



RESEARCH REPORT

Making Sound Cost Decisions in Pay for Success Projects

Estimating Costs and Determining Success Payment Rates

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Executive Summary

Pay for success (PFS) represents a significant departure from the status quo for funding public social programs. Through PFS, the government repays the cost of service delivery only to the extent agreed-on outcomes are achieved. This model aims for high-priority outcomes rather than simply contracting for outputs.

Identifying the costs of achieving these outcomes can be a significant hurdle. Governments and other project partners need to identify and estimate project costs in order to make sound cost decisions. This report outlines the information and basic steps needed to estimate key costs in PFS projects. It discusses how to use that information during planning and development, specifically in the calculation of success payment rates. The good practice recommendations in this report are based on research on existing PFS projects (see table 1), including interviews with several stakeholders.

This report identifies four key tasks in the cost estimation process, along with specific action recommendations:

- 1. The government and the project partners make a number of preliminary cost-related decisions.** First, stakeholders assess the feasibility of obtaining accurate cost information for the issue area and target population of the proposed project. Next, stakeholders decide if cost savings to government departments—that is, future public costs avoided as a result of the project—will be used to help establish success payment rates to investors. Other important parameters include the length of the project, the maximum total success payment the government is willing to pay, and the frequency and timing of success payments.
- 2. Stakeholders thoroughly define the cost-related components of the project.** The plan should (1) make clear which project-related costs are the responsibility of the service provider and which the responsibility of the government, (2) define as precisely as possible what outcomes are sought and which beneficiaries will be served, and (3) identify all government programs whose costs will be significantly affected by the intervention.
- 3. Project partners estimate the specific project costs.** To do this, partners identify which costs will be significant based on the nature and context of the intervention. These costs can be grouped into three broad categories: initial PFS project development, one-time or periodic investment, and annual operation and maintenance. Once specific costs are identified, they are estimated using information provided by the government and service provider. Cost estimates

are based on evidence gleaned from other communities' experiences implementing comparable interventions.

4. **Project partners calculate the success payment rates.** Success payments will face close scrutiny by all stakeholders. These rates should be fair and clear to all parties and respect the government's cost ceiling. If the project is successful, payments should reimburse the costs for the intervention, plus a negotiated profit or fee. Calculating the success payment rate requires a number of steps and a variety of information, discussed in Task 4. The rates described are based primarily on estimated project costs as well as bonus payments commensurate with government estimates of the project's societal benefits. The derivation of the size of these added payments is not discussed in this report.

Making Sound Cost Decisions in Pay for Success Projects

Overview

This report seeks to inform PFS stakeholders and government partners in particular about the steps necessary to assess relevant costs for PFS projects. By obtaining accurate and comprehensive cost information, project stakeholders can make informed decisions about critical project components such as success payment rates.

In addition to ensuring accountability throughout the life of the project, cost information is used

- **during project development**, to determine which interventions are feasible for the government.
- **during project negotiations**, to provide projections of costs to the government and data on the government's relevant historical costs.

If PFS is replacing an existing intervention, the government can use its pre-PFS service delivery costs as a baseline against which to compare the actual PFS costs. Historical costs can also be used during negotiations to help determine success payment rates. (See Task 4 for more details on determining success payment rates.)

If the PFS project is introducing a new service, the current program costs might appear to be zero. However, most PFS projects aim to *prevent* problems that the government is already spending money to *alleviate* in the target population. For example, the government might be incurring costs to provide special education to low-income children who are part of the target population in a new preschool PFS project. The government should identify those costs and estimate cost savings from the intervention.

- **during project implementation**, to assess whether costs are under control or require service delivery modifications.

Many PFS projects do not wait until the end of the project period to provide success payments; instead, the government makes interim repayments. For example, the project in Santa Clara

County provides success payments beginning after the first year, based on the number of clients who achieve three months of housing stability through the permanent supportive housing intervention. By contrast, Cuyahoga County's PFS contract provides for all payments to be made in the sixth year. This allows time to complete the randomized controlled trial evaluation, which measures the outcomes needed to determine success payments.

- **at the end of the PFS project**, to determine whether the intervention should be continued.

A final estimate of the total costs (along with the program's evaluation and other factors) will very likely affect the government's decision to maintain or expand the program beyond the PFS project's time frame. This information enables the government to weigh the costs before and after the PFS project against the program's benefits to answer the following question: Are the benefits of continuing the intervention worth the added cost?

This report focuses primarily on how governments can identify and estimate the cost information needed during the project development and negotiation stages. These efforts lay the groundwork for cost information collection in later stages of the project. We identify specific decisions that need to be made and the types of costs that should be included in estimates, and we suggest specific steps for deriving success payments that ultimately determine the final costs to government and investors. These suggestions are based on our examination of documents from existing PFS projects (e.g., contracts and cost-benefit analyses) and interviews Urban conducted with government officials, intermediaries, and other individuals who have developed or used cost estimates in active PFS projects.

At time of writing, 11 pay for success projects focusing on social programs have launched in the United States (see table 1). This report uses examples from some of them, drawn from desk reviews and, where useful, interviews with project stakeholders.

TABLE 1

Pay for Success Projects

Project	Launch year	Issue area	Initial investment (\$ millions)	Maximum potential repayment amount (\$ millions)
New York City, NY NYC ABLE Project for Incarcerated Youth	2012	Recidivism	9.6	11.7
Salt Lake County, UT Utah High Quality Preschool Program	2013	Early childhood education	7.0	N/A
New York State Recidivism and Workforce Development Project	2013	Recidivism	13.5	21.6
Massachusetts Juvenile Justice Pay for Success Initiative	2014	Recidivism	21.8	27.0
Chicago, IL Child-Parent Center Pay for Success Initiative	2014	Early childhood education	16.9	34.0
Cuyahoga County, OH Partnering for Family Success Program	2014	Child welfare	4.0	5.0
Massachusetts Chronic Homelessness Pay for Success Initiative	2014	Homelessness	3.5	6.0
Santa Clara County, CA Project Welcome Home	2015	Homelessness	6.9	12.0
Denver, CO Social Impact Bond Program	2016	Homelessness	8.6	11.4
Connecticut Family Stability Project	2016	Child welfare	11.2	14.8
South Carolina Nurse-Family Partnership Project	2016	Maternal and child health	17.0	7.5

Sources: Urban Institute Pay for Success Initiative (<http://pfs.urban.org/>); and Nonprofit Finance Fund (<http://www.payforsuccess.org/projects/>).

