

# Generally Accepted Value for Money Analysis Principles

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**BUILD AMERICA CENTER**

INNOVATIVE FINANCING AND DELIVERY  
OF TRANSPORTATION INFRASTRUCTURE

# FIVE PRINCIPLES

## **PRINCIPLE 1: OBJECTIVITY**

Use unbiased, fact-based, best available information, and consider all realistic delivery models.

## **PRINCIPLE 2: COMPREHENSIVENESS**

Consider benefits, costs, and risks throughout the project life cycle.

## **PRINCIPLE 3: CONSISTENCY**

Clearly define and apply the same project scope, standards, procedures, and assumptions throughout the entire analysis.

## **PRINCIPLE 4: ROBUSTNESS**

Use realistic assumptions and account for uncertainties in the analysis and sensitivities of variables.

## **PRINCIPLE 5: TRANSPARENCY**

Clearly disclose the analysis methods, assumptions, and sources.



# INTRODUCTION

## BACKGROUND AND CONTEXT

Most agencies would agree that conducting a robust comparison of project delivery models, often referred to as a Value for Money (VfM) analysis, to inform the selection of the best option is good practice. Moreover, Sections 11508 and 70701 of the Infrastructure Investment and Jobs Act (IIJA), signed into law on November 15, 2021, require VfM analysis for specific categories of projects that are carried out using Federal financial assistance. Given that there is no uniformly accepted standard for what a VfM analysis should contain, the Build America Center (BAC) is developing “Generally Accepted Value for Money Analysis Principles” (hereafter VfM Analysis Principles). By compiling a commonly recognized set of principles on VfM analysis, the BAC seeks to improve clarity and consistency of the communication on the topic across the US infrastructure sector. This effort is primarily focused on transportation projects, however, the principles would apply to any type of infrastructure.

As part of an initial industry outreach effort, in June 2022 the BAC launched a survey aimed at soliciting input from stakeholders involved in conducting or reviewing VfM analyses, in order to inform the identification and selection of the key principles that should be included in the guide. Based on the feedback received, the BAC developed a first draft of the VfM Analysis Principles, which was circulated for review by industry stakeholders. The feedback provided was incorporated into a revised version of the VfM Analysis Principles document, which was shared with the relevant stakeholders. Subsequently, a series of roundtables was hosted in order to provide stakeholders with the opportunity to discuss specific topics regarding each of the principles in greater detail. This final draft of the VfM Analysis Principles was developed based on the roundtable discussions.

## CONCEPTUALIZATION OF A VfM ANALYSIS

A VfM analysis is used to compare different delivery methods, including public-private partnerships (P3s), for the same capital investment project to achieve substantially the same societal outcome.

A VfM analysis is different from other assessments carried out during the preparation stages of a project, such as a benefit-cost analysis

### **Value for Money**

VfM is defined as the optimum combination of risk adjusted life-cycle costs and quality (or fitness for purpose) of a good or service to meet the user’s requirement.

(BCA) and a financial feasibility assessment. More specifically, a BCA aims to assess whether the project is attractive from the perspective of society and a financial feasibility assessment evaluates whether the project is financially feasible. In contrast, a VfM analysis assumes that, at this stage in the process, the decision to proceed with the project has already been made. Therefore, the VfM analysis does not provide an answer to the question of whether or not the project is a good use of societal resources nor does it determine whether the project is affordable. In this context, VfM analysis answers the question: which delivery method provides the ‘best deal’ for implementing a specific project from the perspective of the government? The differences between the analyses are summarized in Table 1 below.

**Public-Private Partnership**  
 A public-private partnership is a long-term contractual agreement between a public agency and a private entity for multiple elements of an infrastructure project, such as development (design and construction), operation, and/or maintenance.

Table 1. Financial and Economic Analyses

Analysis	Tool	Technical Description	Key question to be answered
Economic Feasibility	BCA Analysis	Analysis of all economic (including social and environmental) costs and benefits of the project (compared to the situation without the project)	Is the project attractive from the perspective of society?
Financial Feasibility	Financial Viability Assessment	Analysis of all financial cash flows of the project, and comparison of cash flows to available budget	Is the project financially feasible? Can we afford the project?
Value for Money	VfM Analysis	Comparison of the expected P3 cash flows and expected conventional delivery method cash flows	What is the optimal project delivery method?

**PURPOSES OF A VfM ANALYSIS**

A VfM analysis aims to provide a structured approach for a government to assess the value for money it can expect from the P3/alternative delivery approach. At its core, the VfM analysis is an analysis of the pros and cons of one or more alternative delivery models for a specific project when compared against the default “conventional” delivery model (referred to as the Public Sector

Comparator or PSC). The VfM analysis typically involves an analysis of the projected financial (risk-adjusted) cash flows under various delivery models. A government agency may, however, also want to include non-financial and socio-economic considerations in the decision-making process when deciding whether to undertake a project using P3/alternative delivery. The purpose of VfM analysis is to inform decision-making regarding project delivery or procurement, rather than to replace it.

