



DEPARTMENT OF THE ARMY
WASHINGTON DC 20310

DEC 30 2009

MEMORANDUM FOR PRINCIPAL OFFICIALS HEADQUARTERS, DEPARTMENT
OF THE ARMY

SUBJECT: Cost-Benefit Analysis to Support Army Enterprise Decision Making

1. As Army leaders, we must be responsible stewards of the funds entrusted to our care. This is particularly true now, as we strive to meet the challenges of persistent conflict in an era of constrained resources. We must make the best possible use of our limited funds and ensure that no significant resource-related issue is decided without a thorough review of its costs, its projected benefits, and the trade-offs that might be required to pay for it. In our decision making, we need to supplement professional experience and military judgment with solid data and sound analytical techniques.
2. Toward this end, we are directing that each unfunded requirement and new or expanded program proposal submitted to the Secretary of the Army, Chief of Staff, Army, Under Secretary of the Army or Vice Chief of Staff, Army, be accompanied by a thorough cost-benefit analysis (CBA). This must identify the total cost of the proposal, the benefits that will result, the bill-payers that would be used to pay for it, and the second and third level effects of the funding decision. The net result of the CBA should be a strong "value proposition" – a clear statement that the benefits more than justify the costs and required trade-offs. CBAs will be prepared using the attached template and reviewed and approved by the Deputy Assistant Secretary of the Army for Cost and Economics (DASA (CE)).
3. These measures will enable us to make better resource-informed decisions and will contribute to the Army's overall mission effectiveness.
4. The POC for this action is Mr. Stephen Bagby, the DASA (CE). He can be reached at 703-692-1722.

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Peter W. Chiarelli
General, U.S. Army
Vice Chief of Staff

A handwritten signature in black ink, appearing to read "Joe Westphal", followed by a horizontal line.

Joseph W. Westphal
Under Secretary of the Army

Enclosure

Cost Benefit Analysis (CBA) Template

1. Problem Statement, Objective and Scope

The problem statement clearly defines the problem, need, or opportunity that requires a solution and describes what the effort intends to accomplish.

The objective of the effort is to improve, reduce, or increase some aspect of a process, procedure, or program. Objectives should be measurable, realistic, achievable, and results-oriented. Simply put, objectives are measurable outcomes.

Scope defines the range of coverage encompassed by an initiative or proposal along specific dimensions like time, location, organization, technology or function.

2. Assumptions and Constraints

Assumptions are factors or conditions that are essential to the success of the solution and are beyond the control of the organization. Assumptions define the ground rules and accepted statements in order to limit the scope of the CBA. They are explicit statements of conditions on which the CBA is based.

Constraints usually refer to limits placed on resources to be devoted to the project. Constraints or barriers are normally beyond the control of the analyst and provide limitations within which analyses take place.

3. Current State (the Status Quo)

This defines and assesses the current state/ condition.

The status quo alternative of the CBA is the "baseline" program or system against which the costs and benefits of all feasible alternatives are compared.

4. Alternatives with Cost Estimates

Alternatives are potential solutions to the problem statement which will be evaluated in the CBA.

Alternatives should reflect a review of the mission and strategic goals to verify that the alternative's objectives are consistent with the problem statement.

A cost estimate captures the total cost of each alternative over its entire life cycle and is a summation of all relevant cost elements.

5. Quantifiable and Non-Quantifiable Benefits

Benefits are results expected in return for costs incurred for a chosen alternative. They are the quantitative and qualitative improvements expected or resulting from the implementation of an alternative.

Quantifiable benefits are benefits that can be assigned a numeric value such as dollars, physical count of tangible items, or percentage change.

Non-quantifiable benefits are subjective in nature and can make a positive contribution to the analysis. Some examples of non-quantifiable benefits are improvement in morale and customer satisfaction.

6. Alternative Selection Criteria

Alternative selection criteria are those standards/bases on which a decision will be based. CBAs must contain documentation that outlines decision criteria and identifies the extent to which each alternative satisfies each of the criteria.

7. Comparison of Alternatives

a. Costs and Benefits Comparison

The essence of the CBA process is in comparing the costs and benefits of two or more alternatives (including the status quo) in order to select the preferred alternative.

As a general rule, the preferred alternative is the alternative that provides the greatest amount of benefits in relation to its cost.

b. Trade-offs / Billpayers

Trade-offs / billpayers are the funding sources that have been identified which will cover (partially or entirely) the costs of an alternative.

c. Second and Third Order Effects

Second and third order effects are the results (consequences and/or impacts) stemming from a decision. They include the opportunity costs of pursuing one alternative over another. Second and third order effects identify what a decision maker can do or not do as a result of a decision.

d. Sensitivity Analysis and Risk Assessment

Sensitivity analysis explains what the effect is on the cost/benefit model should assumptions change, risks become issues and/or dependencies not be met.

Risk assessment describes all risks that can impact the achievement of stated benefits or the cost of solving the business problem. Each risk has an associated mitigation strategy and an assessment of likelihood of occurrence.

8. Results and Recommendations

Results and recommendations summarize the findings of the analysis and make conclusive statements about the comparisons of alternatives.

The conclusions should demonstrate the cost/benefit relationships between each alternative.

The results address how the alternatives were ranked using the criteria developed in Step 6. Following a clear statement of the conclusions, there should be a firm recommendation regarding the preferred alternative.

- **Identify Supporting Documentation**

All data and other information used in Steps 1-8 must be adequately documented. Supporting information should be identified so decision makers and analysts can understand how Steps 1-8 were developed.