Note: The South Carolina project's listed investment does not include a \$13 million 1915(b) Medicaid waiver awarded by the federal Centers for Medicare and Medicaid Services.

This report has several limitations. First, we focus on actual monetary costs instead of outlining a formal cost-benefit analysis, which would require monetizing the value of nonmonetary outcomes. Second, because the field is new, we only have a few PFS examples on which to base our recommendations—although many good practices in other areas of public management still apply. Third, every project has its own unique characteristics, so our suggestions are necessarily more general than we would like. Finally, although this report outlines the types of information projects are likely to require, the availability of such data depends on the strength and reliability of the government's cost accounting system.

Report Organization

The following sections are organized around four tasks that governments, in coordination with other project partners, will need to undertake to make costing decisions in a PFS project:

Task 1: Make Initial Cost-Related Decisions

Task 2: Define the Project

Task 3: Identify and Estimate Project Costs

Task 4: Determine the Success Payment Rates

Task 1: Make Initial Cost-Related Decisions

Early on in the project's development, the government and its partners must take the following steps to guide cost analysis efforts:

1. **Assess the feasibility of obtaining accurate cost information on the issue area and target population.** During the project development phase, stakeholders should choose an intervention for which reasonably reliable cost information is available or can readily be made available. Cost information should cover all the government's programs and agencies whose costs are expected to be significantly affected by the intervention. These estimates serve both as a baseline and as a basis for projecting the future costs to the government if the project is not implemented. These costs can later be compared to the actual project costs to assess the project's overall cost impact. If the availability of cost information is questionable, the government should consider selecting a different intervention.
 - » *Project Welcome Home (Santa Clara County, CA):* This permanent supportive housing PFS project began with a thorough analysis of the current costs of providing services to the target population (individuals experiencing chronic homelessness). This information provided a benchmark for comparing the budget proposed by the housing provider to the status quo.¹

Government cost accounting systems are an important source of cost information but may not provide the level of accuracy needed for PFS projects. If the government does not already have a robust cost accounting system, outside expertise may be needed, often at an additional cost.

2. **Decide whether and how cost savings will be included in the criteria used to establish success payments.** Improving the lives of those served is likely the primary motivation for PFS projects. However, reducing costs is almost always a consideration in state and local governments' decision to enter into PFS agreements.

If a government wants to consider cost savings as a basis for making repayments to investors, it can do this *directly*, such as by determining the savings sharing percentage (i.e., the investors receive X percent of the validated cost savings produced by the project). Most PFS projects to date have included cost savings *indirectly*, with benefits validated by an independent program evaluation or audit. Some examples of indirect cost savings programs are listed below.

- » *Partnering for Family Success Program (Cuyahoga County, OH)*: This PFS initiative focuses on reducing the time children in chronically homeless families spend in foster care. The project used “out-of-home placement days avoided” as its success payment criterion. This outcome reflects cashable cost savings because foster care is a significant expense for government and taxpayers. The reduction of time in foster care is expected to lower costs and improve the welfare of participating families.²
- » *Utah High Quality Preschool Program (Salt Lake County, UT)*: This project provides success payments of \$2,607 for each child served who was initially designated at high risk for later needing special education but was not found to need it after attending the preschool program.³
- » *Child-Parent Center Pay for Success Initiative (Chicago, IL)*: Chicago’s early childhood education PFS project also determines success payments based on an expected reduction in the need for special education among students who attend preschool.⁴ Both this project and the Utah preschool program measure special education avoidance and make outcome payments based on the expected cost savings to government and taxpayers from decreased use of services.

Some outcomes are not only beneficial to participants but also highly likely to reduce costs *directly* as well. If a project includes cost savings directly as one of the success payments, the contract will need to specify how cost savings will be split among the government and the other project partners.

- » *Project Welcome Home*: The Santa Clara County project includes a direct cost savings structure. It relates the year’s actual PFS project costs to the amounts budgeted by the service provider. If actual costs are within 90 percent of the budgeted amount, the provider receives those savings (i.e., is paid the year’s budgeted amount). If actual costs are less than 90 percent of the budgeted amount, the savings become “shared savings” costs and are distributed between the provider and the county. If actual costs *exceed* the amount budgeted for the PFS project, the provider must absorb the overage. The parties to the agreement select an independent third-party auditor to review the provider’s financial records and determine the actual project costs annually.⁵

Direct cost savings criteria can provide incentives for a service provider to keep costs down. On the other hand, if providers receive a bonus for delivering the intervention under budget, they may be inclined to reduce services that are beneficial to participants but don’t impact the project’s outcome measures.

PFS agreements might also contain provisions for payments based directly on the amount of cost savings, perhaps determined only at the end of the project.

