

**IMCEN/HQDA
COST-BENEFIT ANALYSIS (CBA)
FINAL REPORT**



Information Management Support Center (IMCEN)
Headquarters, Department of the Army (HQDA)
Pentagon
December 9, 2002

Booz | Allen | Hamilton

HOW TO USE THIS DOCUMENT

CONTENT

This document is divided into three sections: an Executive Summary, a Detailed Diagnostic and Supporting Data. The detailed diagnostic is the heart of the report. It describes the work that was done, details the results and presents Booz Allen's recommendations.

The executive summary synthesizes the key points of the detailed diagnostic, and is designed for executive readers interested in getting to the "bottom line" as quickly as possible—it is of necessity short on detail.

The supporting data, used in conjunction with the detailed diagnostic, are designed to allow an independent reviewer to reconstruct and validate the work Booz Allen did, as well as to document amplifying information considered too lengthy or distracting to be included in the body of the detailed diagnostic.

The executive summary and detailed diagnostic are written so they can stand alone—consequently key information is duplicated in both. However, the executive summary often refers to relevant sections of the detailed diagnostic or supporting data to assist in locating more detailed information if the reader is interested.

FORMAT

The pages in this document are double-sided. The document itself is bound along the upper edge so that when open and laid flat, two pages are visible at the same time. Please see the following page for an example and an explanation of the role of the different formatting features.

All data in this document not developed by Booz Allen is always shown with the source of the data on the same page. Where data from different sources are combined, individual sources are shown for each piece of data.

HOW THIS DOCUMENT IS FORMATTED

STEP	DESCRIPTION OF ACTIVITIES INVOLVED
Study Planning	Formulation of a cost-benefit analysis strategy for the proposed investment. Identify stakeholders, set goals and objectives for the project and finalize the financial analysis approach
Assess Current Environment and Determine Future Requirements	Review of current and future environments, including understanding of the proposed organization and contracting plans and other elements integral to the marginal analysis
Identify Viable Alternatives	Identify those alternatives to be considered in the cost-benefit analysis. In the case of IMCEN there were two: Government Integrator and Contractor Integrator
Collect Cost Data, Determine Benefits, Conduct Risk Assessment and Evaluate Economic Impact	Collect and analyze direct and indirect, fixed and variable and recurring and non-recurring costs. Sunk costs and realized benefits were excluded from the analysis. Collect data on tangible and intangible benefits. Assess risk in terms of business risk, organizational and change management risk, project resources and implementation risks, and management risks. Calculate quantitative costs and benefits for each alternative
Compare Alternatives	Compare the alternatives to determine the best choice in terms of quantitative and qualitative measures
Present Recommendations	Present progress/status to IMCEN on a regular basis for review, clarification and guidance; present recommendations to IMCEN at the end of the study

I-1F

Facer pages are identified by the letter 'F' at the end of the page number

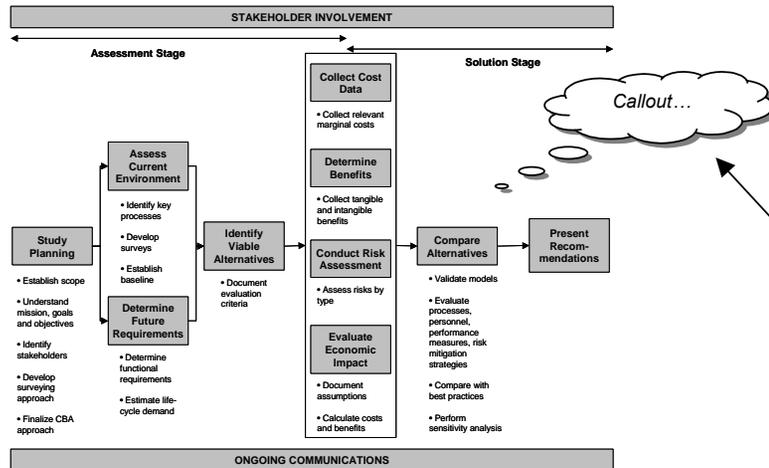
Facer page – used for additional or amplifying information related to the content of the main page

Ghost – provides a running table of contents for the document



Methodology – Project Methodology ...

WORKING WITH IMCEN, BOOZ ALLEN CUSTOMIZED ITS METHODOLOGY TO MEET THE SPECIFIC REQUIREMENTS OF THE STUDY...



I-1

Headline – the point being made on this set of pages. It is possible to just read the headlines page after page to understand the content of the entire document quickly

Main page – used to provide proof or amplification of the statement made in the headline

Callout – used to highlight a key point deemed “cloud-worthy”

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ES. EXECUTIVE SUMMARY

Executive Summary – What’s Inside ...

THE EXECUTIVE SUMMARY IS DESIGNED TO CONVEY QUICKLY—AND AT THE HIGH-LEVEL—THE CONTENTS OF THE DETAILED DIAGNOSTIC...