### STEPS IN A VfM ANALYSIS

In general terms, there are four typical steps that must be carried out as part of a VfM analysis. These are outlined in Figure 1. The first step is scoping and definition, which refers to explicitly defining the geographical, spatial, functional, and temporal scope of the project and determining the exact definition of the conventional and alternative delivery options (including the allocation of risks). The second step is the qualitative analysis, which identifies the expected differences between the P3/alternative delivery model and the conventional approach, in order to prepare for the monetization of these differences in the quantitative analysis. The third step is the quantitative analysis, which involves the development of cash flow projections – and potentially valuation of economic benefits – for the P3/alternative delivery option and the public sector comparator (PSC). The final step is the VfM comparison between the PSC and the P3/alternative delivery option on the basis of a comparison of the financial outcomes, sensitivity analysis, and additional considerations including benefits (or disbenefits) that accrue to the public as a result of the delivery model.

Figure 1. Steps in a VfM Analysis



## PRINCIPLE 1: OBJECTIVITY

### DESCRIPTION

Use unbiased, fact-based, best available information, and consider all realistic delivery models.

### RATIONALE

The underlying objective of a VfM analysis is to inform decision-making from the perspective of the procuring agency, state/federal government, and taxpayer, by providing a fair, current, unbiased, and fact-based comparison of P3/alternative delivery with conventional delivery. VfM analysis shall not be used to justify decisions that have been already made.

### IMPLICATIONS

- ▶ In terms of delivery models, VfM analysis should consider all realistic delivery options (procurement, contracting, and financing) for the procuring agencies. For practical reasons, the public agency should select one conventional delivery model that is deemed the logical default contracting option (public sector comparator), which is the public benchmark to be compared with all realistic alternative delivery models, whether they are short-term or long-term.
- ▶ VfM analysis strives to remain unbiased and intends to use data that is up-to-date and grounded in experience, particularly as it relates to the quantification of differences between delivery models (including expected efficiencies and benefits). However, it is important to acknowledge that the information used in a VfM analysis may often be incomplete and uncertain.
- ▶ The analysis of past performance by the public sector under a traditional procurement to quantify construction-related risks (i.e., cost overruns and schedule delays) and lifecycle-related risks (i.e., deferred maintenance) must be conducted independently in order to generate a database of reliable information.



# PRINCIPLE 1: OBJECTIVITY

- ▶ VfM analysis shall consider the real advantages (or disadvantages) accruing to a government by virtue of its public ownership under conventional delivery, but should correct for artificial advantages that would otherwise result in “hidden” costs or risks that remain unaccounted for.
- ▶ To the extent possible, considerations relating to differences between delivery models in capital expenditures, and operations and management costs should be grounded in evidence and analysis of past performance.



# PRINCIPLE 2: COMPREHENSIVENESS

## DESCRIPTION

Consider benefits, costs, and risks throughout the project life cycle.

## RATIONALE

As P3/alternative procurement is often a medium- to long-term arrangement and the differences between P3/alternative delivery and conventional delivery can occur throughout the entire lifecycle, it is important to consider all costs, benefits, and risks in order to make an apples-to-apples comparison.

## IMPLICATIONS

- ▶ VfM analysis will not only focus on robust capital cost estimation, but also must develop robust operations and maintenance cost estimates.
- ▶ VfM analysis considers life cycle benefits (and costs) to infrastructure users and the public, focusing on the expected differences between delivery models.
- ▶ In order to provide an apples-to-apples comparison, VfM analysis should consider not only the costs (and revenues) transferred to a private entity, but also those retained by the public agency.
- ▶ VfM analysis should also consider the indirect costs borne by the public entity under the PSC and costs retained by the public entity under P3/alternative delivery. These include costs that may be considered “overhead” (i.e., employee benefits, equipment and facilities, and hiring project management staff, among others).
- ▶ VfM analysis considers risks (from the perspective of all relevant stakeholders) and uncertainties throughout the project life cycle, requiring a structured assessment and discussion of the main project risks.
- ▶ A VfM analysis should be periodically updated in order to capture associated risks as accurately as possible.





# PRINCIPLE 3: CONSISTENCY

## DESCRIPTION

Clearly define and apply the same project scope, standards, procedures, and assumptions throughout the entire analysis.

## RATIONALE

A structured and apples-to-apples comparison of a project's cash flows under several delivery models requires a consistent approach to scope, standards, procedures, and assumptions.