3. **Determine the length of the project.** This will have a major effect on the total cost of the project. Total project length consists of the service delivery period and the time required to complete the project evaluation and make final success payments. PFS projects can last many years, especially if any of the outcomes that factor into government payments are not expected to occur for years after the service period has ended. Service delivery periods have typically lasted between four and six years (Archer-Rosenthal 2016, table 8.1). This is the period during which most project costs are incurred. Some outcomes might be expected to occur within a year or so of service provision, while others might not be expected for several years. For example, Chicago's school readiness project measures the reduction in special education slots for four cohorts of students, with payments made through high school graduation.⁶
4. **Determine the maximum total success payment.** Governments should establish a maximum amount for their payments. Such caps were included in all of the PFS projects we studied. The maximum total success payment will be based to a large extent on the government's projected cost for the project. It will also be affected by the amount of available investor funding and the government's own financial situation. If success payments are based on more than one outcome measure, consider providing maximum success payments for each measure.
5. **Determine the frequency and timing of success payments.** For PFS projects expecting outcomes in the near future (e.g., within one year of service delivery), early success payments (e.g., annual) may be in order. Some projects make payments only after the service provider's project work has ended and the evaluation has specified the amount of outcome produced. A recent report by the Nonprofit Finance Fund found that the first nine PFS projects in the United States varied in their payment timing structures (Archer-Rosenthal 2016, table 8.2).
 - » *Project Welcome Home:* Santa Clara County makes success payments based on the number of months that a participating family remains in stable housing. After the first 12 months of continuous tenancy, project outcomes are achieved on a monthly basis, but payments are only made annually. The PFS contract ends such payments at the end of the project period.⁷
 - » *Partnering for Family Success Program:* The Cuyahoga County project offers success payments based on outcomes over a five-year period. All success payments are made in the first quarter of the sixth year.⁸ All enrollments take place during the first three years. For

the last two cohorts, the evaluator is responsible for projecting outcomes for the remainder of the five-year evaluation period based on the outcomes for the first cohort.

- » *Child-Parent Center Pay for Success Initiative:* The Chicago Child-Parent Center project also provides payments beyond the four-year service delivery period. The government repays investors for successful outcomes achieved at the end of year one and over the following 16 years. This model assumes that special education savings (and benefits to the children) measured in sixth grade will continue until the final project cohort graduates from high school.

Task 2: Define the Project

Once an intervention is selected for PFS implementation, the government and its partners must thoroughly define the terms of the project to allow for accurate cost analysis. The following are action items to consider.

- 1. Make clear in the contract for which costs the service provider is responsible (and should be covered by the provider's budget) and those for which the government is responsible.** Although most costs of service delivery are covered by the investors in PFS, there may be costs for which it is unclear who should be responsible. This will especially be the case if the government will be providing other customers with a similar service as will be delivered by the service provider (e.g., if the PFS project expands an existing intervention to serve an enlarged target population). Another example: If both the government and the service provider use the same facilities for service delivery, who is responsible for making repairs to those facilities? The PFS contract should specify who is responsible for which costs, to the extent that they can be anticipated.
- 2. Define, as thoroughly and precisely as possible, the specific outcomes sought and the number and categories of clients to be served by the intervention.** The service provider's budget should be based on specific needs to achieve the desired outcomes. These are generally expressed in the form of "payment per unit of validated outcome."
 - » *Juvenile Justice Pay for Success Initiative (MA):* This project provides success payments of \$750 per participant in each quarter that a program participant is employed as compared with similar young men who are not in the program.⁹

Client categories should account for the expected numbers of clients with different levels of need. The number and percentage of clients expected at each level of need can have major effects on the costs of the intervention. For example, a PFS contract providing supportive housing services to homeless individuals might consider the relative costs of serving recently homeless individuals versus chronically homeless individuals.

- 3. Identify other programs, including programs in other parts of the government, whose costs are likely to be significantly affected by the intervention.** Costs for these other programs may be reduced or increased by the intervention. For example, an intervention aimed at reducing homelessness may increase costs by increasing need for supportive services. Cost and cost savings estimates will need to be obtained from these other programs.

- » *Social Impact Bond Program (Denver, CO)*: The research plan for the Denver PFS project identified the following highly cost-affected services: jails, courts, detox efforts, homeless shelters, and hospitals. The project asked the question: Does the supportive housing intervention affect the use of these services and thus the costs to the government (Cunningham et al. 2016, 22)?

Project partners may consider providing higher success payments for serving clients that are typically more difficult and costly to help. Even in projects targeted at the neediest populations, service intensity and mode of delivery are likely to vary considerably across intended beneficiaries. This can have a considerable impact on cost of service delivery. The difficulty categories would likely be based on each incoming client's characteristics, such as the client's baseline condition and demographic characteristics relevant to that particular program (e.g., English speaking skills, years of education, and criminal history).

4. **Describe the type and level (or at least the minimum level) of service to be provided.** The provider should be given considerable flexibility to make continuous service improvements.¹⁰ For example, the government agency might specify in the contract the minimum number of person-to-person contacts the service provider should have with clients. However, that number should provide sufficient flexibility to enable the provider to try various service delivery modifications.¹¹
5. **Provide for contingencies by identifying how adjustments will be made if such contingencies occur.** Throughout the project, significant service adjustments may be needed because of unexpected developments. For example, the use of comparison groups to estimate whether the intervention caused the outcomes will affect the total number of clients whose outcomes need to be measured. If the agreement specifies the number of people the provider must serve and that number cannot be attained (and therefore the number of successful outcomes cannot be achieved), it may become impossible for the project to recoup its cost. Such contingencies are hard to anticipate, but the contract should provide a mechanism by which the parties can jointly work out changes to the agreement.
 - » *Partnering for Family Success Program*: The Cuyahoga County contract included a number of contingency clauses. For example, if the number of eligible enrollments did not reach a specified level by a specified deadline, the contract would be terminated. If labor costs increased to make timely success payments impossible, the project's governance committee would review the contract.¹²

Task 3: Identify and Estimate Project Costs

Identifying Project Costs

Cost elements are categories of cost that a PFS project needs to consider. Collectively, these should cover all the programs and services whose costs are likely to be significantly affected by the intervention. Cost elements will vary across PFS projects. Appendix A presents a starter set of cost elements that governments can use to guide the cost identification process. These elements should be tailored to the specific intervention.

Below are actions governments should take to identify the relevant cost elements for a PFS project.