PAGE(S)	DESCRIPTION
ES-2	Describes the purpose behind performing the cost-benefit analysis and details the changes in the contracting goals over the life of the study
ES-3F, ES-3	Shows Booz Allen’s structured cost-benefit analysis methodology. The results of the cost-benefit analysis are documented at a high-level in the executive summary and with more granularity in the detailed diagnostic
ES-4	Describes the three alternatives used in the cost-benefit analysis: the baseline (BL), the government integrator (GI) and the contractor integrator (CI). The baseline has already been superseded by the government integrator alternative, and so is included only for comparison purposes. While cost data was developed for the baseline, no risks or benefits were assessed because the outcome of the cost-benefit analysis is a choice between the government integrator and the contractor integrator
ES-5F, ES-5	Summarizes Booz Allen’s recommendation of the GI alternative based on the decision analysis in the detailed diagnostic. This table addresses all the considerations entering into the decision: cost, DoD and commercial outsourcing experience relevant to the alternatives, quantitative benefits, IMCEN’s assessment of qualitative benefits and risks, risk mitigation, IMCEN’s current operational performance and IMCEN’s staffing levels and skill sets. Putting this page closer to the front of the executive summary allows the reader to get to the “bottom line” sooner. Some supporting detail is provided on subsequent pages
ES-6	Graphically depicts the output of the cost model—the GI costs are well known and so show little divergence; the CI costs contain uncertainty in the input values (for example, contractors have a certain leeway in the number of people they provide, the skill level of those people, the amount of turnover they experience, etc.) which is reflected in the range of possible output costs shown. The key point is that the costs are about equal, removing cost as a factor in the decision
ES-7	Graphically depicts the IMCEN staff’s assessment of the benefits and risks of the CI and GI alternatives. While the benefits are nearly equal, the CI alternative has much more risk
ES-8F and ES-8	These pages make the point that “one size doesn’t fit all” in IT activities, and it shouldn’t in contracting types either. Booz Allen recommends a portfolio of contract types tuned to the IT activity being performed
ES-9F and ES-9	These pages make the point that a performance-based contract works well so long as IMCEN maintains a robust in-house capability to ensure price realism and contractor cooperation
ES-10	Booz Allen’s explicit recommendation and rationale consolidated onto a single page
ES-11	Provides a roadmap to the detailed diagnostic, showing where information is located to make it easier to find additional data if it is desired

THE PURPOSE OF THIS COST-BENEFIT ANALYSIS IS TO DETERMINE IF A SINGLE-SOURCE PERFORMANCE-BASED CONTRACT IS THE BEST OPTION FOR HQDA'S DESKTOP SUPPORT SERVICES...

IMCEN Acquisition Strategy

IMCEN Acquisition Strategy:

- Complete transition to IMCEN operational control NLT 30 Sep 2002 and obtain a "Single Source" desktop support contract NLT 30 Sep 2003



Benefits:

- Most prudent course of action
- Army leadership will have desktop support services consolidated under IMCEN with strongest potential for cost savings and best value
- IMCEN will have the time needed to assess the HQDA desktop support environment fully and craft requirements for a "Single Source" contract that adds value from consolidation
- Extended time frame maximizes options for a truly competitive process
- Leverages the continued existence of the IMCEN Multi-Vendor Contract



Single source, performance-based contract goals:

- Realize 10% cost savings
- Subcontract 45% to small businesses
- Maintain a robust government presence and career development pathway

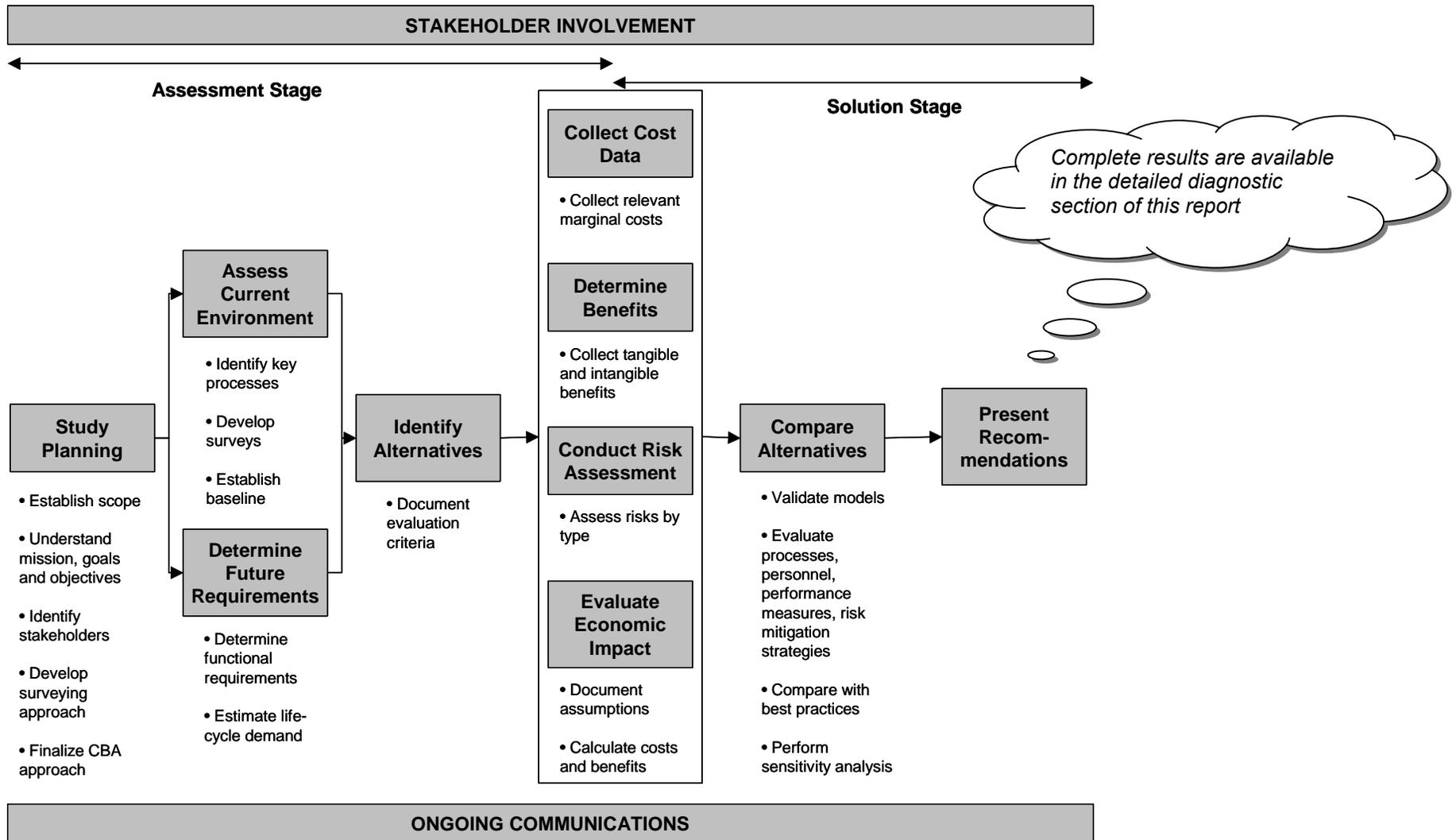
Final small business percentages in the model are: 10% small business primes, 47.1% small business subcontracts (Source: IMCEN)

