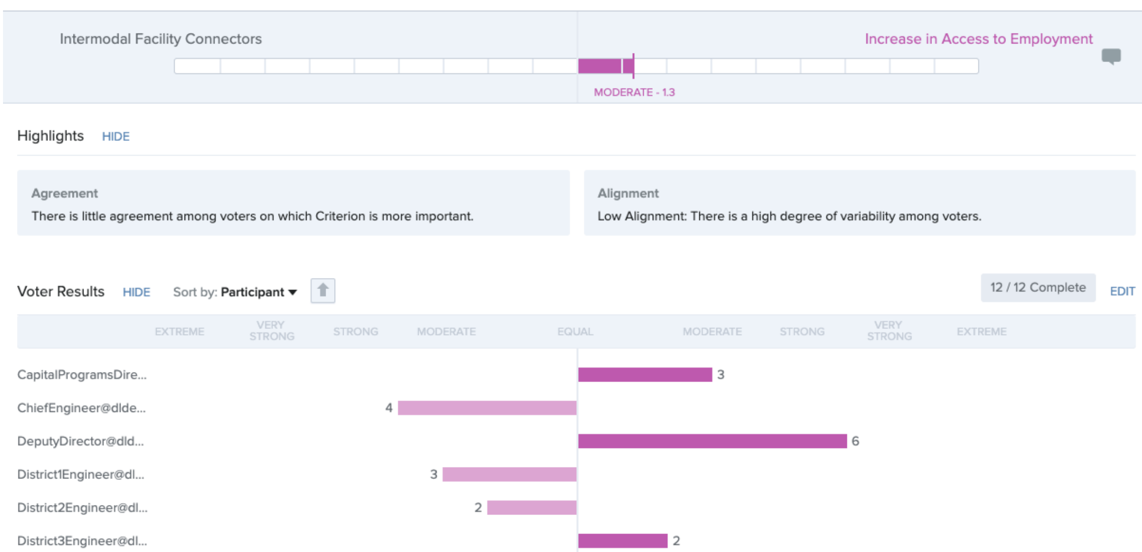

Figure 2: *Collect the expertise of stakeholders and determine what criteria is most important in achieving your objectives*

Figure 3 illustrates the resultant priorities that will become a cornerstone in the capital planning process. In this example, while the group is expressing that protecting the community and environment is important, the responsibilities of ensuring the safety of the citizens and sustaining the existing infrastructure are much more pressing drivers for how they will prioritize the projects in the multi-year investment plan.

Weighting the criteria will prevent the organization from funding capital investment projects that have little to no relevance to what the organization is trying to accomplish. For example, a capital asset project that presents an extreme significance to a strategic objective that is relatively unimportant needs to be handled quite differently than a project that hits across several major strategic thrusts.

STEP 3: PRIORITIZE YOUR CAPITAL ASSETS PORTFOLIO AND TEST YOUR ASSUMPTIONS

Once strategic priorities have been established, the next step is to evaluate each capital asset project against the weighted strategic objectives. Through this process, viewed in Figure 4, the "value" of a particular capital asset project can be derived as a quantitative score based on how it enhances or hinders achievement of these strategic goals.