- **Clarify which costs will be borne by the service provider and which costs will be borne by the government.** The provider’s budget should identify all costs for which the provider is responsible. The government should confirm that cost elements not identified in the provider’s budget will be the government’s responsibility (e.g., housing vouchers). The PFS contract should specify who is responsible for which costs, to the extent that they can be anticipated.
- **Consider and plan for intervention costs that may be incurred before the formal start of PFS project implementation.** This so-called “ramp-up” period can occur before formal project launch to allow project partners to operationalize and refine systems. Typically, ramp-up periods are funded separately (perhaps by a philanthropy) and are not repaid by the government as part of the success payments. Partners must determine whether ramp-up costs will be paid by the government or by a project investor, perhaps to be factored into success payments later.
 - » *Project Welcome Home:* Santa Clara County’s initiative explicitly included a ramp-up period of three months “in preparation for the start of the full six-year project.”¹³ These costs were paid by the county using a fee-for-service contract and were thus excluded from success payments.¹⁴
 - » *Partnering for Family Success Program:* In Cuyahoga County, the service provider used a ramp-up period to “hire and train staff and develop other operations before the project officially launched.” This gave government and case workers time to become familiar with the PFS project and with each other, and to share clients among them (Third Sector Capital Partners 2016, 12). The six-month ramp-up period was funded separately by a philanthropic grant.¹⁵

Ramp-up costs probably should be distinguished from normal project operating costs and reported separately. The government incurs ramp-up costs only once for an intervention, but it and its partners need to decide who pays for these costs.

- **Distinguish between cost elements that vary with the number of participants and cost elements that do not.** The latter are often referred to as *fixed costs* associated with a program. (For example, facility leasing costs are not likely to change until the number of additional customers exceeds a certain amount.) By contrast, actual services provided will fluctuate with the number of people served. Such costs are known as *variable costs*.

Estimating Project Costs

At the end of the PFS project, the government will want to know the actual cost of the PFS intervention in order to compare it to the estimated cost if the project had not been implemented. These actual costs should not include costs unique to the PFS model, such as the cost of the intermediary and the in-depth evaluation, which presumably will no longer be needed. This information is among the major criteria (along with data on the outcomes actually achieved) that the government uses at the end of the PFS project to help it decide whether to continue, modify, or end the intervention.

Appendix A lists costs that should be included in PFS cost estimates. The service provider's budget will be a major source of cost information, and the government's cost accounting system can provide data for estimates of added costs for supporting the new intervention.

The government will likely rely on its own cost accounting system to estimate its cost of serving the targeted number of enrollees. If the government has no prior experience with the services proposed by the PFS project, it may need to consult outside experts or seek cost information from other governments that have implemented similar programs.

The following are suggestions for estimating PFS project costs:

- **Identify costs that are probably too small to affect decisions.** Exclude these costs from further consideration.
- **Estimate impact on the costs of other government programs that will be significantly affected by the project.** Costs to multiple government agencies may be increased or decreased by the intervention. For example, interventions aimed at reducing recidivism could lower law enforcement, court, and prison detention costs; on the other hand, the costs of providing

support services to those released could increase. These spillover effects on other government costs contribute substantially to the total cost of a PFS project.

» *Partnering for Family Success Program*: The Cuyahoga County project primarily affects three systems: child welfare (e.g., foster care), housing, and jails. The county obtained cost per customer data for each system and then combined these costs to estimate the total cost of service for each client. An advantage of this approach is that unit costs can be used to estimate costs for various numbers of people who may be served by the intervention.

- **Consider the difficulty of helping the proposed mix of service recipients.** The number and percentage of total clients who are difficult to serve is an important cost factor. If the actual mix of clients is substantially different from the mix on which cost payments were based, the project may require more or less time and expense to achieve the desired outcomes.

One way to plan for this problem is to develop different success payment rates based on each client's level of difficulty. The project could define a small number of difficulty levels into which each participant can be categorized. The government, probably in conjunction with the service provider, will determine the success payment rate for each difficulty category. If the proportion of participants in each category is found to be significantly different from that which the service provider used to generate its cost estimates, contingency actions such as renegotiations may be needed.

- **Obtain comparable cost information from other governments that have implemented the intervention.** Such information offers a useful comparison to the costs estimated by the government and the service provider for the proposed application of the intervention. Knowledge intermediaries such as the Urban Institute can help make these connections.
- **Estimate cost changes expected during the life of the agreement.** These include annual adjustments to employee salaries, wages, and fringe benefits, as well as increases for supplies and equipment. For projects that last many years, such adjustments can become substantial by the end of the project.
- **Identify changes in fixed costs caused by the intervention during the life of the project. Determine how these costs will be handled in cost comparisons.** Fixed costs may increase or decrease because of investments in the intervention such as new or modified facilities or capital equipment. The service provider's budget should clarify whether the provider is

expected to pay for these added costs. If the government would have incurred these costs without PFS, they should not be considered part of PFS project costs.

If programs outside the intervention will use new fixed capital, project partners will need to estimate the percentage of these costs for which the PFS project is responsible.

- **Review the accuracy of cost and outcome data throughout the project.** For example, Santa Clara County used an independent auditor to review actual project costs. Such reviews will add to the total cost of the intervention.

The estimated *total cost of the project to the government* is the sum of the expected success payments and the estimated additional cost items (e.g., government project support for contract oversight and special performance monitoring costs; see appendix A).

The government will likely ask for an estimate of the total cost to the government to serve the clients specified in the contract if the intervention is *not* implemented. This estimate, when compared to the government's estimated total project cost, provides an estimate of the *costs saved, or the additional costs incurred*, by the project. These estimates will be derived from the government's cost records. The list of cost elements in appendix A can help the government include all significant costs. In place of "Success Payments" (cost element 6 in appendix A), the government can use its own service delivery costs, such as labor, supplies, and equipment. These costs should include those of all government agencies expected to be significantly affected by the intervention.

The estimate of the total cost to the government if the project is not implemented can help the government establish its financial obligations ceiling. At the end of the project, the government will want to compare the final costs of the project to the total cost to the government of serving the clients specified in the contract if the intervention is *not* implemented, in order to discern how much more or less expensive the project was compared with business as usual. With this information, the government can assess whether the new intervention provides good value. Note that if the number of clients served by the PFS project represents an expansion of the government's current services, cost estimates both with and without the added number of clients if the project is not implemented may be useful to the government.

