BUSINESS CASE MODEL FOR THE DOD LOGISTICS COMMUNITY:

A Guide to Business Case Development

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Department of Defense
Deputy Under Secretary of Defense (Logistics)
Logistics Reinvention Office

TABLE OF CONTENTS

1.0 PREAMBLE iii

2.0 INTRODUCTION 1

3.0 PURPOSE OF THIS GUIDE 1

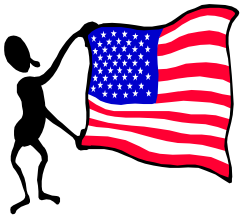
4.0 BUSINESS CASE MODELING FUNDAMENTALS 2

4.1 WHAT IS A BUSINESS CASE? 2
4.2 WHAT IS THE ROLE OF BUSINESS CASE MODELING IN LOGISTICS REENGINEERING? 2
4.3 WHEN SHOULD I PREPARE A BUSINESS CASE? 3
4.4 HOW DO I GET STARTED? 3
4.5 WHAT SHOULD MY MODEL INCLUDE? 4
4.6 WHAT SHOULD THE BUSINESS CASE DEVELOPER(S) KNOW? 4
4.7 WHAT SHOULD THE DECISION-MAKER KNOW? 5
4.8 WHAT ARE THE BARRIERS? 5

5.0 BUSINESS CASE MODEL MINIMUM REPORT REQUIREMENTS 6

5.1 EXECUTIVE SUMMARY 6
5.2 BOUNDARIES OF THE BUSINESS CASE - GOALS AND VISION 7
5.3 BOUNDARIES OF THE BUSINESS CASE - CONTEXT AND PERSPECTIVE 7
5.4 BOUNDARIES OF THE BUSINESS CASE - FUNCTIONAL PERFORMANCE AND METRICS 8
5.5 BOUNDARIES OF THE BUSINESS CASE - INITIATIVES CONSIDERED 9
5.6 BOUNDARIES OF THE BUSINESS CASE - ALTERNATIVES CONSIDERED 10
5.7 BOUNDARIES OF THE BUSINESS CASE - KEY ASSUMPTIONS 11
5.8 BOUNDARIES OF THE BUSINESS CASE - AS-IS ACTIVITY MODEL 11
5.9 DISCUSSION OF ALTERNATIVES - FUNCTIONAL PROCESS DESCRIPTION 11
5.10 DISCUSSION OF ALTERNATIVES - PERFORMANCE IMPACT AND METRICS 12
5.11 DISCUSSION OF ALTERNATIVES - TECHNICAL ARCHITECTURE (WHEN TECHNOLOGY IS AN ISSUE) 12
5.12 DISCUSSION OF ALTERNATIVES - COST PROJECTIONS (ECONOMIC ANALYSIS) 12
5.13 DISCUSSION OF ALTERNATIVES - COST PROJECTIONS - INVESTMENTS 14
5.14 DISCUSSION OF ALTERNATIVES - COST PROJECTIONS - OPERATIONAL 14
5.15 DISCUSSION OF ALTERNATIVES - RISK ASSESSMENT 14
5.16 COMPARISON OF ALTERNATIVES - FUNCTIONAL 15
5.17 COMPARISON OF ALTERNATIVES - PERFORMANCE 15
5.18 COMPARISON OF ALTERNATIVES - COSTS 16
5.19 COMPARISON OF ALTERNATIVES - INVESTMENT COSTS 16
5.20 COMPARISON OF ALTERNATIVES - OPERATIONAL COST SAVINGS 17
5.21 CONCLUSIONS, RECOMMENDATIONS, AND ISSUES 17

1.0 PREAMBLE



Making Joint Vision 2010 a reality and accomplishing the goals and objectives of the DoD Logistics Strategic Plan will require coordinated, focused and well managed efforts by OSD, the Services, and Agencies. A cornerstone of the logistics transformation process is the preparation of business cases that support our implementation initiatives. Properly prepared business cases provide the linkages among the individual initiatives, the Logistics Strategic Plan, and Joint Vision 2010 as well as the metrics for measuring success of the initiatives and progress toward achieving the overarching goals and objectives. A properly prepared business case represents an effective tool to improve the decision making process and foster timely and accurate decisions within the DoD logistics community.

To assist in the adoption and use of business case development as a management tool for implementing the DoD Logistics Strategic Plan, this guide: Business Case Model for The DoD Logistic Community: A Guide to Business Case Development, has been prepared. The guide is intended to assist all within the DoD logistics community who need to prepare, document, and evaluate alternative approaches as well as those responsible for making decisions and directing courses of action.

This guide provides the information needed to use business case modeling as an effective tool to manage change. It is simple, straightforward, and serves as a road map for formulating a sound business case. The guidance provided can be used to create a sound business case that is consistent with DoD Logistics Strategic Plan goals and objectives.

There are three simple steps:

1. Tailor the business case model that is provided in the guide to meet specific needs.
2. Gather the information needed to support population of the tailored model.
3. Populate the tailored model in accordance with the guidance provided.

The populated model is the business case.

2.0 INTRODUCTION

Business cases are an integral part of every competent manager's decision process. They are frequently informal and often undocumented. Such analyses and models consist of the manager's assessment of financial, procedural, organizational, and performance implications of a proposed change. Informal as it may be, this process yields information needed to support a business decision and is therefore a business case. In general, when the change of the organization is more complex, the business case development process should be more formal and rigorous.

Within the DoD, formal business cases are critical elements of on-going Business Process Reengineering (BPR) and other improvement activities, and related decision-making processes. Despite significant guidance published to date, business cases continue to be misunderstood and inconsistently applied within the DoD community. ***Ineffective applications of a business case are found throughout the organization, such as, being used after the fact to justify technology decisions, in-process implementations or projects, and related sunken costs. They are also improperly used to determine the value of completed technology or software development projects.*** This guide will help in avoiding these traps.