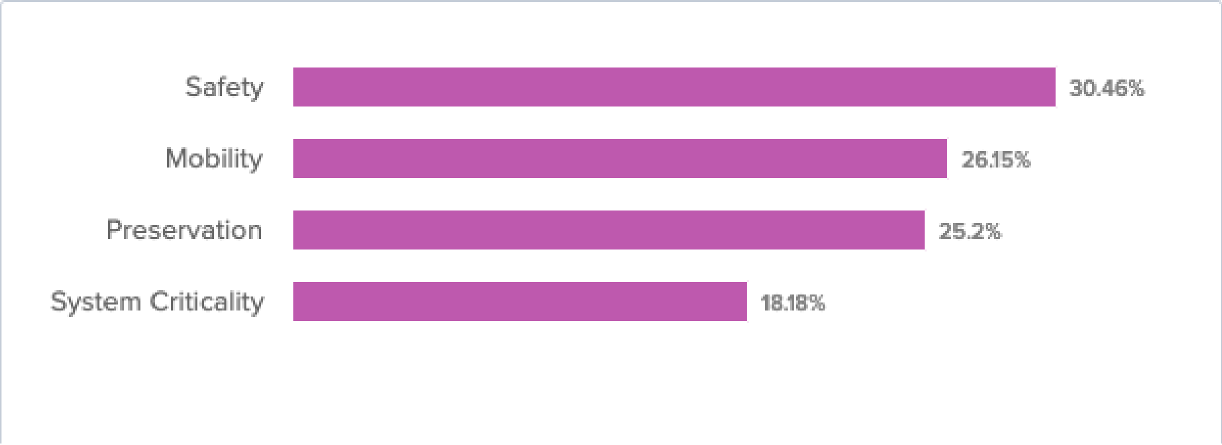

Figure 3: *Visualize the priorities of the group and discuss competing viewpoints*

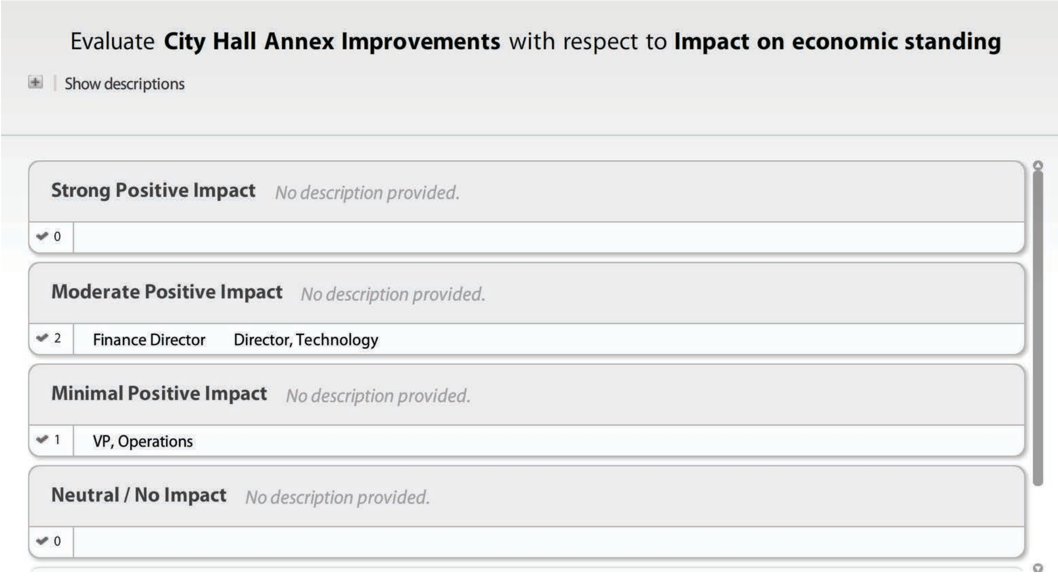

Figure 4 *Evaluate capital improvement projects against strategic priorities*

Every single capital asset project in the portfolio will be evaluated. And as the relative value or "score" of each project emerges, it will be clear which investments most closely align to the strategy. This ultimately determines how the capital assets portfolio is prioritized (Figure 5).

