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ISSUE BRIEF: BARRIERS. OBSTACLES. CHALLENGES

Navigating real and perceived impediments to financing natural water infrastructure

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Barriers. Obstacles. Challenges.

The pathway to adopting an outcomes-based financing solution has promise for many natural infrastructure projects, but it is paved with many barriers, obstacles, and challenges. Understanding these, and discerning between the challenges that can be addressed, obstacles that can be reduced, and barriers that need to be avoided, can be critically important for the local proponents of any project.

While there is considerable enthusiasm for scaling the application of collaborative finance¹ across the water sector, there has not been commensurate movement to apply these strategies to actual projects. Despite the pioneering work of key non-traditional finance champions (e.g., Quantified Ventures, Blue Forest Conservation, and Corvias), application mostly has been limited to several high-profile pilot or demonstration projects, often supported by philanthropic foundations. As interest in these innovative finance strategies expands, water agencies, land managers, and others interested in accessing new finance mechanisms can benefit from frank reflection on the factors that have frustrated widespread adoption.

In our conversations with financing experts and project developers who have opted to pursue collaborative finance approaches, we've come to recognize three types of challenges that have an outsized effect on successfully securing financing:

Securing Project Payors

- Infrastructure investments, including nature-based approaches, typically need a public agency to be the primary responsible payor. Spending by these agencies is most effectively motivated by the need to meet a regulatory or other mandate. Even then, statutory, or regulatory restrictions may limit the types of infrastructure in which an agency may invest.

Understanding and Allocating Acceptable Levels of Risk

- There is low institutional tolerance for risk in the collaborative finance arena, meaning that resolving real or perceived risk can be a significant challenge to adopting unfamiliar technologies or finance mechanisms. Supporters of a project need to consider the tolerance for risk that each stakeholder has, and design both the project and financing in ways that satisfactorily address those risk perceptions. For example, a stormwater management agency may be reluctant to invest in a comprehensive green infrastructure program because it isn't sure that the associated projects will meet its regulatory obligations and the private-public partnership being suggested to implement the program is an unfamiliar approach to contracting. A pay-for-performance structure that ties repayment to achievement of specified water quality goals or volume of stormwater treated may be a step toward overcoming the agency's resistance.

Identifying and Measuring Outcomes

- When the structure of a financing arrangement is focused on delivery of a project's outcomes, it becomes crucially important to identify and measure these outcomes in manners that speak to the concerns of the payor agency. Outcome measurement, and communication about outcomes, must be responsive to agency input and concerns, rather than pulled from a standard template. Metrics that are accepted across the collaborative stakeholder group can help with aligning interests and investments.

¹ Collaborative finance is an approach to developing financial instruments which involves cooperative interaction between individual project developers, stakeholders and finance providers. This process may or may not include traditional financial institutions (collaborativefinance.org). We broaden the term to include finance developed by fair and equitable participation of stakeholders in a region, landscape, or watershed to address natural resource and infrastructure management needs, utilizing multiple forms of funding from public grants to private investment. Finance approaches may include outcomes-based finance models such as environmental impact bonds.

While described here as separate issues, they are actually closely intertwined. Resolving one may require the project's proponents and stakeholders to consider and address all three. For example, a water supply or flood control district may be the ideal payor for a restoration project but convincing its board and staff to allocate funds may require reducing the risk they perceive in either the project, the financing strategy, or both. In turn, this perception of risk may be due to uncertainty about the delivery of benefits that align with the district's mission or long-term strategies. Identifying ways to quantify the benefits that the district cares about may be a pathway to gaining its support.

In addition to these core concerns, there are other challenges that often arise, many of which are not unique to collaborative financing strategies. Opting to pursue collaborative finance doesn't erase any of these challenges and so project stakeholders are advised to consider them in designing both the project and the financing strategy.

Funding Challenges

- **Repayment revenue.** Perennially a limitation on water infrastructure projects, collaborative finance strategies also depend on identifiable, sustainable revenue streams that can be allocated to repayment of debt obligations. The expectation is that at least some investment repayment will come from the sponsoring/payor agency; an advantage of collaborative finance approaches is that multiple repayment streams may be assembled.
- **Funding limitations.** State or federal grant or loan programs can be important components of a portfolio of repayment funds. However, these programs often have restrictions that limit their applicability, for example, barring repayment of interest on private investments.

Sociopolitical Challenges

- **Lack of familiarity.** Collaborative finance strategies involve outcomes-based or other non-traditional financing structures which are frequently unfamiliar to typical project proponents and developers.
- **Capacity.** Capacity of organizations involved to create, manage, and fundraise is uneven across municipal and water sectors. Public agency finance staff may be reluctant to buy into these approaches or lack fundamental understanding about them.
- **Natural Infrastructure as add-on.** For many public agencies, nature-based alternatives and green infrastructure are considered add-ons and funded through pay-as-you-go (paygo) strategies based on annual operating budgets. This limitation is reinforced by governing boards and accounting systems that have difficulty accommodating revenues other than traditional grants, loans, and water sales.
- **Debt.** Many public agencies are unwilling to incur debt for natural infrastructure projects. Widespread preference for cash-basis funding and, general or reserve funds and federal and state grants and loans limits appetite for financing strategies.
- **Trust.** Successfully developing and deploying an outcomes-based financing method requires collaboration between a range of stakeholders. Unless there is positive history between these entities and individuals, progress may be frustrated by lack of comfort, lack of trust, and lack of familiarity.

Finance-related Challenges

- **Avoided Cost Basis.** Difficulties in quantifying avoided infrastructure and maintenance costs lead to unwillingness/impossibility of using this basis for project approval and financing.
- **Predevelopment Costs.** The cost of feasibility studies and pre-transaction development may be high relative to other infrastructure projects. It can be a high bar for many communities and organizations to raise planning/feasibility funds just to start the process.
- **Finance networks.** There are few established networks for connecting financiers to municipalities and water agencies. Investors are unaware of emerging project needs and opportunities, and water project developers are disconnected from relevant investment sources.