3.0 PURPOSE OF THIS GUIDE

This purpose of this guide is to bring consistency and understanding to business case development efforts within the DoD logistics community. It highlights the process steps required to produce a simple, straightforward and easy to understand Business Case Model. The target audience is the Joint Chiefs of Staff (JCS); Office of the Secretary of Defense (OSD); Service, Agency, and Industry logistics functional experts; program management; prime vendors; and Integrated Product Teams (IPTs) tasked with implementing change and making decisions about change within the DoD logistics community. The objective is to promote the use and consistent application of business cases as the tool for the evaluation and management of change within the DoD logistics community.

The Need of the Decision-Maker

The need of the decision-maker is for timely, consistent, complete, and accurate information. The business case facilitates making decisions consistent with the organization's strategic goals and objectives, as well as keeping in compliance with the Information Technology Management Reform Act (ITMRA) of 1996 and the Government Performance and Results Act (GPRA) of 1993. It provides a formal yet flexible system to manage individual initiatives more efficiently and align them with national initiatives underway.

This guide, when properly applied will assist the decision-maker to:

- Align resources within their purview with DoD mission priorities, the Deputy Under Secretary of Defense (Logistics) (DUSD(L)) strategic plan and component strategic plans.
- Present management with relevant decision-maker information in a consistent framework that will allow comparison, evaluation, and prioritization of competing and overlapping change initiatives.

4.0 BUSINESS CASE MODELING FUNDAMENTALS

This guide provides the fundamentals needed to integrate business case modeling into the management decision-making process. It answers the questions: What, Why, When, How, and Who. This guide provides additional references for business case preparation and on-line training. For each site, the Uniform Resource Locators (URLs), or Internet addresses, are provided to allow easy web access. (Look for the blue-underlined text in parenthesis!)

4.1 What is a Business Case?

A business case is a tool used to manage business process improvement activities from inception through implementation. A business case is a document that identifies functional alternatives and presents economical and technical arguments for carrying out alternatives over the life-cycle to achieve stated business objectives or imperatives. Each business case will look different depending on its application. However, essential ingredients remain constant. Essential ingredients include functional process descriptions, technical architecture descriptions, cost projections including value-added benefits, cost savings and return on investment (ROI), action plans, measures of performance, and risk assessment for each alternative under consideration. The focus is on process improvement and reengineering, not on technology insertion. The role of technology is to enable or support meaningful process change. To be effective as a management tool, a business case must never begin with any predetermined notions of the outcome or predetermined technological solution. It must be completely and totally unbiased in its conduct and presentation.

4.2 What is the Role of Business Case Modeling in Logistics Reengineering?

Business cases should support the strategic goals and objectives of the organization. Within the DoD and DUSD(L), this means that all business cases must clearly support the following:

- National Security Strategy (*http://www.rbf.org/pws/strategy.html*)
- National Military Strategy (*http://www.dtic.mil/jcs/core/nms.html*)
- The TO-BE State identified within Joint Vision 2010 (*http://www.dtic.mil/doctrine/jv2010/jvpub.htm*).
- The DoD Enterprise Model (*http://www.dtic.mil:80/c3i/bprcd/0035.htm*)
- The DoD Logistics Strategic Plan
- The DoD Logistic Activity Model (http://www.acq.osd.mil/log/mdm/lsp98.htm)

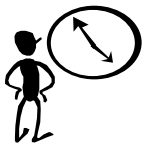
Linkage to Overarching Plans and Visions

Linkage to overarching plans and visions is of primary importance. One goal of the DoD Logistics Strategic Plan is to achieve maximum logistics productivity. The associated objective states, "Conduct business case analysis and risk analysis at all organizational levels." Just as this Guide has a direct link to the referenced goal in the DoD Logistic Strategic Plan and corresponding objectives, so must each business case show similar linkages to related goals. The DoD Enterprise Model and the DUSD(L) Activity Model define main activities and efforts that take place within the organization. The DUSD(L) Activity Model is a subset of the DoD Enterprise Model. A business case should include activity models that focus on relevant logistics functions. This enables the decision-maker to learn if there are any overlaps in activity coverage, and potential contentions in project dollar allocations.

To this end, each business case and the included alternatives must:

- Address a specific area within the Logistics Strategic Plan. Pinning down how the business case links to definite goals and objectives within the plan is the beginning of defining business case value for the decision-maker.
- Show how it directly adds value to the accomplishment of the strategic plan, and helps move toward the achievement of the DUSD(L) vision and Joint Vision 2010.
- Show relationships to Department/Service/Agency vision, goals, and objectives.
- Should clearly indicate how alternate courses of action would take the current, or AS-IS, state to a reengineered, or TO-BE state that is consistent with the vision.

4.3 When Should I Prepare a Business Case?



Prepare a business case when any change is anticipated in a business process or supporting technology. For significant changes, the requirement to prepare a formal business case and its actual preparation should occur as early as possible in the change planning process. Formal business case preparation is imperative in the following situations:

- When business process reengineering is identified and technology choices become drivers of process redesign. This usually happens when strategic plans show a need for major jumps in productivity. This might be seen in a strategic plan goal that describes an end state that is significantly different from current experience. Here, executive management has decided that fundamental change is needed, and the business case lays out an investment to enable the transition to a performance-based organization. *(Electronic College of Process Engineering - http://www.dtic.mil/c3i/bprcd/).*
- When any planned project, program, initiative, effort, implementation, product purchase or lease will result in a significant change in an organization's processes.
- When decisions between competing or overlapping change initiatives must be made.
- When conformance with organizational strategic objectives has an adverse impact on programmatic objectives.
- When an initiative affects business processes or policy outside the span of control of the implementing organization. (If we build it, they will come.)
- When there is a requirement to provide a *Comprehensive Portfolio Approach to IT Investment*, which defines the portfolio of information technology (IT) investments in every phase of development (from concept exploration to operational) and of every type (mission-critical, cross-functional, infrastructure, and administrative) as they relate to missions and processes. *(Office of the Assistant Secretary of Defense Command, Control, Communications, and Intelligence Documents - http://www.c3i.osd.mil/doc/index.html).*