These were the goals at the beginning of the cost-benefit analysis—they were changed as the study progressed; this study reflects the final percentages

Source: HQDA DOIM Status Briefing for Army CIO/G6, dated 2 May 2002

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Compare Alternatives	Compare the alternatives to determine the best choice in terms of quantitative and qualitative measures
Present Recommendations	Present progress/status to IMCEN on a regular basis for review, clarification and guidance; present recommendations to IMCEN at the end of the study

BOOZ ALLEN TOOK A STRUCTURED APPROACH TO COMPLETING THE COST-BENEFIT ANALYSIS...



BOOZ ALLEN EVALUATED THREE CONCEPTUAL ALTERNATIVES FOR IMCEN DESKTOP SUPPORT IN THIS COST-BENEFIT ANALYSIS...

CONCEPTUAL ALTERNATIVE	DESCRIPTION
Baseline (BL)	The IMCEN state prior to the FY2002 HQDA re-alignment where HQDA business units were free to procure their desktop support services from IMCEN or other contracts. Costs collected for the baseline are for the same services provided by IMCEN under the government integrator and contractor integrator alternatives to ensure a fair comparison
Government Integrator (GI)	The IMCEN state after FY2002 HQDA re-alignment where specified OPCONs (approximately 6,500 end-users) transfer their personnel, vendor contracts and funds associated with the delivery of desktop services to IMCEN, which then assumes full desktop life-cycle support for those organizations in accordance with a written Service Level Agreement. IMCEN oversees multiple contractors who in turn oversee their subcontractors
Contractor Integrator (CI)	Transition from the multi-vendor Government Integrator to a single-source, performance-based, fixed (FFP) or variable (per-unit priced) contract for certain HQDA desktop support services. Services are also available on a time and materials basis to IMCEN and other HQDA organizations. IMCEN oversees the single source contractor who in turn oversees its sub-contractors

Source: IMCEN

DECISION ELEMENT	FAVORS...	
	GOVERNMENT INTEGRATOR	CONTRACTOR INTEGRATOR
Cost—see section IV of detailed diagnostic for details <ul style="list-style-type: none"> Costs for both the CI and GI alternatives are about equal—effectively eliminating cost as a discriminator between the two alternatives 	✓	✓
DoD experience (based on survey data)—see section VIII of detailed diagnostic for details <ul style="list-style-type: none"> The track record of DoD outsourcing contracts is mixed Commanders' attitudes toward outsourcing (especially among those who outsourced) were preponderantly negative Outsourcing did not improve or enhance respondents' most important reported consideration—mission effectiveness 	✓	
Commercial experience (based on survey data)—see section VIII of detailed diagnostic for details <ul style="list-style-type: none"> A majority of companies considering outsourcing rejected it For those who outsourced, outsourcing typically failed to live up to their expectations A significant minority of respondents reported serious problems with outsourcing 	✓	
Commercial outsourcing best practices—see section VIII of detailed diagnostic for details <ul style="list-style-type: none"> Smart sourcing (GI alternative) was chosen by 82% of U.S. respondents 79% used multiple contractors (best-of-breed providers) Best practice: 3-5 year detailed contracts are best Best practice: A mature in-house capability to direct and work alongside the contractor Best practice: Careful selection of suppliers for tasks to which they are best suited 	✓	

Table continues below...

BOOZ ALLEN RECOMMENDS IMCEN SELECT THE GOVERNMENT INTEGRATOR ALTERNATIVE AS THE MODEL FOR ITS NEXT-GENERATION SUPPORT CONTRACTS ...

Table continues from above...

DECISION ELEMENT	FAVORS...	
	GOVERNMENT INTEGRATOR	CONTRACTOR INTEGRATOR
IMCEN qualitative benefits assessment—see section V of detailed diagnostic for details <ul style="list-style-type: none"> CI alternative scored slightly better on benefits (51.9% to 48.1%) than GI 		✓
IMCEN qualitative risks assessment—see section VI of detailed diagnostic for details <ul style="list-style-type: none"> The CI alternative was considered more risky in every category: business risks involve disruptions in service and possible poor performance (60.4% v. 39.6% for GI); organizational and change management risks are those that negatively impact customer organizations (63.4% v. 36.6% for GI), resource and implementation risks involve managing the contractor(s) successfully (60.8% v. 39.2% for GI) and management risks include ensuring a smooth transition and managing customer expectations (61.7% v. 38.3% for GI) 	✓	
IMCEN risk mitigation approach—see section VII of detailed diagnostic for details <ul style="list-style-type: none"> Based on best practices supported by GI—see facer 	✓	
IMCEN current customer satisfaction levels—see section VIII of detailed diagnostic for details <ul style="list-style-type: none"> IMCEN's customer satisfaction rating (survey by GartnerGroup in 2001) was 4.25/5.00; confirmed by independent Booz Allen survey ending in November, 2002—indicating no operational problems that require outsourcing to solve 	✓	
IMCEN existing staff availability/skill types—see section II of detailed diagnostic and Appendix A of supporting data for details <ul style="list-style-type: none"> IMCEN is staffed according to the GI model; a change to the CI model would require retraining or potentially relocating existing staff 	✓	