Task 4: Determine the Success Payment Rates

Success payment rates (i.e., payment amounts per unit of outcome achieved) play a major role in determining how much the government pays out and how much project investors recoup. The contract should thoroughly define each outcome to be used as the basis for success payments.¹⁶ Project partners should develop payment rates that specify the success payment per unit of each successful outcome. The number of outcome units achieved multiplied by the success payment rate determines the amount the government is obligated to pay the investors for that amount of outcome.

The sum of the success payments for each targeted outcome over the contract period will be the total dollar amount of the government's maximum contractual obligation.

Basic Principles for Success Payment Rates

- Success payment rates should be fair to all parties. They should be neither so low that they dissuade investors nor so high that they represent a bad deal for the public.
- If the project successfully achieves the outcome levels targeted by the project, the success payments should fully reimburse investors for the project costs identified in the contract and include any fee or profit agreed to in the negotiation process.
- The expected sum of the success payments should not exceed the maximum level specified in the agreement.
- Given the scrutiny that success payments are likely to face, it is important that parties are transparent about the rates and their derivation in the contract. To avoid any potential confusion or disagreement, success payment rates should be predictable: it should be clear when, under what circumstances, and in what amount each payment will be made.

Suggested Steps for Calculating Success Payment Rates

PFS projects come in many forms. Each intervention requires its own unique calculations because project specifics vary considerably. This section outlines a basic approach for developing success payment rates. The order of these steps can vary. The procedure described below assumes that success

payment rates are primarily used to reimburse the investors' payments for funding the service provider's costs (see figure 1).

The following steps (1–6) are recommended:

1. **Identify the amount of funding available from outside investors.** This figure should be within the maximum amount the government is willing to reimburse.¹⁷ The funding ceiling helps determine the length, structure, and reach of the project (e.g., how many clients can be served). Once the amount of funding seems reasonably firm, proceed with the following steps.
2. **Identify the number of clients expected to be served by the intervention during the life of the project.** This number will likely originate with the government and/or the service provider, based on past workloads and the amount of funding available for the project. The number of expected clients will directly drive the cost and structure of the project and must be large enough to provide valid outcome information.

Although projects should strongly consider a randomized controlled trial—the most rigorous evaluation design option—planners can be overly optimistic about the number of clients who will be eligible for the intervention. Incorporating a comparison group can double the number of clients for whom information will be needed. Project planners should ask: Will there be enough eligible clients coming in for the provider to meet the proposed targets?

3. **Estimate the number and percentage of clients served by the intervention who are expected to achieve each outcome tied to success payments.** The service provider should develop an estimate based on its past client success rates, impact evaluations of similar interventions elsewhere, and/or its projection of what it can accomplish with the funds available. If the service provider has implemented the intervention and a rigorous evaluation in the past, the success rate used in the previous evaluation may be the best estimate for the new project.

If the government has been using other methods to achieve similar outcomes, it should calculate its own past success rates for each outcome and compare them to the estimated success rates proposed by the service provider. If the government's past success rate is higher than the rate provided by the service partner, the project may need to justify the project based on potential cost savings. The government and the service provider should examine evaluations of similar programs to help estimate success payment rates. However, past evaluations of the intervention may not apply if the new intervention is scaled in a different location or serves a different target population.

The expected number of successes is the client success rate multiplied by the number of clients estimated to be served by the project. For example, if 150 clients are estimated to be served and the estimated success rate is 30 percent, then 45 clients are expected to be successfully served by the project. This product will be related to the total expected project cost to provide the success payment rate.

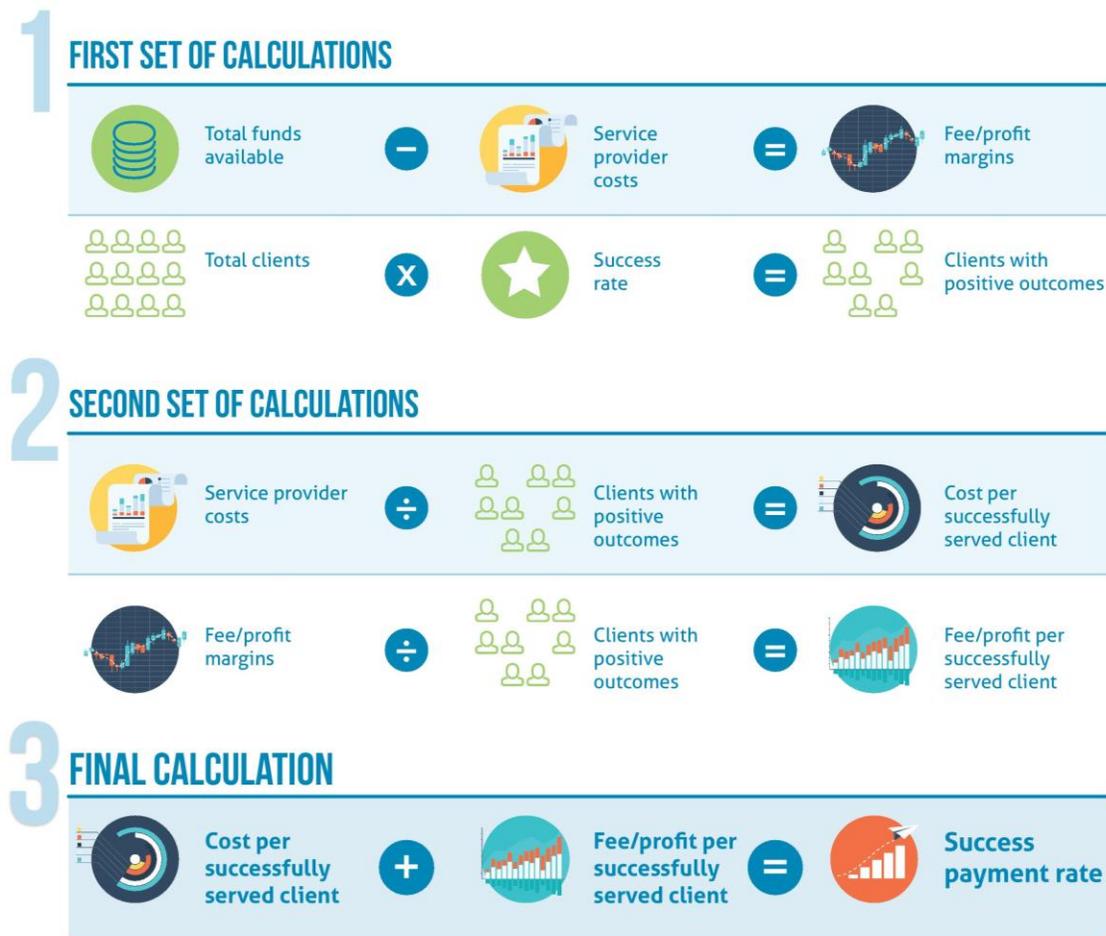
4. **Obtain the service provider's estimated total cost.** Obtain from the service provider its estimated total cost over the period of the project to serve the target number of clients at the specified service level. This estimate will be based on the provider's information on the target population and/or its past costs from similar interventions. The service provider's cost estimates should allow for contingencies and normal cost increases over the project period.
5. **Calculate the service provider's estimated cost per client successfully served.** This is the success payment rate if the government will not also repay special PFS costs such as fees or profits, project management, evaluation, and ramp-up. This rate can be calculated by dividing the service provider's total project estimated cost (obtained from step 4) by the estimated number of customers for whom successful outcomes are achieved (obtained from step 3).