4.4 How Do I Get Started?

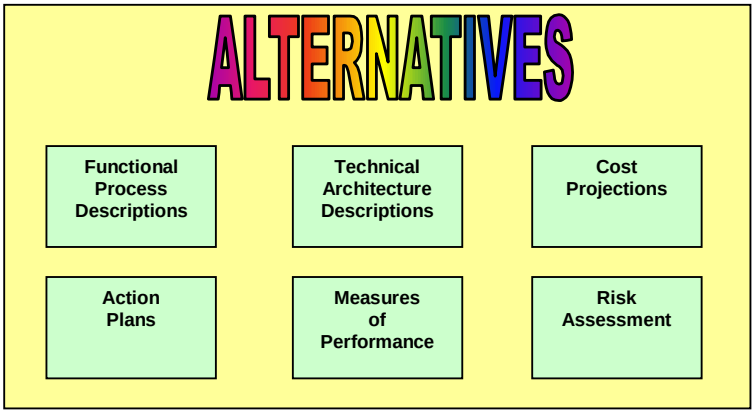
Establish a dialog among all of the parties involved to define the requirements and objectives that are to be accomplished. Those designated to prepare the business case must know what is important to the decision-maker. They must

also understand the initiatives and alternatives to be included in the business case and gain an understanding of how the business case will be used to come to a decision. If an IPT exists, empowering the IPT to do the business case is an excellent approach. The IPTs functional, cost, and technical expertise can be a very powerful body of consensus and understanding.

The decision-maker should identify the critical elements of the decision process for those who will develop the model. Preferences for presentation of alternative comparisons should be discussed, agreed upon, and documented. Specialists and/or training, if any, required to support the process should be identified and scheduled. Activity modeling, financial analysis and Activity Base Costing (ABC) are areas that are most likely to drive the need for training and or support from specialists.
(Logistics Reinvention Office - http://www.acq.osd.mil/log/lro/index.html).

4.5 What Should My Model Include?

Business cases are about choice. They must present the decision-maker with the current "as is" state as well as alternatives and the consequences of those alternatives. In general, not less than two alternatives should be presented and compared with the current "as is" state. The figure at right provides the general information that should be included for each alternative.



4.6 What Should the Business Case Developer(s) Know?

The most important requirement is to be thoroughly versed in the organization's processes and activities, and corresponding goals and objectives as they relate to the business case. Know what is important to the decision-maker. Activity modeling and financial analysis skills are also required or alternatively, specialists may be used to assist in these areas. Use of specialists, when available, is highly recommended. They can significantly reduce the time required to prepare a business case.

4.7 What Should the Decision-Maker Know?

The decision-maker must have an understanding of how to use the business case and how it will apply to the expected change. The decision-maker does not need to understand the detailed analysis techniques; however, he or she should have a basic knowledge in financial areas such as ROI and discounted cash flow. Matter-of-course knowledge of business process reengineering topics, such as activity modeling, aids in using the model to make good decisions.

Dos and Don'ts of Business Case Development

- Do include a business case as an integral part of BPR. The ITMRA requires BPR prior to IT acquisitions.
- Do establish a business case development team that is independent of those who are responsible for the project.
- Do identify a cost structure that allows for proper comparison.
- Do keep IT-related measurements used in defining IT investments in terms of functional requirements, identifying which outcome-based performance measures accurately assess achievement of requirements.
- Do continuously ensure that the linkage between investments and mission accomplishment is maintained.
- Do mold the business case development process into the entire organization's way of planning and making investment decisions.
- Do directly tie the use of the business case process with funding of any initiative.
- Do adopt a timeline for completion of business cases prior to budget completion to allow approved alternatives proper funding during the next budget year.
- Do prepare a business case model prior to the selection of any alternative or technological solution.
- Do not prepare a business case in support of decisions already made or in support of implementations already in progress.

4.8 What are the Barriers?

Several barriers exist to preparing a business case. They fall within four categories: vision barrier, people barrier, learning barrier, and operations barrier. The vision and learning barriers have been previously addressed. The people barrier occurs when individuals within the organization may inhibit, for one reason or another, development of a business case. This often occurs when the business case represents a beginning in the process of change. An operating barrier exists resulting from how the organization works. One such barrier is DoD cost accounting systems. Cost is a primary driver therefore it is very important to provide the decision-maker with a cost methodology that is consistently applied for comparison. The political climate, procedures, and rules may also cause an operating barrier.

Similar barriers may exist to the implementation of changes addressed by the business case itself. If so, the barriers and the plans to overcome the barriers should be documented within the business case.

5.0 BUSINESS CASE MODEL MINIMUM REPORT REQUIREMENTS

A SIMPLE STRUCTURE

The displayed table of contents provides the recommended outline that all business cases should follow. Each outline element is briefly discussed to provide an understanding of needed content.