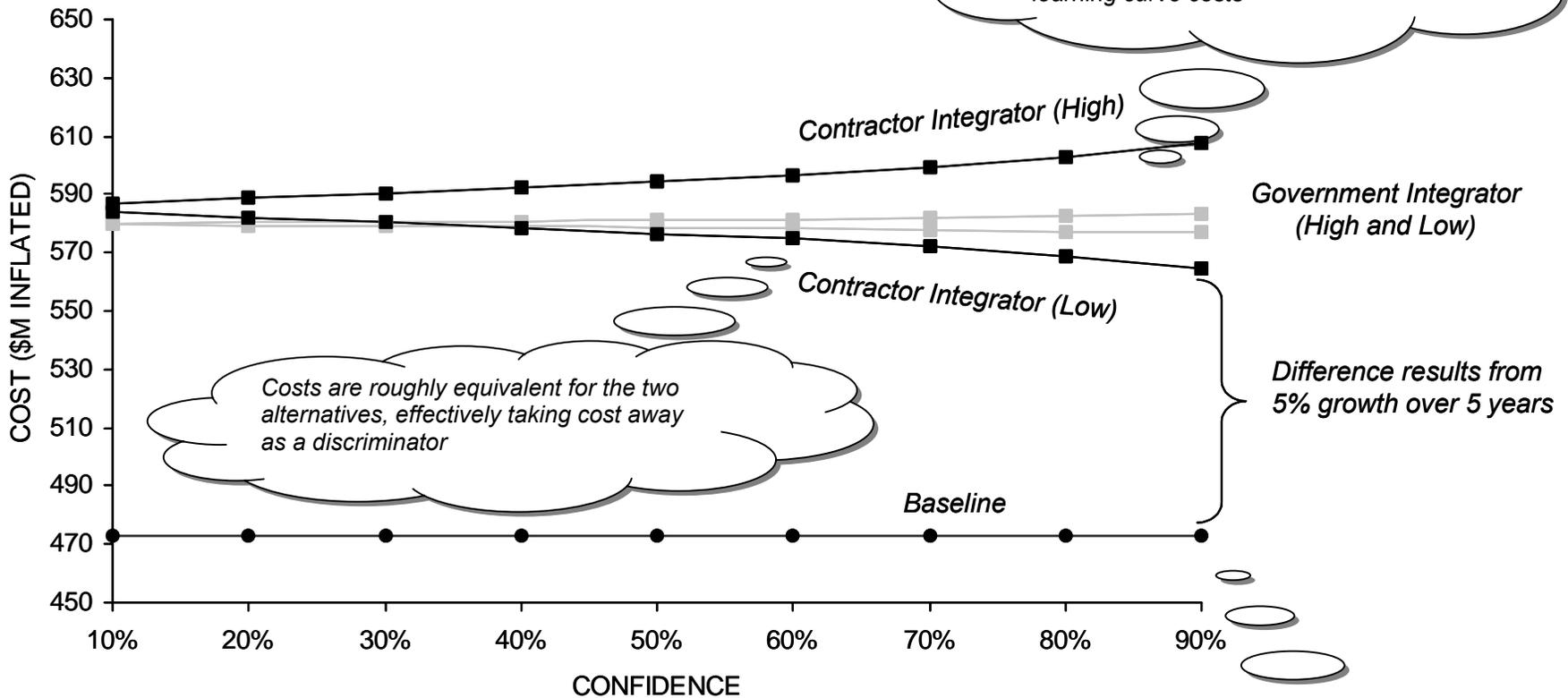
Source: Booz Allen analysis

Executive Summary – Reasoning ...

REASON #1: COSTS FOR THE GOVERNMENT INTEGRATOR AND CONTRACTOR INTEGRATOR ALTERNATIVES ARE ABOUT THE SAME...

For a more thorough treatment of Booz Allen's reasoning, please see the detailed diagnostic

RANGE OF COSTS BY ALTERNATIVE



The cost estimate for the contractor integrator alternative has a wider range because of the uncertainty in the input values for number of staff, salary and learning curve costs

Costs are roughly equivalent for the two alternatives, effectively taking cost away as a discriminator

Difference results from 5% growth over 5 years

Source: Booz Allen modeling and analysis of IMCEN-provided data

More detail is provided in the detailed diagnostic section IV and Appendix A

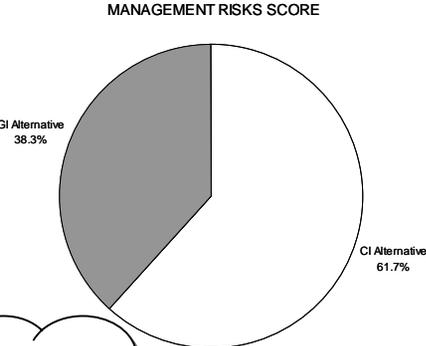
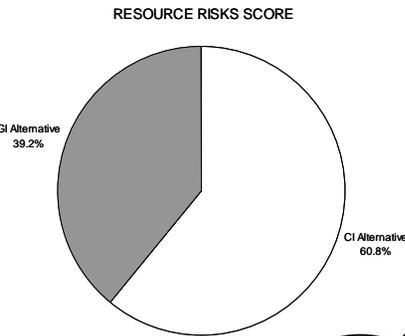
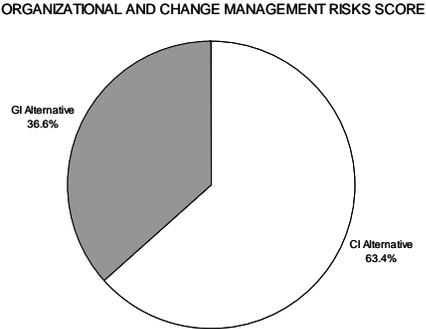
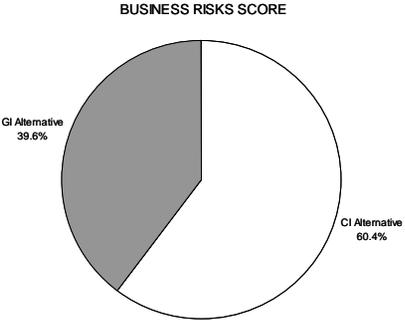
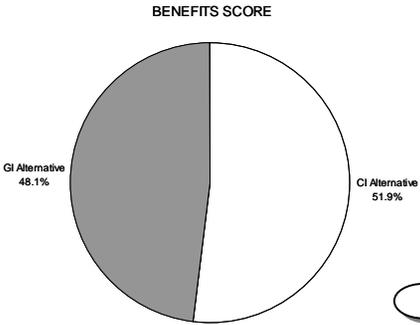
For a more thorough treatment of Booz Allen's reasoning, please see the detailed diagnostic

Executive Summary – Reasoning ...