For example, assume the total estimated cost for the project is \$1,000,000 and the additional number of clients for whom successful outcomes are expected is 120 (based on 200 clients expected to be served and a 60 percent success rate). Then, the estimated cost per client for whom successful outcomes are expected is \$8,333 (\$1,000,000 divided by 120). This is the success payment rate if the items discussed in steps 6 and 7 are not paid for through success payment rates.

6. **Add the expected fees and profits to the amounts obtained in step 4 (as part of the government's cost) only if success payments will be paid annually based on successes achieved to date.** One alternative is to pay all fees and profits at the end of the project.

FIGURE 1

Basic Steps for Calculating Success Payment Rates



Steps 7 to 9 cover optional items that the government may wish to add to the agreement.

7. **Consider increasing the success payment rate if the societal benefit for success is large enough to warrant the added expenditure.** This can be justified if the investors have agreed to share this extra success payment amount with the service provider as an incentive to produce added successful outcomes.
8. **Add ramp-up costs to the total government project cost (step 4), if specified in the agreement.** Ramp-up periods can help build in and test the new intervention procedures before full-scale implementation begins. Six of the first nine PFS projects in the United States needed a ramp-up period ranging from three months to one year (Archer-Rosenthal 2016, table 5).

9. **Add any other PFS costs (e.g., project management, evaluation, legal fees) to the success payment rate, if specified in the agreement.** Many PFS projects have covered these costs using other sources such as philanthropies. This item would also cover any extra success payments offered as an incentive to the service provider to achieve special societal benefits. In this model, investors agree to share at least part of the extra payments with the service provider.

Success Payments Using Multiple Outcomes

If only one outcome is tied to success payments, the unit cost factor can be calculated. However, if the agreement calls for success payments based on multiple outcomes, complications arise. With more than one success payment amount, it becomes necessary to allocate the total costs of the project among the multiple outcome criteria. Project partners must determine how much of the total project costs should be allocated to each outcome.

If the costs associated with each success payment are fully distinct from each other, this issue can be handled easily. However, if some of the costs simultaneously affect more than one outcome, another basis for allocating the total project cost among outcomes is needed.

Consider a \$4 million homelessness reduction project that has two outcome measures: number of bed days avoided and number of clients placed into permanent housing. Assume the service provider and the government agree that \$3,000,000 is needed to provide sleeping quarters and \$1,000,000 is needed to place clients in permanent housing. The service provider estimates that its program will avoid 1,000 bed days and stably house 200 individuals in permanent supportive housing. The bed day cost factor would be \$3,000,000 divided by 1,000, yielding a success payment of \$3,000 per bed day avoided. Similarly, the second success payment would be \$1,000,000 divided by 200, yielding a success payment of \$5,000 per individual who achieves housing stability.

If, however, a substantial amount of the intervention simultaneously affects both outcomes, the government and the service provider would need to rely on other means to divvy up the \$4,000,000 between the two outcomes. These decisions may simply be left to their mutual discretion.

- » *Child-Parent Center Pay for Success Initiative:* Chicago's project uses three outcome metrics: kindergarten readiness, avoidance of special education placement, and third-grade literacy. Many of the project's activities and costs affect multiple outcomes. Allocating portions of the cost of these activities among the three outcomes relies on judgments of the

importance of each outcome and the potential for future cost savings (e.g., from avoiding special education).¹⁸

Need for Government Cost Analysis Capability

Obtaining cost information can be difficult, especially if the government does not have experienced cost analysts or a reliable cost accounting system.

Specialized cost analysis personnel may be needed. For example, costing special education avoided is not as easy as it may appear. What programs and cost elements are involved? Savings from reductions in the need for special education may include not only the time of special education teachers but also special support services from other agencies.

As a backup approach, the government may use outside expertise to help make the various estimates. Most PFS projects have used outside help to develop at least some of the cost estimates described above. For example, the Harvard Kennedy School Government Performance Lab has provided technical assistance to a number of sites exploring pay for success. This support has included estimation of cost-benefit analysis for potential outcomes.¹⁹

Other Options for Calculating Success Payments

EXTERNAL STANDARD PRICES PER UNIT OF OUTCOME

A public or private independent organization could derive a set of success payment values that any government agency could later adapt without further analysis. To our knowledge, this approach has only been used in the United Kingdom, the first country to implement PFS, or “social impact bonds.”