Typical Business Case Table of Contents

1.0 Executive Summary
2.0 Boundaries of the Business Case
  2.1 Goals and Vision
  2.2 Context and Perspective
  2.3 Functional Performance and Metrics
  2.4 Initiatives Considered
  2.5 Baseline/Alternatives Considered
  2.6 Key Assumptions
  2.7 AS-IS Activity Model
3.0 Discussion of Alternatives
  3.1 Alternative 1
    3.1.1 Functional Process Description
    3.1.2 Performance Impact and Metrics
    3.1.3 Technical Architecture (Optional)
    3.1.4 Cost Projections
      3.1.4.1 Investments/Action Plans
      3.1.4.2 Operational
    3.1.5 Risk Assessment
  3.2 Alternative 2
4.0 Comparison of AS-IS and Alternatives (Graphical Presentations Preferred)
  4.1 Functional
  4.2 Performance
  4.3 Costs
    4.3.1 Investment Costs
    4.3.2 Operational Cost Savings
5.0 Conclusions, Recommendations, and Issues

5.1 Executive Summary

The Executive Summary is the foundation for senior leadership briefings and must answer the "So What?" question. The Summary should recognize the DoD sponsor and funding organization(s) and describe the approach used in broad terms. The objective of the Summary is to establish confidence in methods followed during business case synthesis and preparation, and should focus on the results, not the activity behind producing them. Make sure that this addresses the "Why" of doing the case. The question of "So What?" is met by explaining benefits of approving an alternative and its initiatives, or emphasizing the need to continue.

The developers should answer, as a minimum, the following questions:

- **Does the Executive Summary contain all basic elements?**
- **Can it stand by itself?**
- **Are all acronyms explained?**
- **Is it short (two pages or less)?**
- **Is it absolutely error free?**
- **Does it support the need to continue?**

5.2 Boundaries of the Business Case - Goals and Vision

As stated earlier, all business cases should support the strategic goals and objectives put forth in the Logistics Strategic Plan. Business cases should support implementation of the TO-BE State identified within Joint Vision 2010 as well as the Service or Agency vision, mission, goals, and objectives; explain why the business case is being prepared; and, identify sponsoring and funding organizations. The explanation of why the business case was done can reinforce the idea of aiding DoD in its transition to a performance-based organization. The starting point for identifying the business case subject is usually a proposed or planned action, but the subject of the business case is ultimately defined in terms of objectives.

5.3 Boundaries of the Business Case - Context and Perspective

The context and perspective should match the context activity model developed during Functional Analysis. Define what is and is not being considered in the scope of this business case, and reinforce whom it is for and what decision is helped by it. Identify potential stakeholders, including what organizations will be affected, and who plays the biggest part in the failure or success of the alternatives. Stakeholders should be identified before functional analysis.

Once identified, stakeholders must participate in the analytical process, whether in an active or passive mode. The business case must address how carrying out an alternative will affect stakeholder interests, and vice versa. This preempts actions by those who initiate regional changes that may drive other downstream changes, while having no authority to make that change happen.

Answer the question "What does it take to fulfill our mission and achieve our vision? The answers to this question describe catalysts of success or failure in the function's mission. Stakeholder requirements about products and services drive factors that are critical to the fulfillment of mission and achievement of vision. This is markedly true of customer requirements. Participants in functional analysis of activities must understand and document the impact these changes will have on employees, customers, vendors and others.

The Importance of a Stakeholder

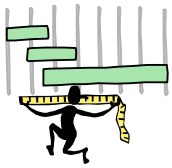
A stakeholder is anyone who has a vested interest in the organization's efficiency and effectiveness. This interest gives them the ability to affect an organization's management, policies, and objectives. Typically, there are four main stakeholders of a function:

1. Customers or recipients of output and services produced by a process.
2. Suppliers/Vendors, or providers of inputs used by a process.
3. Regulators or overseers of a process.
4. Process Participants, or employees and managers that form the product or service.

Stakeholders express their interests as outcomes. Outcomes can drive process behavior and drive investment and operating decisions about these processes or their outputs. Persuading process customers and participants, who are the most visible stakeholders, to accept change is the process owner's high order objective. While across the board acceptance is highly desirable, some stakeholders may not accomplish everything they want. The depth and breadth of firm commitments from stakeholders reflect downstream potential for process and organizational change, resistance, or acceptance.

Taking various stakeholder perspectives, scrutinize pro forma initiative events, deliverables, workflow, and integration opportunities. As they arise, examine resource and planning contentions to learn if any transition event or implementation would have a significantly adverse affect or outcome. On a best efforts basis, recognize uncertainty in the plan or its outcomes, quantify transition and stakeholder risks, use previous lessons-learned that apply, and delineate any potential benefits or values. Identify underlying causes (e.g., drivers, inhibitors) of risk, and outline past successful strategies for dealing with these type of causes. Integration opportunities normally focus on shared data assets or continued use of legacy systems as migration backbones. Learn if there are established, clear lines of (internal) data ownership, custody, and access.

Develop impact statements, positions that outline concerns and recommend suggested courses of action that could mitigate, or at least lessen, impact or risk. These impact statements may also include suggesting tailored messages that would resolve uncertainty in affected stakeholders, or recommending certain time frames that may increase chances for success. Guide stakeholders through resolution of impact statements, with an aim to produce impact agreements. Affected stakeholders must be given an open and fair forum to express their concerns and disagreements. Reach a consensus position; one where not everyone may agree, but everyone can support, even if their support is passive.



5.4 Boundaries of the Business Case - Functional Performance and Metrics

The Government Performance and Results Act (GPRA) of 1993 set forth guidelines for developing performance measures within the organization. Various measures have been identified within the DoD Logistic Strategic Plan. Measures identified within the Program Manager's business case must be subsets of the DoD Logistic Strategic Plan or other relevant documents such as Service or Agency Strategic Plan.

Performance measurement is the assessment of effectiveness and efficiency of activities, operations, and processes in support of achievement of an organization's missions, goals, and quantitative objectives through application of outcome-based, measurable, and quantifiable criteria, compared against an established baseline.

