

WHITE PAPER / **MATURITY ASSESSMENT**

KEY COMPONENTS, CORE FOCUS AREAS AND PROGRAM MANAGEMENT

by **John Pruss** AND **Robert Wolfe**

Infrastructure is aging and capital improvement projects need to be addressed across the nation. Successful maturity assessment studies can reveal necessary enhancements by identifying and accessing four key components across core focus areas.



It is no secret that infrastructure in the United States continues to age and decline. As a result, municipal and investor-owned utilities face ever-growing portfolio of capital improvement projects, large and small. There are considerable challenges public and investor-owned utilities confront when working to prioritize and undertake these projects. Effective and efficient program management is the cornerstone to success.

To manage this new scale of spend, some utilities might decide their best approach is to outsource to an external program manager, while others may determine they want to manage the portfolio leveraging in-house resources, understanding they may need assistance filling management gaps. There is an opportunity when partnering with an external program manager to expand their internal knowledge and ramp up their in-house capacity to handle the capital portfolio in future years.

From finding gaps and identifying corresponding workable solutions, to bridging silos in large, well-established utilities, to piloting and implementing the best tools and technologies, an experienced external team brings valuable lessons learned from multiple experience areas and industries to help project delivery teams that are facing uncharted waters or increased complexities. This kind of skilled hand can help navigate a successful maturity assessment.

WHAT IS A MATURITY ASSESSMENT?

Before answering the question of whether to hire an external program manager or manage the work in-house, it is helpful to better understand the scope of a maturity assessment and how to define maturity levels.

Maturity assessments involve the evaluation of four key components of core focus areas that are considered critical. Each critical focus area is instrumental to the success or failure of the program, and each is graded based on a distinct set of definitions and criteria. Grades or scores are established for each of the four key components of each core focus area, which form a larger matrix to establish an overall score or grade.

EVALUATING THE KEY COMPONENTS

The basis of developing a best-in-class maturity assessment begins with several key components. These four components are universal across industries:

People — Evaluate those who are internal and external to the utility to understand who is serving the efforts and how they will impact and buy into the work.

This involves grading several groups and processes, including executive staff and governance body/structure, as well as project managers, team members, operations and maintenance managers, and other project stakeholders. SIDM refers to a matrix listing the tools at a client’s disposal for project use and cross references with client deliverables. The matrix helps identify redundancies, while also revealing gaps in tools needed for a project.

Process — In order to gain a stronger footing in the maturity assessment process, there are multiple items that need to be identified and measured, which include identification of the best approach, the type of model management strategy and deliverable/management system, as well as determining the success measurements or Key Performance Indicators (KPIs). SIDM refers to a



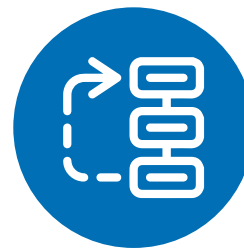
PEOPLE



PROCESS



PRODUCTS



PRIORITIES

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Products — Technology tools and software are key, and it is important to understand what currently exists and what is needed. The team will need to analyze aspects such as their existing tools, System Deliverables & Integration Matrix (SDIM), and their enhancement, addition and replacement needs. SIDM refers to a matrix listing the tools at a client's disposal for project use and cross references with client deliverables. The matrix helps identify redundancies, while also revealing gaps in tools needed for a project.

Priorities — The priorities of each focus area are informed by the preceding key components. The evaluation of people, processes and products are unique for each team and should be analyzed before prioritizing. SIDM refers to a matrix listing the tools at a client's disposal for project use and cross references with client deliverables. The matrix helps identify redundancies, while also revealing gaps in tools needed for a project.

ASSESSING THE FOCUS AREAS

Key focus areas are assessed for each capital project, utilizing existing policies, procedures and documentation. When assessing each capital project across the core focus areas, the analysis needs to be thorough:

- Asset data management.
- Change management.
- Compliance management.
- Construction administration management.
- Cost management.
- Document control management.
- Project management.
- Quality management.
- Reporting and communication management.
- Risk management.
- Safety management.
- Schedule management.

There may be other, variable project-specific focus areas that are included and assessed for each capital improvement project, including:

- Asset management.
- Environmental/permitting management.
- External stakeholder management.
- Materials management.
- Public communications and outreach management.

ESTABLISHING THE MATURITY LEVELS

Maturity levels are established for each of the focus areas based on the current state. A score of 1-5 is assigned, with 1 being the least mature and 5 being the most mature. These levels establish the baseline and accompanying assumptions and characteristics of each level so that each focus area can be evaluated and assessed independently and then compiled into an overall project-readiness scoring model.