## IMPLICATIONS

- ▶ The project scope is to be defined, from a geographic, spatial, functional, and temporal standpoint, including the definition of the project's goals and objectives. The project scope should be applied across all delivery models in a consistent manner with a clear definition of the output specifications, key performance indicators, and quality of service.
- ▶ VfM analysis clearly defines and consistently applies standards, procedures, and assumptions throughout the analysis, and discloses any changes or updates in the standards, procedures, and assumptions.
- ▶ It is recommended that the VfM analysis be updated if there are material changes in the scope, risk allocation or any other parameters relevant for the comparison of delivery models.
- ▶ There are natural points in time in which a VfM analysis may be developed or updated, each with its specific motivation:
  - i. early in the project preparation, before the decision on the delivery model, to inform the procurement or project delivery decision;
  - ii. during the procurement process, supporting discussions with potential bidders, to rationalize decision-making regarding scope revisions and risk allocation in the Request for Proposals or Project Agreement;



## PRINCIPLE 3: CONSISTENCY

- iii. prior to the selection of the preferred bidder to confirm that the selected delivery model is still preferred; and
  - iv. during the operations phase to collect relevant data on the performance of the selected delivery model.
- In the event a VfM analysis is updated after P3/alternative delivery bids have been received, the scope of the public sector comparator will need to reflect any changes in the P3/alternative delivery scope and risk allocation, as well as revisions of the technical requirements that are needed to allow for any Alternative Technical Concepts (ATCs). Additionally, where innovations from the P3/alternative delivery approach are incorporated, the benefits of these will need to be considered. Finally, a VfM analysis that is being used for decision-making purposes at the time of contract award does not need to take into account “sunk costs” (i.e., transaction and other costs made prior to that time) because these are not relevant to the decision on whether or not to continue the procurement using P3/alternative delivery.



# PRINCIPLE 4: ROBUSTNESS

## DESCRIPTION

Use realistic assumptions and account for uncertainties in the analysis and sensitivities of variables.

## RATIONALE

The quality of a quantitative VfM analysis is dependent on the quality of the inputs. Unfortunately, the lack of reliable data can be a challenge, which typically makes it impossible to reach a high level of precision. This is not only true for the financial benefits and costs of P3/alternative delivery (prior to receipt of P3/alternative delivery bids), but also for long-term cost estimates and valuation of risks under conventional project delivery.

## IMPLICATIONS

- ▶ Both qualitative and quantitative analysis should be conducted, keeping in mind that only what is quantifiable should be included in the quantitative analysis. Hence, when quantitative data are not available, the VfM analysis needs to rely more heavily on the results of the qualitative analysis.
- ▶ Quantitative analysis should acknowledge uncertainty. VfM analysis should perform simulations and sensitivity analyses and, due to uncertainty, present results of the quantitative analysis in ranges, rather than as exact outcomes.
- ▶ Discount rates, risk valuation and financing costs are critical variables in quantitative analysis. The VfM analysis must clearly explain these concepts and justify any assumptions, and also show the sensitivity of the outcomes to these variables.
- ▶ Socio-economic benefits (accruing from the delivery method) should, to the extent practicable, use well-established benefit-cost analysis procedures such as those published by the US Department of Transportation for applicants to discretionary grant programs.



# PRINCIPLE 5: TRANSPARENCY

## DESCRIPTION

Clearly disclose the analysis methods, assumptions, and sources.

## RATIONALE

As a tool to inform decision-making, VfM analysis should be easily understood by elected officials and peer industry experts. This will also enable VfM analysis to, in some form, be useful in informing the general public. This is only possible if the analysis is transparent and well documented. Any financial model used in the analysis must also be transparent, easy to follow, well documented, and structured (i.e., not a black box).

## IMPLICATIONS

- ▶ In order to be verifiable, a comprehensive VfM analysis should be transparent by documenting all relevant details about how the analysis was conducted (i.e., methods, assumptions, and sources) and its results. This includes clearly describing the status and certainty level of assumptions and explicitly reporting on changes in assumptions at various stages of the VfM analysis.
- ▶ It is important to note that the specific requirements regarding disclosure of information will most likely be governed by State transparency and accountability laws and policies.
- ▶ Although the information should be publicly accessible and available to peer industry experts and the general public, in most cases, it may not be necessary and/or productive to present the entire detailed analysis to all stakeholders. Therefore, careful consideration should be given to the best way to communicate the results of a VfM analysis in a concise and understandable way.
- ▶ Moreover, each component of the VfM analysis must be presented individually and separately. Particularly, the treatment of financing costs, escalation, discount rate chosen, and risk valuation must be transparent and well documented.
- ▶ As a tool to inform decision-makers, the results of the VfM analysis may be presented to elected officials in a summarized fashion – based on the more comprehensive analysis.



## BUILD AMERICA CENTER

INNOVATIVE FINANCING AND DELIVERY  
OF TRANSPORTATION INFRASTRUCTURE

A knowledge center that empowers public and private organizations to deliver crucial transportation infrastructure projects using innovative financing and alternate delivery methods.

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