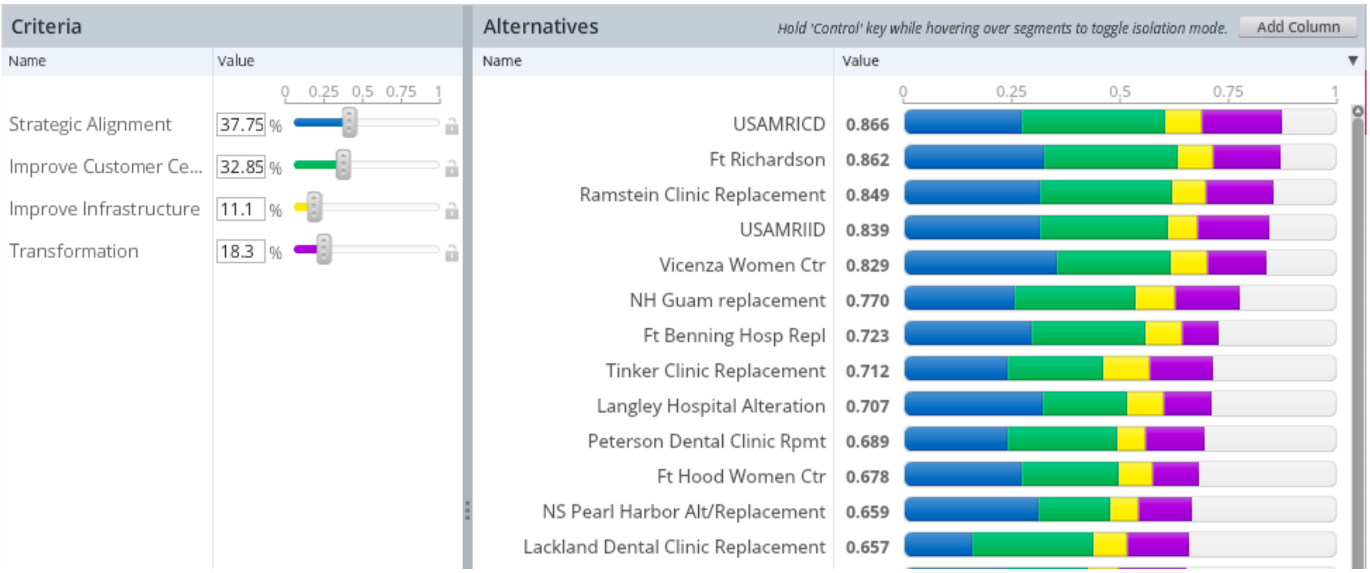

Figure 5 *The projects that most closely align with strategic objectives will rise to the top of the list*

Typically, after the capital projects have been ranked, their ratings are reviewed and often need to be justified to senior management. This is where many decision processes fail.

In most decision frameworks, there is an inability to introduce ad-hoc changes or objections late in the process. Senior management may have a slightly different view of the problem. Rather than having the ability to test the new assumptions, the team often has to throw out the portfolio and start again.

Management may wonder why a certain project received such a high rating. The team should be able to easily go back and evaluate the group's judgments on that project. Did the team forget to consider something? If so, the team can then add in a new criterion, compare it to the others and rate the projects against it. Whatever the reason may be, the ability to make real-time adjustments "on the fly" will enable you to see the immediate impact of potential changes, ensuring a robust, repeatable process. (See Figure 6)