> The Primary Measure may not be cost.
> Although cost is a primary measure, it is not sufficient to be able to say that the TO-BE is achieved by this measure alone. Additional measures may be used to relate to the organization's overall goals and objectives. Performance measures are used to distinguish and weigh primary benefits received from the activity generating the measure. Meeting the desired level for these measures could imply that the level of benefit the organization seeks was attained.
>
> *"Not everything that counts can be counted, and not everything that can be counted counts.'*
> Albert Einstein

The GPRA and the Information Technology Management Reform Act (ITMRA) require establishment of clear organizational hierarchies of goals and performance measures. To comply with the spirit and intent of both laws, goals and measures used at lower organizational levels must be linked to DoD's mission/strategic goals. Mission benefit, not cost and schedule constraints, must be the overriding measure of success for any IT project.

There are four classes of performance measures used in both functional and economic analysis within the DoD:

1. An *outcome* measure assesses actual results, effects, or impacts of a program activity compared to its intended purpose.
2. An *output* measure describes goods or services produced and the actual level of activity recorded or effort that was realized.
3. An e*fficiency* measure is a ratio of outputs to inputs.
4. An *effectiveness* measure should identify critical characteristics of the output that meet customer requirements.

Discuss what organizational performance measures are being used and how they are influenced by the initiatives, preferably through use of selected metrics from the Logistics Strategic Plan or Agency Plans.

A *performance indicator* is a factor used to assess speed or responsiveness, quality, or cost of a process, input, output, or outcome. In effect, it is the unit of measure for a performance measure. Indicator definitions can be used to compare projected outcomes of each alternative, as well as how the indicator will be maintained for continued feedback into the success or failure of the selected alternative once implemented. A brief discussion on the costs and benefits of collecting this monitoring information should be included, especially if a method of collection must be set up to facilitate the new metric.

5.5 Boundaries of the Business Case - Initiatives Considered

Develop high-level plans that describe new or different approaches to doing business according to performance targets and business objectives. It is likely that several improvement ideas and plans will be identified. However, not all of them can or should be put into place. Find possible ways to do each approach and then parse these into achievable packages of work and results. Project-level groupings of work that produce distinct deliverables are named initiatives. Initiatives can vary in scope and size. There must be a narration of each initiative included in the business case. Describe how strategies will be put into place in terms of specific actions, timeliness, and resources. Evaluate initiatives against demonstrated implementation experience or other's best practices. Identify and assess each candidate initiative's risks and define different paths to abate such risk. Match each candidate's initiative to common barriers or characteristics.

Barriers to successful implementation, previously mentioned, refer to those situations that tend to be outside the span of control of those making change, or that have prevented desired outcomes of previous attempts to adopt new ideas or technologies. Similar implementation efforts must find ways to overcome or bypass these barriers to achieve closure. For most individuals, change is difficult. Therefore, resistance may be encountered when gathering accurate information from individuals within the organization. These barriers are overcome with proper communication. Explain why certain questions that are being asked can promote a more open environment for dialog. Sometimes there is nothing to do except document within the business case, any issues relating to the people barrier.

Each initiative must reflect progression (including phased achievement) toward affected performance targets. Convert performance targets into provisional performance objectives. These objectives can frame stepped-investment justification and selection decisions, and drive downstream development of the TO-BE process.

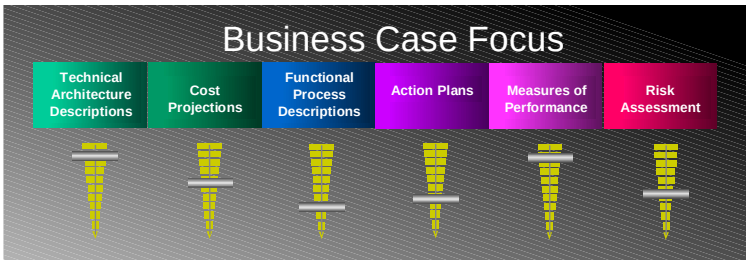
Providing clearly defined initiatives give the decision-maker an understanding of what the business case is about, because in the end, the business case is about initiatives.

5.6 Boundaries of the Business Case - Alternatives Considered

The objective of functional process improvement is to achieve the vision. Because each initiative considers only one or a few areas for improvement, analyze combinations of initiatives to address each goal. It is unreasonable to study all combinations, because there will be too many. A more practical method is to combine logical packages of initiatives that work well together or portfolios of a set of initiatives with common objectives or goals to form alternatives. As a rule, initiatives sharing common critical performance measures or objectives make the best business case for being put in one portfolio versus another. However, each set of related initiatives must put into place changes that handle the same predicted level of process workload within the planning horizon. Another point to consider is the decision-maker's focus on the business case and the corresponding emphasis to place on each element of analysis across all alternatives. Look at *tuning* the business case's emphasis in the same way the settings are adjusted on a sound system's graphic equalizer.

Take Care Not to Introduce Bias

Take care not to introduce bias into the process when creating alternatives. Technology initiatives must have a clear relationship to process improvement initiatives when they are combined into a single alternative. Ask this question: "Does this technology initiative enable each and every process change included in this alternative?" If the answer is no, the technology initiative should be excluded from the alternative. This approach will prevent the perpetuation of "pet" technology projects that are impractical or have no real benefit to the organization.



The reference for measurement is the status quo, or **the baseline**. Baseline cost and performance provide threshold values for the cost and performance of alternatives. AS-IS costs and performance measurements revised to reflect any approved changes not yet implemented would provide this baseline. The business case should include at least three alternatives, including the status quo. Each alternative must give functional management a complete view of financial and operational impacts of proposed changes.

Develop total investment cost flow and total anticipated process cost savings flow for each alternative. Quantify total risk assessments based on probability and consequence of failure for each principal initiative activity. Develop an action plan for each alternative, and assemble as a total package for review by the approval authority. Any controversial ideas should be pre-tested

with the approval authority or his or her peers. Use economic simulation techniques (e.g., risk-adjusted discounted cash flow) to develop supporting cost schedules.