FINDINGS FROM A MATURITY ASSESSMENT

When a maturity assessment is completed, specific areas for enhancement are revealed. When working on systems that must remain in service, comprehensive information is especially important. From new perspective gained across projects, to holistic recommendations for enhancing and standardization, to the design of organization structure, processes, tools and controls, these findings matter. For example, a maturity assessment can give greater clarity on the current state of the utility, and furthermore, shine light on processes required to enhance capital project delivery knowledge, resources, processes and controls to achieve the desired future state necessary to optimize utility operations.

Equipped with this information, owners can operate from a position of strength as it works to apply recommendations and address systemic as well as immediate and urgent gaps, if any. It is important to provide owners access to experienced support in order to develop and implement proven solutions to address deficiencies. Consultants can also develop and implement solutions for identified challenges owners might be facing.

The following observations are a few examples of what may be noted through a maturity assessment:

- Asset data management processes and procedures are not formally established to keep utility systems of record up-to-date continuously.
- Change management process is not documented or formalized.
- Lack of consistent use of standardized framework, processes and tools for managing capital projects.
- Procurement, contract management and materials handling processes are not documented or formalized.

UTILITY PROGRAM MANAGEMENT

Circling back to the question of whether a utility hires an external program manager, or goes in-house with backing, there are several key points of interest that need to be upheld.

Typically, utilities are seeking to accomplish short- and long-term business objectives, and as a result, it is critical that they have the capabilities, processes, systems, program management tools and controls to deliver capital projects on time, on budget and within the specifications for quality. When conducting an internal audit, it is important that the maturity assessment is clearly focused on reviewing and advising management through the process of developing and implementing improvements, analyzing management’s portfolio and identifying gaps.

An efficient capital project delivery structure and framework is generally always a work in progress, and the findings and recommendations prepared by the program manager need to support and inform that process with an unflinching eye. Annual internal audits and the ongoing updating of maturity assessments should be performed to evaluate progress at closing gaps and continuous improvement on multiyear programs so that utilities can realize the short- and long-term improvements they seek. These audits and assessments need to provide management with input based on industry best practices for managing capital projects through the project life cycle. Full collaboration from management stakeholders is needed for a successful maturity assessment.

BEST-IN-CLASS PROFILE: CON EDISON AND ORANGE & ROCKLAND

Con Edison was in need of updated processes to improve efficiency and increase utility revenue. Con Edison, Orange & Rockland (O&R), and Burns & McDonnell partnered to develop best-in-class project management (PM) and project controls (PC) systems.

Traditionally focused on delivering safe and reliable energy to their millions of customers (a goal at which they excel) Con Edison and O&R sometimes had to put project management and its triple constraint goals (on schedule, on scope and on budget) in a back seat to operational concerns. Lack of consistency in PM procedures throughout the company, and the shift toward energy efficiency and renewable energy has placed pressure on utility revenue, driving companies to place added focus on cost optimization and effective project delivery. Recent state and federal programs and legislation have driven competitiveness and novel approaches to energy delivery. Programs and legislation goals were goals were cost optimization, efficiency gains, on-schedule project performance and enhanced decision-making ability for management.

With annual capital spend of more than \$2 billion, it is crucial that Con Edison and O&R are prepared for the future with top-notch PM procedures and people, and highly effective project controls tools and processes. Con Edison and O&R, with help from Burns & McDonnell, have made incredible progress in recent years, what they would define as a transformative change to the culture of the company.

CONCLUSION

Aging infrastructure and mounting capital improvement project needs across the nation mean municipal and investor-owned utilities alike need to prioritize and tackle long-overdue infrastructure renewal projects. These challenges are made even more difficult when the existing capital delivery structure and framework are inefficient, ineffective and otherwise lacking standardization.

Successful maturity assessment findings can reveal necessary enhancements by identifying and assessing four key components across established core focus areas. The decision to hire an external program manager or to go with in-house team members supported with some external assistance is an important decision every utility owner must face.

BIOGRAPHIES

JOHN PRUSS is director of program management for the Water Group at Burns & McDonnell. John brings more than 30 years of experience to our program team. He has extensive experience in management of wastewater consent programs having led programs in Kansas City, Missouri; Springfield, Missouri; and Jackson, Mississippi. John is currently involved in consent decree negotiations and renegotiations in Kansas City, Missouri; Kansas City, Kansas; Jackson, Mississippi; and Fort Smith, Arkansas. He has experience in taking over

existing programs, having taken over leadership and program management responsibilities for Kansas City, Missouri's program three years into implementation and assuming control of Jackson, Mississippi's program from another consultant three years into implementation.

ROBERT WOLFE is principal and director of program management at Burns & McDonnell, leading large-scale programs across the AEC industry. As manager in the firm's Construction/Design-Build Group, he leverages the diversity of knowledge and experience across the company and the group's award-winning in-house technology that has been successfully utilized on billion-dollar programs.

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