REASON #2: THE GOVERNMENT INTEGRATOR ALTERNATIVE HAS ALMOST THE SAME BENEFIT AS THE CONTRACTOR INTEGRATOR BUT SUBSTANTIALLY LESS RISK...

BENEFITS

RISKS



For additional detail on benefits, see section V of the detailed diagnostic; for additional detail on risks, see section VI of the detailed diagnostic

IMCEN staff made assessments during a benefits and risks assessment workshop

INFORMATION TECHNOLOGY SHOULD NOT BE THOUGHT OF AS A UNIFORM SET OF ACTIVITIES ...

- Examine each IT activity from the perspective of its:
 - Business contribution
 - How the activity fits with the customer's organizational culture and processes
 - Level of technical sophistication required

- Different activities require a customized approach
 - Utility: focus on cost containment/reduction; success defined by service levels and price
 - Enhancement: focus on productivity gains; success defined by good relationship and contract flexibility
 - Transformational: focus on innovation; success defined by business alignment and vision

Source: Booz Allen compilation of sourcing best practices

Executive Summary – Caveats ...

CAVEAT #1: BOOZ ALLEN RECOMMENDS IMCEN TREAT INFORMATION TECHNOLOGY ACTIVITIES AS A PORTFOLIO OF SERVICES—USING A PORTFOLIO OF CONTRACT TYPES...

Technology integration refers to how tightly technology is coupled with business processes in a given organization

Regardless of contract type, rapid changes in both IMCEN's business and IT costs mandate shorter contracts

Preferred Supplier – Close relationship with one vendor; vendor learns customer's business processes (example: support for financial institution)

Buy-In – Buy vendor resources to supplement in-house skills but manage the activity internally. Buy vendor expertise without a detailed contract; provides learning opportunity to in-house staff (example: ERP implementation)

Preferred Contractor – Detailed contract; vendor responsible for management and delivery of an IT capability (example: administrative desktop support)

Contract Out – Vendor assumes complete responsibility for performing a specific IT function. IT activity is a commodity and technology is mature (example: PC repair)

HIGH

Technology Integration

LOW

Preferred Supplier	Preferred Contractor
Buy-In	Contract Out

LOW

Technology Maturity

HIGH

A portfolio of IT service types should be supported by a portfolio of IT contract types

Source: Lacity and Willcocks

Executive Summary – Caveats ...

CAVEAT #2: BOOZ ALLEN RECOMMENDS A PERFORMANCE-BASED CONTRACTING APPROACH—PROVIDED MULTIPLE VENDORS ARE USED, WORK IS PHASED IN OVER TIME AND IMCEN RETAINS AN IN-HOUSE CAPABILITY...

- Look at performance-based contracting strategically to create a balance between in-house complacency and vendor exploitation
 - Keep comparing prices and performance internally and externally to keep everyone honest and on their toes
 - .. Don't assume anything is included in vendor pricing—compare with the in-house price
 - Pay attention to market pricing and its relationship to the vendor's fixed costs, especially in longer-term contracts
 - Watch for deteriorating service levels and subsequent discretionary spending outside IMCEN's contracts

Source: Booz Allen compilation of sourcing best practices

BOOZ ALLEN HAMILTON RECOMMENDATION

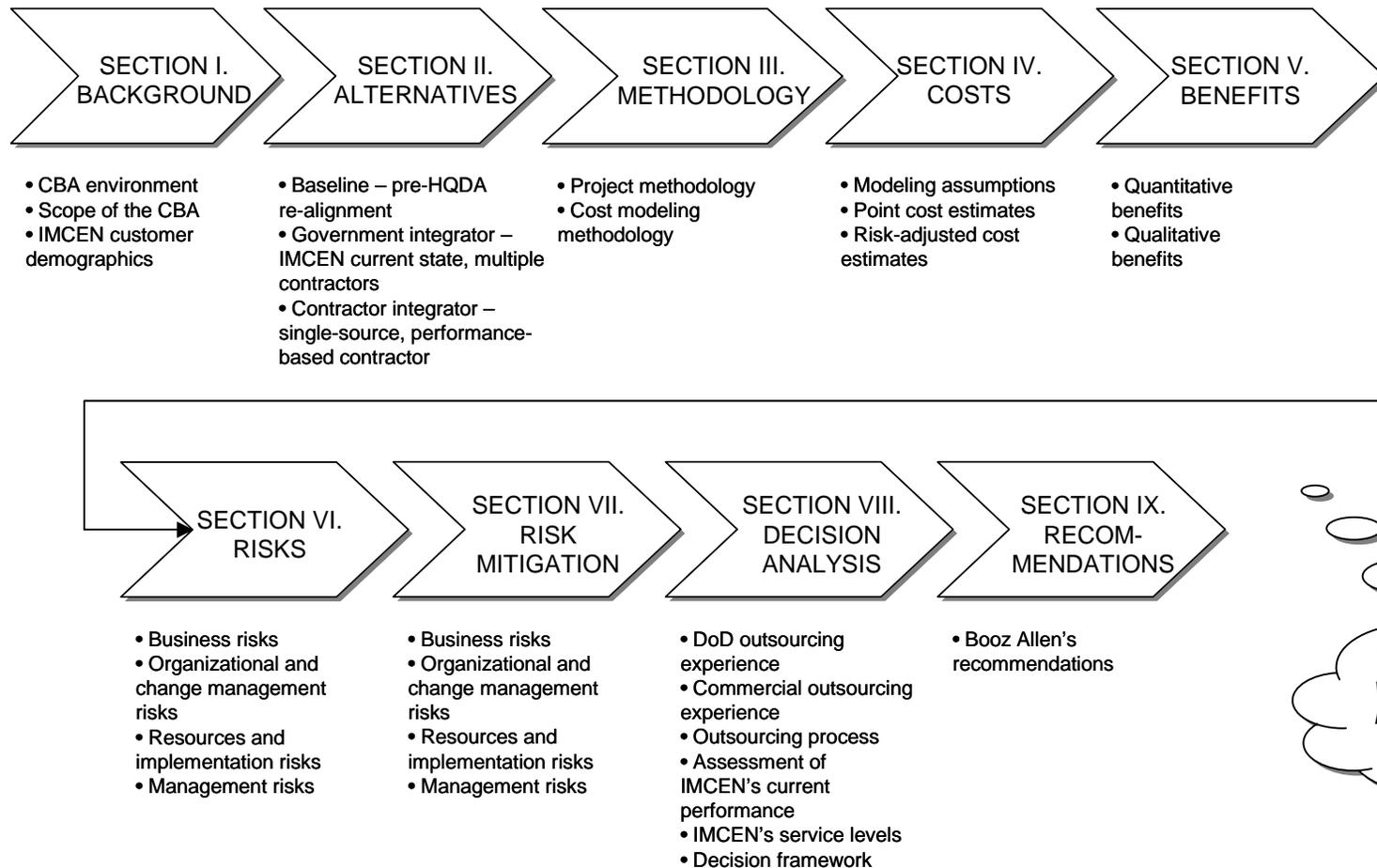
BOOZ ALLEN RECOMMENDS THE GOVERNMENT INTEGRATOR (GI) ALTERNATIVE USING MULTIPLE VENDORS AND MULTIPLE CONTRACT TYPES FOR HQDA DESKTOP SERVICES