The UK Department of Work and Pensions developed a “rate card” for projects linked to improved employability. Its 2015 rate card for social impact bonds included nine outcomes for each individual (e.g., £1,400 per student for improved attendance, £3,300 for achieving competence at level 2 on national occupational standards, £3,500 on entrance into employment, £2,000 for sustained employment). The rate card also established a maximum amount payable per individual (£11,700).

This approach is attractive because it avoids the need for each project to undertake the cost analysis described above. However, it is not likely to be adopted in the United States, at least in the near future, if for no other reason than that each American PFS project has its own unique features. Additionally, this approach has some limitations related to evaluation including the inability to estimate whether the intervention itself *caused* the outcomes.²⁰ Nevertheless, as more PFS projects are implemented, individual governments will want to review and compare their success payment rates with those of projects tackling similar societal problems.

SOCIETAL VALUE OF ACHIEVED OUTCOMES

The government, other project partners, and the public are likely to consider the larger societal value of expected outcomes, beyond reducing future government costs and producing outcomes that can be readily expressed in quantitative terms. The quantitative outcomes used in PFS projects can fall quite short of covering all the qualitative benefits of the intervention.

This disparity could lead the government to increase the success payment rates or provide extra bonuses for meeting or exceeding outcome targets if funding is available (Rohacek and Isaacs 2016, 14–15). These additional payments can provide an incentive for the service provider to improve its success rates *if* the investors share those added payments, in part or in full, with the service provider.

If the project undertakes a cost-benefit analysis including broader societal costs and benefits, it could provide an estimate of the monetized value of those outcomes. This estimate could add to or substitute for the cost-based success payment rates described in Task 4. Cost-benefit analysis can be complex and costly but appropriate if major societal benefits are sought and constitute the main motivation for the intervention.

Appendix A. List of Government PFS Cost Elements

This section lists typical cost elements to consider when estimating a project’s total cost to the government. The specific terms of a PFS agreement will determine which of these cost elements are relevant and whether other cost elements also need to be considered.

In the process of developing the PFS agreement, the government will want estimates of (1) the costs of each relevant element if the PFS project is not implemented and (2) the expected costs if the project is implemented. These estimates will enable the government to calculate total cost savings (or increases) expected from the PFS project.

The agreement must also specify which costs will be borne by which partner. Moreover, if the proposed project increases the number of clients to be served, the government should include any spending needed to accommodate this increase in its estimate of costs if the project is not implemented.

APPENDIX TABLE A.1

Basic List of Cost Elements

The government and its PFS partners may refer to this list of cost elements to check that their contract clarifies each party’s cost responsibility. The government only needs to consider those cost elements for which it is responsible.

Initial PFS project development costs	One-time or periodic investment costs	Annual operating and maintenance costs
1. Negotiation, intermediary, and evaluation	4. Leasing new facilities or modifying existing facilities	6. Success payments
2. Ramp-up	5. New or modified equipment	7. Government project support
3. Special consultants and/or contractors		8. Data quality cost controls
		9. Transportation
		10. External project management
		11. Overhead
		12. Inflation
		13. Contingency costs
		14. Added premiums
		15. Other costs

Initial PFS Project Development Costs

1. **Negotiation costs.** PFS projects require substantial time and effort to set up. This cost element includes specialized legal, financial, and procurement costs that the government incurs. PFS

projects typically also engage an intermediary organization and an external evaluation organization, both of which are contracted at the outset to provide services throughout the life of the project. The agreement should specify who is responsible for these costs. Typically, the government and the investors pay for their own costs separately. The costs of the intermediary and the evaluator are not usually covered directly by the government. If these costs will be borne by the investors and not by the government, they will not be relevant to estimates of the government's PFS project costs.

2. **Ramp-up costs.** Some projects include a pre-launch ramp-up or pilot test period to allow project partners to operationalize and refine systems. The service provider may need to work with a small number of clients before launch in order to become familiar with the government's operating procedures and information systems and to establish working relations with government employees. For some projects, this process could take one year or more. Ramp-up or pilot periods have often been funded by philanthropies with no added impact on government costs.
3. **Special PFS-related consultant and contractor costs,** such as those incurred to help the government determine project feasibility and success payment rates. These costs are typically paid separately by the government.

One-Time or Periodic Investment Costs

These costs can be amortized over the period of the agreement in order to provide estimates of annual costs (Ammons 2002, chap. 11). If any investments will be used jointly by other government programs, the PFS project's share of the costs will need to be determined.

4. Investments in, or leasing of, **new or modified facilities.**
5. **New or modified equipment** (e.g., computer or communications-related equipment).

Annual Operating and Maintenance Costs

6. **Success payments.** The major potential cost to the government will be success payments to investors, to the extent that successes are realized. The government will want to know its total obligation if the program meets its success targets. PFS contracts can provide success payments throughout the life of the project, with the government repaying investors for early

outcomes. If the project achieves the planned outcomes, investors will collect both the up-front costs paid for service delivery as well as a fee from the government. Fee or profit percentages might be included as part of early success payments. Alternatively, the government may withhold payment of any such fees or profits until the project is completed and has achieved the promised outcomes. At the end of the project, these investor fees and profits would not need to be considered when the government estimates the cost to continue the intervention. The budget provided by the service provider, after negotiation with the government and investors, will likely be the primary basis for developing the success payment rates (as described in Task 4). If the service provider subsequently finds its cost to be much higher, or much lower, than its agreed-on budget, contingency clauses in the agreement might kick in.