Getting Beyond No

While this roster of potential impediments may seem daunting, most can be reduced through a well-conceived and managed collaborative strategy. It may be helpful to focus on a trio of core themes running through many of the looming challenges:

- **Identify beneficiaries/potential revenue streams.** Accessing private capital will require a solid business case underpinned by identifiable, reliable revenue sources to provide an attractive risk-adjusted return to investors. It may be important to convert some project beneficiaries from “free loaders” to payors. In most cases, an entity (or entities) with a strong regulatory or economic driver will likely be the key payor(s) for the project, bearing ultimate responsibility for repayment of investors.
- **Create consistent, agreed-upon metrics.** Universally accepted metrics may not be suitable for every individual project. Some, like the [Volumetric Water Benefit Accounting](#) method developed by the World Resources Institute, may be useful, but often the metrics for evaluating success must be identified by the project partners, and should be responsive to the risks and values that payors and investors bring with them. In addition, metrics should reflect the regulatory, economic, environmental, or economic forces that drive the project.
- **Value broad-based political and community support.** Building a coalition of support across the political and societal landscape is key to implementing collaboratively financed projects. This support can translate into widespread buy-in and multi-faceted financing.

Resolving Challenges in Real Time

With this short catalogue of potential resolutions in hand, let’s explore how these themes come into play across the various stages of project’s timespan. With careful planning, deep engagement across the stakeholders, and some creativity these challenges can be overcome.

Conceptual Stage

It can be valuable to identify potential financing strategies even at the earliest stages in the development of an eventual project, when the initial stakeholders have identified a problem in need of a solution but haven’t yet clarified what that solution may be. However, at this point, it’s likely that few stakeholders will have a working grasp of outcomes-based approaches that may be relevant. Some foundation-laying education may be important, including introductory level presentations by outside experts. This level of engagement can help to socialize available concepts within the stakeholder group and begin building relationships with potential partners and finance providers.

Project Identification/Design

As the project advances to a preliminary design stage, discussions amongst the stakeholders should turn to identifying the intended outcomes of the project, including co-benefits. These outcomes can be linked to the mission or values of one or more stakeholders and may be the basis for financial investment in the project. At the same time, it can be helpful to agree upon metrics that indicate successful realization of the desired outcomes and evaluation strategies that can provide an acceptable measurement of the outcomes and benefits.

Advancing the Project: Role Assignment

With project design and desired outcomes/benefits in hand, a stakeholder group may turn to identifying likely payors and investors in the project. Noting the difference in these roles. Payors are entities that agree to contribute funding without expectation of repayment, e.g., a water utility or special district with a regulatory obligation linked to a project outcome. Investors, on the other hand, may be motivated by one or more of the project’s benefits to provide funding but with an expectation of repayment. This repayment may or may not include some amount of interest in addition to the amount of capital provided.

Project Implementation

As the project moves into implementation, a credible, neutral third party may be brought on as a project administrator / implementation manager. Engaging a third party can not only relieve the payor(s) of daily implementation burdens but may be able to provide or locate financing for the project. For example, some public-private partnerships are built around project developers who not only undertake implementation tasks but deliver project finance.² Bringing in a trusted implementation partner can reduce some of the risks otherwise carried by the public utilities leading the project by providing cost-effective, expert project management.

Evaluation and Communication

Finally, as the project begins to deliver benefits, reach agreed upon milestones, or is completed, a trusted evaluator can ascertain whether metrics are being met and outcomes-based payments are appropriate. Credible evaluation reduces risks for the payor and investors and is also valuable in providing information to help communicate the value of the project to all stakeholders.

Concluding Thoughts

As the cliché goes, the flip-side of challenges are opportunities. Collaborative finance approaches can deliver a range of administrative, economic and environmental benefits to communities, public agencies, and watersheds. These benefits include the ability to implement projects more quickly and at landscape scale, cost-effective implementation of nature-based infrastructure, and delivery of outcomes rather than payment for project completion. While the challenges described above may seem unsurmountable, the very process of collaboration that lies at the heart of these non-traditional financing strategies may hold the keys to success.

This paper focuses on the challenges and obstacles that project stakeholders may encounter within their own, localized pathway from concept to project delivery. At the same time, the broader project finance community has its own work to do to acknowledge the existing barriers that have frustrated wider embrace of outcomes-based private investment in water infrastructure. A number of recent publications have explored this subject and are worth reviewing for those interested in advancing local projects.³ Experience tells us that it often takes multiple avenues of action to bring new innovations to fruition. The compelling pressures of accelerating need for investment in resilient communities and water systems couple with stretched public budgets makes the case of resolving challenges to ‘innovative’ financing.

Collaborative Finance Series

This finance barriers blog is part three of a series of blogs on collaborative finance. Part one, [Finding the Pathway](#) outlines the steps to collaborative finance. In [part two](#) of the series, we provide a primer on alternative approaches to project finance. Future papers will explore solutions to barriers facing collaborative finance and strategies to leverage public grants and loans to secure private investment. A more complete discussion of these strategies can be found in the American Rivers’ report [Because It’s Worth It](#).

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² For example, [Corvias](#) has partnered with municipalities to design, finance and deliver multi-benefit stormwater green infrastructure programs to meet regulatory requirements.

³ See University of California, Berkeley, Center for Law, Energy and the Environment, [Seeding Capital: Policy Solutions to Accelerate Investment in Nature-based Climate Action](#); Gordian Knot Strategies, [Enduring Arches: Building Conservation Finance Projects for Impact](#).