- Costs are about equal, but the CI cost estimate carries more risk
- Qualitative risks are much higher for the CI alternative across the board including business risks (disruptions in service and possible poor performance), organizational and change management risks (negative impacts to customer organizations), resource and implementation risks (managing the contractor(s) successfully) and management risks (ensuring a smooth transition and managing customer expectations)
- According to a published DoD outsourcing survey, the track record of DoD outsourcing (the CI alternative) is mixed
- According to a published DoD outsourcing survey, Commanders' attitudes toward outsourcing (the CI alternative)—especially those Commanders with first-hand experience—were overwhelmingly negative
- According to a published DoD outsourcing survey, outsourcing (the CI alternative) did not improve or enhance military respondents' most important reported consideration—mission effectiveness
- According to several published commercial outsourcing surveys, a majority of commercial companies considering outsourcing (the CI alternative) rejected it
- According to several published commercial outsourcing surveys, commercial companies that outsourced (the CI alternative) typically felt outsourcing did not live up to their expectations
- According to several published commercial outsourcing surveys, serious problems with the outsourcing arrangements (the CI alternative) occurred with a significant minority of commercial companies
- IMCEN's customer satisfaction is high (measured at different times by different companies)—negating a potential benefit of the CI alternative
- Risk mitigation strategies are most effective with the GI alternative
- IMCEN is staffed according to the GI model; a change to the CI model would require staff retraining or potential staff relocation
- The GI alternative allows for small business prime contractors
- Competition among contractors in the GI alternative ensures IMCEN the best performance at the best price
- The GI alternative satisfies IMCEN's goal of maintaining a robust government presence and career development pathway

Executive Summary – Where to Look for More Information ...

THE DETAILED DIAGNOSTIC PROVIDES THE DETAIL SUPPORTING THE STATEMENTS IN THE EXECUTIVE SUMMARY...