5.7 Boundaries of the Business Case - Key Assumptions

Assumptions are necessary in a business case because they are explicit statements used to describe present and expected future behavior upon which the business case is based. No one knows what the future holds, therefore assumptions must be used to set boundaries for painting the business case. Example assumptions include future workload, estimated useful life of an investment or system, and the period over which alternatives will be compared.

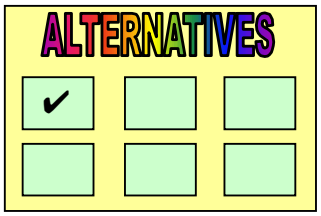
> **Assumptions Should Be Documented**
> Assumptions should be documented for the decision-maker's consideration. Obvious assumptions such as there will be a next year, are not required. The assumptions should be clearly defined. Work closely with the decision-maker to determine critical assumptions. In some cases, the decision-maker may want to provide additional information. An example assumption would be the frequency of an event remains constant in the future.

Summarize key economic indicators used for each alternative assessment; also briefly discuss what non-quantitative issues need consideration. Employ a sensitivity analysis or another method and focus on assumptions that are thought or historically demonstrated to cause the greatest amount of variation in costs and performance.

5.8 Boundaries of the Business Case - AS-IS Activity Model

The current process-flow of that piece of the organization that is being considered in the business case must be detailed to a level where all stakeholders can support conclusions drawn from the analysis. It also must be developed enough to understand areas affected by proposed initiatives. Finally, it must be detailed enough to assign costs and link performance measures. This step is also considered developing the baseline or baselining. It provides the picture of what is being changed that will be used to compare with the alternatives. The entire span of activities depicted in a business case should map to both the Enterprise and DUSD (L) models. Integration Definition Function Modeling (IDEF0) modeling as defined in Federal Information Processing Standard (FIPS) Pub 183 is recommended.
(FIPS Publication 183 Integration Definition for Function Modeling-
http://www.qd.cl/WEBPAGES/IDEF/IDEF0/idef0.html).

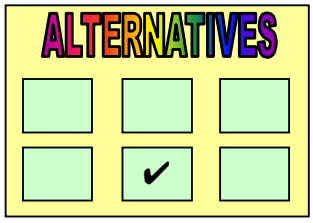
5.9 Discussion of Alternatives - Functional Process Description



Functional Analysis is about what is done. This should describe significant outcomes, outputs, measures, and inputs involved in executing this process. It must focus on efficiency (best use of inputs), effectiveness (best delivery of outputs and outcomes), and productivity (output over input). Sometimes these differences in TO-BE versions tend to be very subtle, and this may require a greater focus on change in flows than on the processes themselves. Another approach is to build higher-level context models. These show how the

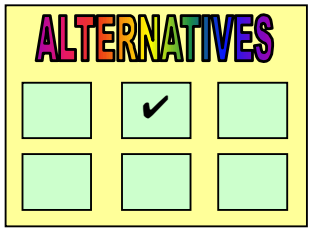
change impacts upstream or downstream activities (that is, the outcome difference may not be within the scope of the activity model). Give attention to those actions that will eliminate or reduce excess and delay.

5.10 Discussion of Alternatives - Performance Impact and Metrics



Provide the projected metrics that are expected to result from each alternative and indicate how the metrics compare to the baseline. At this level, we are talking about how mission requirements, strategic goals, expected outcomes, and expected performance will be met by this alternative. A conscious, focused effort should be made at each stage of the process to recognize and document the relationship of each requirement to the accomplishment of a higher-level goal or objective.

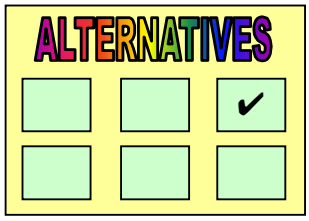
5.11 Discussion of Alternatives - Technical Architecture (When Technology is an Issue)



Often, the business case will be considering technology that an initiative is driving, employing, or developing to achieve the organization's goals and objectives. Develop a clear picture to explain how technology will do this, what activities this technology will impact, and how it blends with other implementations.

The ITMRA of 1996 distinguishes that Information Technology (IT) alone is not sufficient to justify the cost. It must be shown that the IT will impact the organization's activities in a way that improves benefits as well as reduces costs. This should be the predominant focus of the technological discussion within the business case, not a detailed technical discussion of its function and components. Not how it works, but how it impacts the operations that it supports.

5.12 Discussion of Alternatives - Cost Projections (Economic Analysis)



Economic Analysis is about the costs and benefits of how something is and will be done. *(Functional Economic Analysis -* http://www.dtic.mil/c3i/bprcd/340a.htm*).*

The business case places emphasis on future economic benefit rather than on period costs, and on "value-added" as opposed to "cost savings." This section must focus on what investment option should produce the best use of investment capital. The concept of Total Ownership Costs (TOC) should be applied. This concept takes into account not only the initial and ongoing costs of the asset but also all those costs that go into making it productive on a daily basis, i.e., maintenance costs, manpower to operate.