7. **Government project support.** This includes staffing costs (salary, wages, and fringe benefits) for government staff that (a) work with the service provider, (b) provide project oversight, and (c) track the outcomes detailed in the project agreement but not currently collected by the government (e.g., special IT costs needed for collecting, processing, and analyzing new performance data, to the extent that these costs are the government's responsibility). This cost element also covers additional supplies and equipment (e.g., computers, phones, and furniture) that will need to be procured for use by the service provider and any additional utilities (e.g., janitorial services, heating, electricity, air conditioning) that are the responsibility of the government and not the service provider.
8. Additional **data quality control costs**, such as those for special audits required by the government.
9. Added **transportation costs**, such as those needed to reach customers living in rural areas.
10. **External project management costs.** PFS projects typically require an external intermediary organization to manage activities such as determining and processing the success payments (based on feedback from the project evaluator) and handling communications among the investors and other stakeholders. In the PFS projects we studied, the costs of these intermediaries were not borne by the government.
11. The project's share of government **overhead costs** (e.g., contract and grant administration, finance, personnel office, housekeeping). Such costs apply to multiple programs simultaneously. For cost accounting purposes, they can be spread over those programs according to characteristics such as program staff size.²¹
12. **Inflation costs.** These have been small in recent years but could grow, particularly with long-term agreements.²²
13. **Contingency costs.** The agreement should build in a cushion for unanticipated expenses.

14. Any **added premiums** above the amounts specified in the contract, provided to the investors and/or the service provider. These include premiums for risks taken or special incentives for the service provider. For example, the Santa Clara County project “provides a small premium commensurate with the risk they are taking, referring to the risk taken by both the investors and the service provider.”²³
15. **Other costs** applicable to the project. This category includes the intervention’s cost effects (potential increases or decreases) on programs in other government agencies.

If the service provider relies substantially on volunteer work, the government may need to convert volunteer time into paid employee time after the project ends. The cost of those paid employees would need to be included in cost estimates used to determine whether to continue the intervention. If the use of volunteers is an inherent part of the delivery process and the government continues to use volunteers, we do not recommend that *imputed* costs of the volunteers be included in calculations of the intervention cost. These imputed costs would not appear in the government’s budget. However, any cost to the government of overseeing the volunteers would need to be included in the estimate.

Notes

1. Based on telephone interview with Santa Clara County officials.
2. County of Cuyahoga, “Pay for Success Contract among Cuyahoga County, Ohio, Mental Health Services for Homeless Persons, Inc. d.b.a. FrontLine Service and Cuyahoga PFS, LLC,” executed October 28, 2014, http://www.payforsuccess.org/sites/default/files/resource-files/cuyahoga-county-pfs-contract_0.pdf.
3. United Way of Salt Lake, “Social Impact Bond for Early Childhood Education Shows Success,” news release, October 7, 2015, <http://www.uw.org/news-events/news-releases/2015-news-releases/10-07-2015-20sib-20news-20release-20final-2.pdf>.
4. City of Chicago, “Loan Agreement and Pay for Success Contract between City of Chicago and IFF Pay for Success I, LLC,” issued October 8, 2014, http://www.payforsuccess.org/sites/default/files/resource-files/o2014-8677_0.pdf.
5. County of Santa Clara, “Pay for Success Agreement by and between the County of Santa Clara and Abode Services,” executed June 23, 2015, <http://www.payforsuccess.org/sites/default/files/resource-files/Attachment-139169.pdf>, 13–15.
6. Chicago, “Contract.”
7. Santa Clara, “Agreement,” 4.05(b)(ii).
8. “Fact Sheet: The Cuyahoga Partnering for Family Success Program,” Urban Institute Pay for Success Initiative, http://www.thirdsectorcap.org/wp-content/uploads/2014/12/141204_Cuyahoga_PFS_Fact-Sheet.pdf, 4.
9. “Fact Sheet: The Massachusetts Juvenile Justice Pay for Success Initiative,” Urban Institute Pay for Success Initiative, <http://www.goldmansachs.com/our-thinking/trends-in-our-business/massachusetts-social-impact-bond/MA-juvenile-justice-pay-for-success-initiative.pdf>.
10. Such modifications could complicate the interpretation of evaluation results to determine the program’s impact. For example, if an evaluation purports to study the effectiveness of program A but, because of implementation changes, studies program B, the evaluation may be misleading. To mitigate this effect, when the service provider makes substantial changes to its procedures, the government and the provider should examine the potential impact on costs and outcomes to determine whether any contract modifications are needed.
11. The service provider for Cuyahoga County’s Partnering for Family Success Program identified flexible funds in its budget for handling client needs (Third Sector Capital Partners 2016, 13).
12. Cuyahoga, “Contract,” 35.
13. County of Santa Clara, “Agreement/Amendment 77051: Pay for Success Project regarding Chronic Homelessness: Project Welcome Home,” approved June 23, 2015, <http://sccgov.iqm2.com/Citizens/FileOpen.aspx?Type=30&ID=68998&MeetingID=6059>, 2.
14. Interview with Santa Clara County public official, May 1, 2016.
15. Interview with Cuyahoga County public official, April 14, 2016.
16. The identification of the specific outcomes to be used is beyond the scope of this report. However, outcomes should be estimates that represent as closely as feasible the number of *additional* successes that occurred compared with what would have occurred if the intervention had not been implemented. The determination of the amount of successful outcomes is the role of the PFS independent evaluation.
17. This maximum funding available ceiling can be reached in a number of ways. See, for instance, Rohacek and Isaacs 2016.

18. Chicago, "Contract," exhibit 1.
19. For more information, see "Harvard Kennedy School Government Performance Lab: Grantee Information," Corporation for National and Community Service, <https://www.nationalservice.gov/programs/social-innovation-fund/pay-success/harvard-kennedy-school-social-impact-bond-lab>.
20. Matthew Eldridge, "How the UK Pays for Success," *PFS Perspectives* (blog), Urban Institute, May 23, 2016, <http://pfs.urban.org/pay-success/pfs-perspectives/how-uk-pays-success>.
21. For further details and options, see Ammons 2002, chap. 12.
22. For further details and options, see Ammons 2002, chap. 16.
23. Santa Clara, "77051," 5.

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