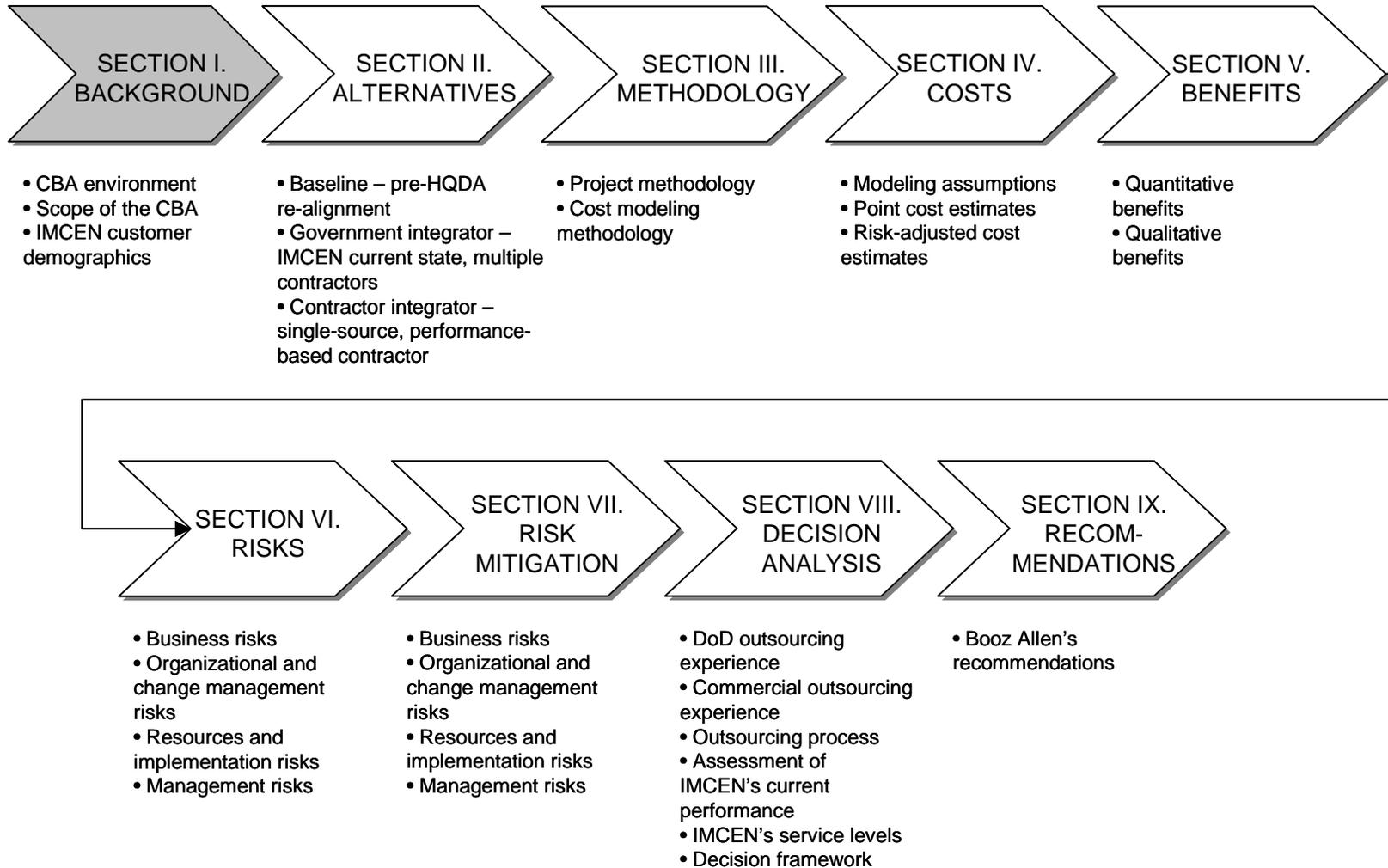
COST-BENEFIT ANALYSIS (CBA) DETAILED DIAGNOSTIC ROADMAP



DETAILED DIAGNOSTIC

THE DETAILED DIAGNOSTIC ROADMAP SHOWS THE INFORMATION TO EXPECT IN EACH SECTION—COMING UP...

COST-BENEFIT ANALYSIS (CBA) DETAILED DIAGNOSTIC ROADMAP



I. BACKGROUND

Background – What's Inside ...

THE BACKGROUND SECTION DESCRIBES THE CIRCUMSTANCES UNDER WHICH THE COST-BENEFIT ANALYSIS WAS PERFORMED...

PAGE(S)	DESCRIPTION
I-2F, I-2	Describes how IMCEN came to be responsible for consolidated desktop support services and sets the context for the cost-benefit analysis. Includes a summary of the roles and responsibilities for both IMCEN and its customer organizations taken from an Interim Service Agreement
I-3	Describes the purpose of the cost-benefit analysis and shows the changes in contracting goals from the study kick-off meeting to the final report
1-4	Provides details of which costs are included in the cost-benefit analysis. Some activities are not-in-scope because they are provided by organizations outside IMCEN, and even certain costs under IMCEN control are excluded because they are common to all the alternatives
I-5F, I-5	First of two sets of pages describing IMCEN customers. This set of pages breaks out the IMCEN customer population demographically
I-6F, I-6	Second of two sets of pages describing IMCEN customers. This set of pages depicts IMCEN customers' computer proficiency and provides some idea of the service demand they create
I-7	Roadmap showing which section is next

SUMMARY OF INTERIM SUPPORT AGREEMENT TERMS

IMCEN	CUSTOMER ORGANIZATION
<ul style="list-style-type: none"> • Assume operational control of all individuals identified as providing desktop support services to the customer organization • Provide direction, guidance and policies for desktop support • Provide access for customer organization's existing desktop support staff to HQDA help desk system for managing support services and provide necessary training • Provide three levels of support services: Standard, Premium and VIP • Record service levels for each customer account into the help desk system • Provide customer with standard HEN configuration descriptions • Coordinate with customer on all new or ongoing problems or issues related to IMCEN-managed network resources or services • Identify and discuss the types and levels of support remaining with the customer or transferred to IMCEN 	<ul style="list-style-type: none"> • Provide requirements analysis/planning, business application development/operations and content management/data administration functions • Designate a primary Information Management Officer (IMO) to act as IMCEN liaison and provide early-on coordination with IMCEN for support • Provide physical space to house existing desktop support staff during transition/migration • Use the HQDA help desk as the primary entry point for help desk services • Develop and maintain accurate records of staff and their service support levels • Provide customer-specific information about IT architectures and unique business applications (including program documentation, approved system accreditation and POC for IMCEN help desk to contact) • Control and administer customer-specific unique applications, web sites and databases • Define external communications paths, requirements for sharing information with entities outside the Pentagon reservation • Provide administrative access to customer network and systems • Provide as-built system configuration documents • Provide current inventory of hardware, installed software, product media and COTS licenses • Route IT purchases and contract actions to IMCEN for approval • Operationally re-assign Government desktop support FTEs to IMCEN • Train users to redirect support requests to the IMCEN help desk

Source: IMCEN Interim Support Agreement (DRAFT)

The ISA defines the roles and responsibilities of both IMCEN and their customers

Background ...

HQDA ADDRESSED IT MANAGEMENT ISSUES BY CENTRALIZING AUTHORITY AND CONSOLIDATING SUPPORT SERVICES UNDER IMCEN...