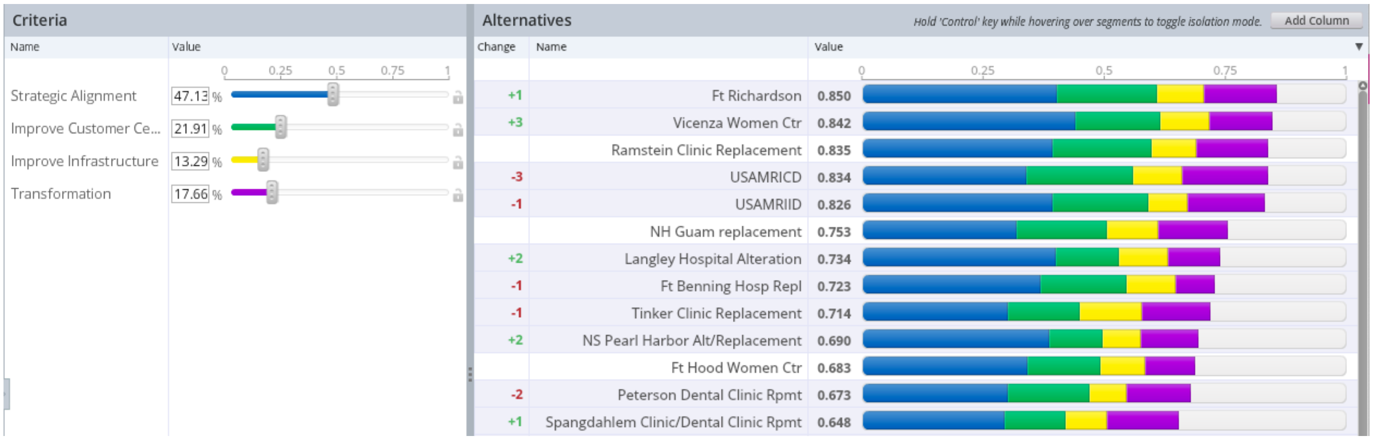

Figure 6 *Test the impact of shifting priorities in real-time to explore how projects are reappraised*

STEP 4: OPTIMIZE YOUR MULTI-YEAR BUDGET ALLOCATION

A ranked list of projects is very valuable and is often sufficient to satisfy an organization's needs for annual capital planning. But there are other important issues to consider in order to optimize a multi-year investment plan. What about the costs? What about funding constraints? What about project dependencies?

Often, there are multiple funding sources, projects run over the course of several years, and there are interdependencies among the projects where one project cannot be started until a supporting project is funded and completed. Spreadsheets are frequently used to track project budget estimates. Projects are moved around manually in an attempt to gain the highest value out of the portfolio, but with little actual analytical validation behind the changes.

In addition, a project at the top of the prioritized list might be so expensive that the company is better off not funding it and instead should use that investment to fund a series of other projects further down the list that may have less direct alignment and benefit, but together deliver more overall value than the top project. At the same time, a project at the bottom of the ranking may get funded if it is very inexpensive and easy to execute. The framework for the multi-year investment plan should be designed to very precisely fund those projects that provide the highest value per dollar. Rather than going down the project ratings list from top to bottom, a more robust approach is to find the optimal portfolio for the given funding level.

Consider the figure on the following page, which captures a notional view of a Value Return on Investment (VROI) for resourcing your capital assets projects.

As the line graph (in orange) descends from the left side of the chart, it represents a declining return on investment — or a decreasing importance in allocating resources towards a certain project based on the importance of the project (green bar) and how much it costs to implement it (red bar). Using the cost data for each project, your asset planning framework should easily discern which capital assets are the best investments, delivering the best "bang for buck" with the available resources.

Finally, since capital projects are funded over long time periods, it is very important that capital investments are not only optimized by benefit, but also sequenced to meet the expansions and contractions of the budget sources. The ability to evaluate facilities over a multi-year budgeting process is critical. The capital investments must be sequenced so that each year provides the optimal use of funds.