Cost Projection Issues to Consider

- Consider the impact of the initiative across multiple fiscal years.
- Consider the time value of money. (When adding costs across years, dollars in future years must be discounted.)
- Consider inflation by including adjustments in future year cost projections by a rate consistent with this economic reality.
- Consider, for comparison, constant dollars to demonstrate the impact of the inflation assumption.
- Consider that estimations based on various operational cost data may be the best estimate. Consider using the 80/20 rule (where 80% of the costs are made up of 20% of the activities). The ratio of investment to savings should be so significant that most estimating errors will be insignificant.
- Consider the following measures: current project funding support, dollar value of benefits, projected project costs, rate of budget expenditures compared to projections, and adherence to baseline schedule or time frame.
- Consider the Earned Value Management approach that provides an effective mechanism for linking cost, schedule, and benefits performance for acquisition programs.
- Consider Internal Rate of Return (IRR) that demonstrates what interest rate would have to be obtained outside the organization before the decision to invest funds outside rather than on this initiative.
- Consider Return on Investment (ROI), also called Return on Assets, that demonstrates what rate of return can be expected from the investment outlay.
- Consider Risk Adjusted Discounted Cash Flow (RADCF) that considers risk and discounting cash flow. It brings all alternatives back to the current year for a total cash-flow comparison. Any positive RADCF value is considered a good investment, but another alternative may demonstrate greater RADCF value, making it the preferred alternative.

The analysis should focus on productivity, and describe how it mitigates both initiative-fulfillment risk and organizational uncertainty stemming from the intended changes. It should offer the decision-maker multiple cash flow calculations. Technology churn costs, depreciation, losses, and obsolescence are some issues that should be taken into consideration during this analysis.

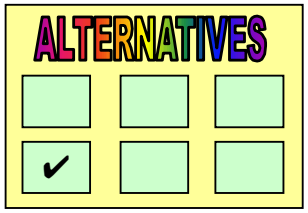
Underscore that there is no one right answer, only one best answer. The best course of action should blend the total cost of involved processes, output performance, and outcome impacts prevailing over all sub-optimal choices; e.g., those that only justify better technology for the sake of better technology. Qualitative considerations may tip the scale between alternatives, as when data or system integration, purchase of Commercial Off-The-Shelf (COTS) software, inadequate security mechanisms, et al. cannot meet some mission requirement.

The organizing backbone of the business case is a time line extending across months or years. *(OMB Circular A-94 Discount Rates - http://www.npr.gov/library/omb/numericl.html).*
This provides a framework for showing management how they can work to help put financial tactics into place: reduce costs, increase gains, and accelerate gains.

The business case is not a budget, not a management accounting report, and not a financial reporting statement. This distinction is meaningful for deciding upon the a cost comparison methodology and the cost content of the business case: incremental values or total cost and benefit figures. Incremental values are probably the right choice in decision support situations,

notably where both costs and benefits will enter the business case. *(DoD Computer-aided Acquisition and Logistics Support (CALS) Integrated Data Environment (IDE) Defense System Business Case Modeling - http://www.dcnicn.com/ide2/deliverables/task4/default1.htm).*

5.13 Discussion of Alternatives - Cost Projections - Investments



These costs should be the complete and total costs necessary to have the alternative turned into a reality. This includes training and needed purchases. Provide an aggregate, initiative-level mapping that would help view required cash flows over time as they relate to each alternative. This would also link to activities that an alternative affects. At the heart of this mapping is a high-level course of action used to frame when and how a TO-BE state becomes operational. This is called an *action plan*. This should enable the decision-maker to see how cash spending increases until some point at which operations costs start decreasing.

Prepare a plan of action and milestones (POA&M) that specifies what needs to be done and when. A solid and complete action plan has each of the following characteristics:

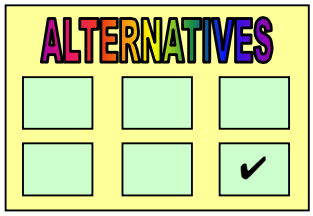
- Each component action has a specific beginning and ending point.
- Each component action is done by a specific person or group of people. Responsible parties have authority, capability, and obligation to get the job done.
- Each component action has a tangible, clear result. Afterward, it is possible to know whether it was done or not.

5.14 Discussion of Alternatives - Cost Projections - Operational

At a minimum, the business case should reflect the AS-IS cost of doing the whole activity, coupled with a targeted reduction percentage that can be applied over time (tied to its initiatives). This will show expected TO-BE activity costs once changes are put into place. Moving it to the next level of output costing, or better yet outcome costing would be desirable, because most people can relate to it.

ABC relates cost of resources to activities that consume them. At a minimum, this information provides insight for calculating future out-year resource requirements and costs. ABC can provide calculations that will depict activity levels through the planning horizon. These costs should be ongoing operation costs directly contributing to activities defined within the activity model mentioned in the functional analysis.

5.15 Discussion of Alternatives - Risk Assessment



This must be discussed with or without having quantifying information. We can classify different categories of risk: Business Risks, Process Risks, Technical Risks, and Organizational Risks. Risk to the organization can be an influence from other organizations that formed alliances because of the alternative (i.e., outsourcing).

Even with these categories, it cannot be assumed that some standard mitigation routine can be applied to every one of that type. Each identified risk needs to be separately looked at and handled. To avoid paralyzing the decision-making processes, rank these factors and address the most ominous of them. *(Methodology for Analyzing Benefits, Costs, and Risks - http://www.gsa.gov/gsacio/capap6.htm)*.

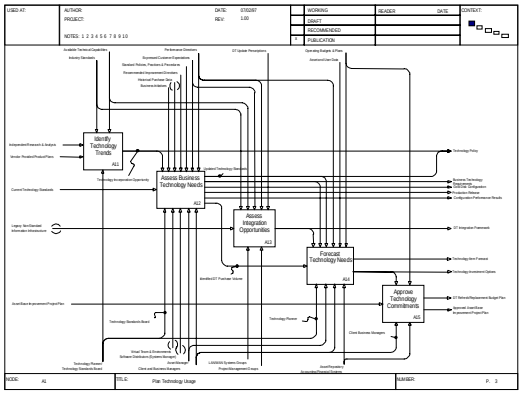
Recognizing risk does not have to hit an exact number, but instead distinguish one alternative from another by the degree of risk that separates them. This recognizes that not every decision carries an equal degree of failure or success. It allows the decision-maker to recognize the fact that estimates have varying degrees of becoming reality.

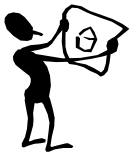
A Proper Study of Risk

A proper study of risk should be addressed in any business case, but risk is perhaps the most difficult area to figure out. Risk should be viewed as "an undesirable implication of uncertainty." Risk can be quantified in terms of odds (probabilities) or remain non-quantified (uncertainty). For quantified risk, probability distribution of various outcomes is known. For uncertainty, there is no knowledge of the probability distribution of possible outcomes. Both should be addressed.

5.16 Comparison of Alternatives - Functional

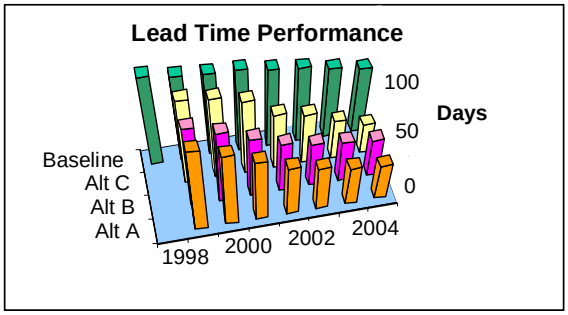
Describe the TO-BE activity models for each alternative and describe how they address performance measures vis-à-vis the AS-IS activity model. These TO-BE models should represent a different future state in line with each alternative. This should also point out why the alternative would achieve a distinctly different manner of doing business, rather than continuing with the AS-IS, or baseline. Annotate differences between each TO-BE diagram and the AS-IS diagram, and among TO-BE diagrams. These diagram comments can depict organizational and other resource volumes as well as volumes represented by the flow arrows. Tying initiatives to both AS-IS and TO-BE activities illustrates intended changes and helps visualize necessary project work.





5.17 Comparison of Alternatives - Performance

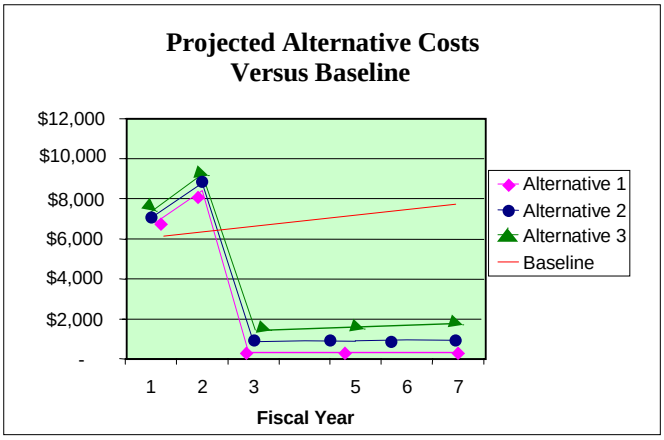
Use various charting techniques to show expected performance improvement in line with realizing changes put into place by various initiatives. Another technique arrays over a timeline the expected performance level ranges for each measure and all alternatives in a table that is highlighted in red, yellow, or green. Regardless of the approach, provide the decision-maker with a straightforward picture of



expected performance. Guidance in using the software application *Turbo BPR*, Version 2.5 for business case development is available on the Internet. This tool can help the business case development process by guiding the user through the primary components of the business case process as outlined in this guide. Although this tool does not represent a complete solution for all business case development, it does provide the user with help in understanding the structure and terminology of a business case. *(Turbo BPR Software - http://www.dtic.mil/c3i/bprcd/)*.

5.18 Comparison of Alternatives - Costs

As stated earlier, the organizing backbone of the business case is a time line extending across months or years, as the figure at right suggests. A graph of total investment and operational costs for the baseline and each alternative should be provided, as well as any other presentation helpful to the decision-maker. Changes in cash flow may be effected by increasing or accelerating gains, or reducing costs.



5.19 Comparison of Alternatives - Investment Costs

Cost measures gauge the number of investment dollars needed to achieve a particular milestone or activity level. For example, a performance measure can be the dollars necessary to move an effort through one phase. The granularity of a performance result is not as important as tying the investment of dollars to the achievement of some result. This task is decidedly different from measuring whether budgeted dollars were spent in a particular fiscal year. Schedule measures gauge the amount of time necessary to obtain a particular performance result. As stated above, a performance measure can be the amount of time needed to move an effort through a phase or the amount of time to do part of a phase. What is important is that the schedule measure is tied to the same performance result as the cost measure. Investment project baselines should contain major events that impact the effort. Achieving these events on time may demonstrate satisfactory progress. For each effort, establish a target date that is based upon contractual requirements or the need to complete an event before another can start. Thresholds for these events can be set by policy (e.g., 90 days beyond target) or by absolute need when there is no slack in the schedule.

Value-Added Must Be Considered

Value-added must be considered over costs alone. The business case must consider the cost of the initiatives, but even more so, it must identify the value-added to the organization. Reducing services just to reduce costs will more than likely not accomplish the organization's strategic goals and objectives. Although one initiative can show greater cost savings, the initiative may compromise value. This should be clearly stated within the business case. Other alternatives that generate greater value, but at a greater cost, may present justification consistent with OMB Circular A-94. OMB Circular A-94 states that both tangible and intangible benefits and costs should be recognized.

5.20 Comparison of Alternatives - Operational Cost Savings

Exploit Activity Based Costing capabilities in the business case by assigning projected costs to various activities affected by each initiative. The change in activities from the AS-IS activity model to the TO-BE activity model should make up cost savings realized by that initiative. The TO-BE activity model should always represent increased value-added to the organization.

5.21 Conclusions, Recommendations, and Issues

This section should be prepared at the end of the business case development and may include a sensitivity analysis. Make an initial conclusion and recommendation to the decision-maker based on the findings.