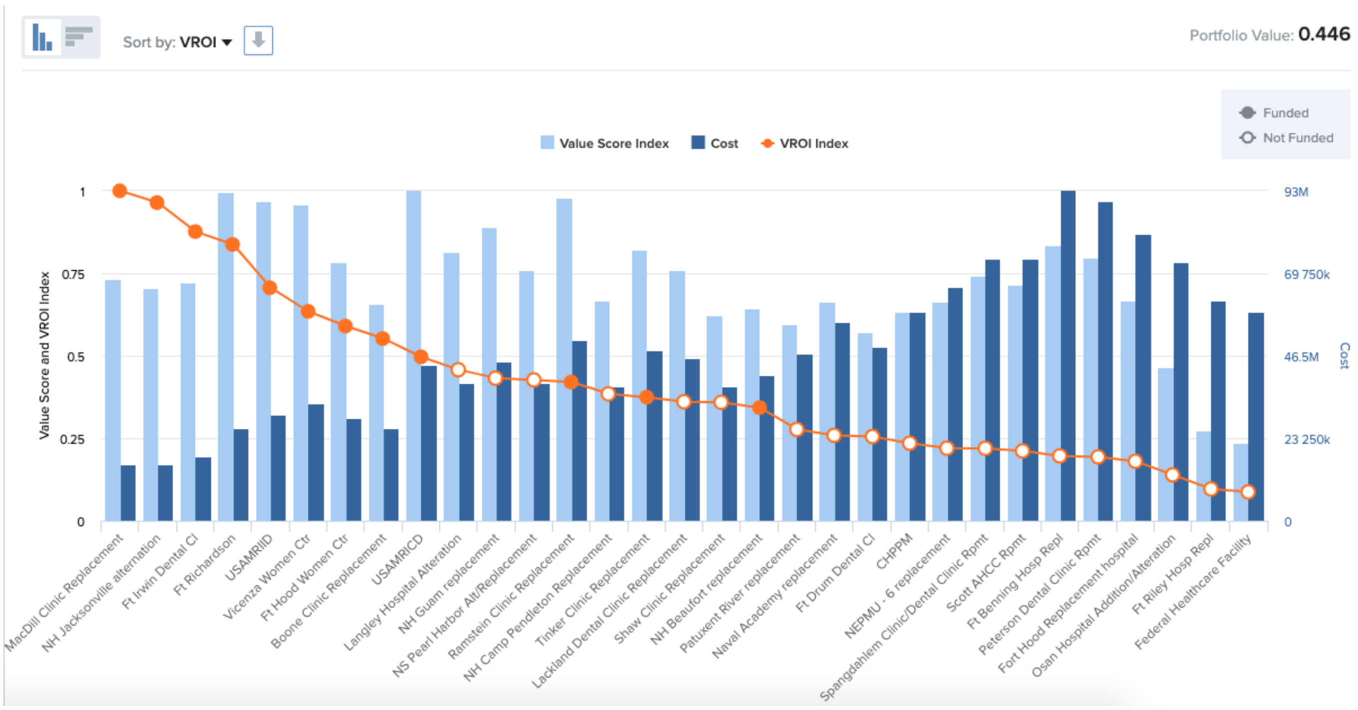

Figure 7 *Maximize the ROI of your portfolio by considering project values, costs, and potential shifts in funding*

STEP 5: FOCUS ON CHANGE MANAGEMENT

The introduction of greater transparency, collaboration, and analytical rigor into the capital planning process will certainly lead to significant changes in how investment projects are selected and funding is allocated for the multi-year plan. Regardless of the prioritization methodology's robustness, successful execution will still require supporting infrastructures such as governance frameworks, business processes, and vehicles for access to data. These fundamentals of change management are vital to developing a world-class capital planning process, yet they are often overlooked or explored only after the impact of lack of preparation becomes evident.

Assembling a cadre of internal stewards to champion the change is essential to implementation. This team can spearhead standardization of benchmarks and metrics, data acquisition, socialization of results for buy-in, and performance monitoring for continuous learning and improvement. Commitment and engagement from the executive management team has also proven to be a best practice in driving adoption and scaling the methodology across the organization.

Figure 8 *Drive adoption through governance and change management support*

Let's start a conversation about how to build a streamlined, defensible and repeatable capital planning process that aligns with your organization's strategic goals and delivers high-impact, cost-justified projects.

where can you improve? — Defining value for competing projects? Buy-in, collaboration and transparency? Choosing the best value projects to pursue? rapidly responding to an ever-changing landscape?

Decision Lens can help. to learn more about Decision Lens contact us at **info@decisionlens.com** or visit **decisionlens.com/state-and-local**