IT MANAGEMENT ISSUES
<ul style="list-style-type: none">• Perception by leadership of excessive IT support cost• No handle on overall IT spending• Lack of uniformity and centralized control



DRIVERS
<ul style="list-style-type: none">• Organizational segmentation• Multiple help desks• No common tracking mechanisms• Non-standard desktop support infrastructure• “Shadow” IT staff• Excessive peer-to-peer support effort• Inefficient procurement• Lack of performance measurement• Reactive v. proactive support

Source: HQDA DOIM Status Briefing for Army CIO/G6, 2 May 2002

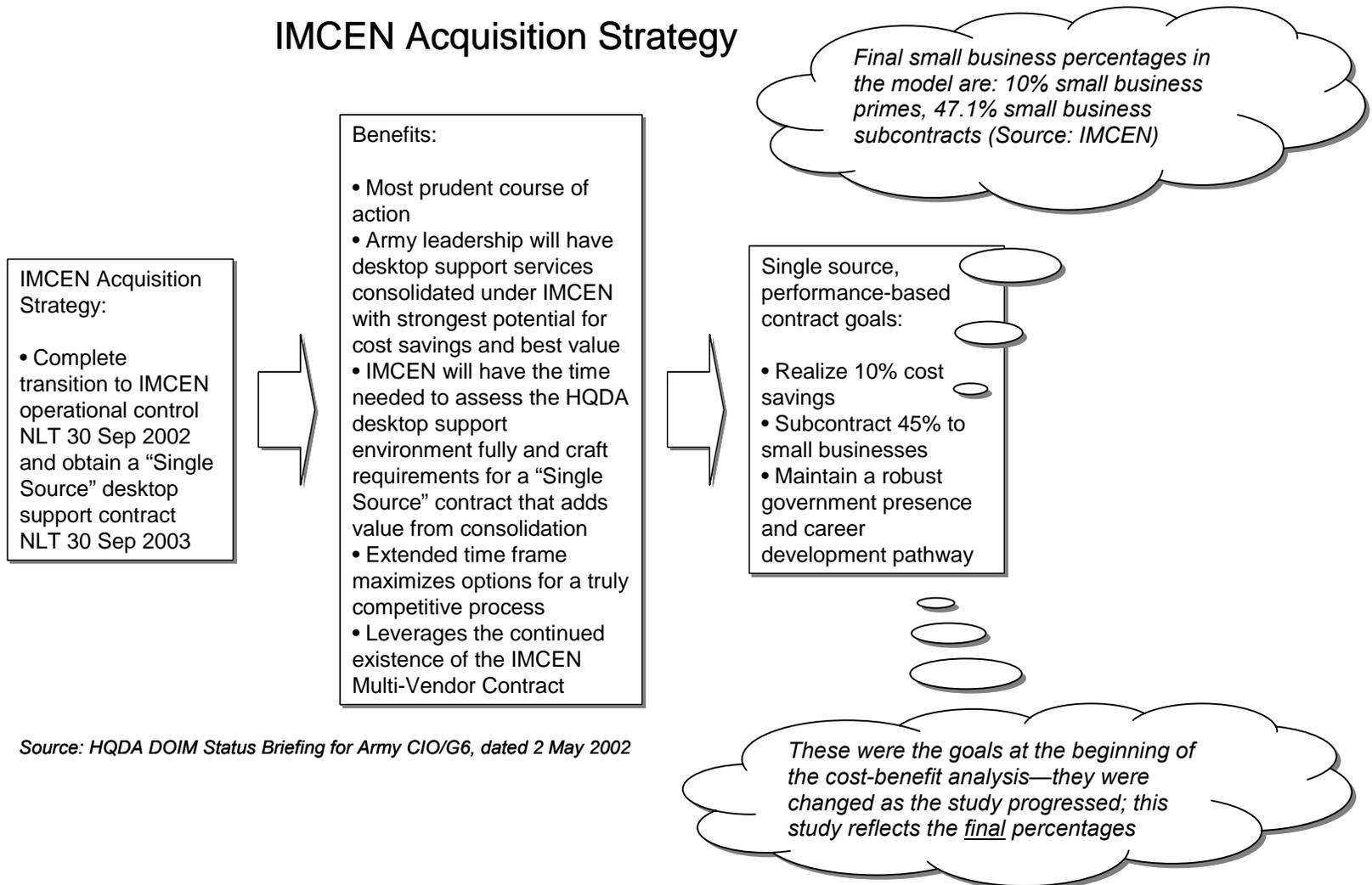
HQDA SOLUTION
<ul style="list-style-type: none">• Make one person in the Army responsible for the delivery of IT services: Army CIO/G6• Establish an organization to provide technical control over IT down to the desktop: NETCOM/9th ASC• Make one person in HQDA responsible for HQDA IT operations: DOIM, HQDA• Consolidate desktop support services under a single organization, IMCEN will:<ul style="list-style-type: none">– Sign an agreement with each customer, the Interim Service Agreement (see facer)– Introduce best practices across HQDA– Consolidate piecemeal desktop support contracts

This page explains the context in which the cost-benefit analysis was undertaken

Background ...

THE PURPOSE OF THIS COST-BENEFIT ANALYSIS IS TO DETERMINE IF A SINGLE-SOURCE PERFORMANCE-BASED CONTRACT IS THE BEST OPTION FOR HQDA'S DESKTOP SUPPORT SERVICES...

IMCEN Acquisition Strategy



Source: HQDA DOIM Status Briefing for Army CIO/G6, dated 2 May 2002

Background ...

ONLY THE LABOR SHOWN IN-SCOPE IS INCLUDED IN THE MARGINAL COST-BENEFIT ANALYSIS...

A marginal cost-benefit analysis includes only those cost elements that change from alternative to alternative. Hardware, software and support contracts remain the same across alternatives; only the labor costs vary

IMCEN COST-BENEFIT ANALYSIS SCOPE	
IN SCOPE	NOT IN SCOPE
<ul style="list-style-type: none">• Desktop hardware• SAN/server hardware• COTS software• Support contracts• Labor:<ul style="list-style-type: none">– Enterprise services (server administration)– End-user training– Security operations– Level 0/1 help desk– Level 2/3 desktop services– Customer liaison	<ul style="list-style-type: none">• Planning and requirements analysis• Business application development• Content management• Security administration• Telecommunications Service Control Officer (TSCO)

In-scope refers to those cost elements (hardware, software and labor) under IMCEN's control

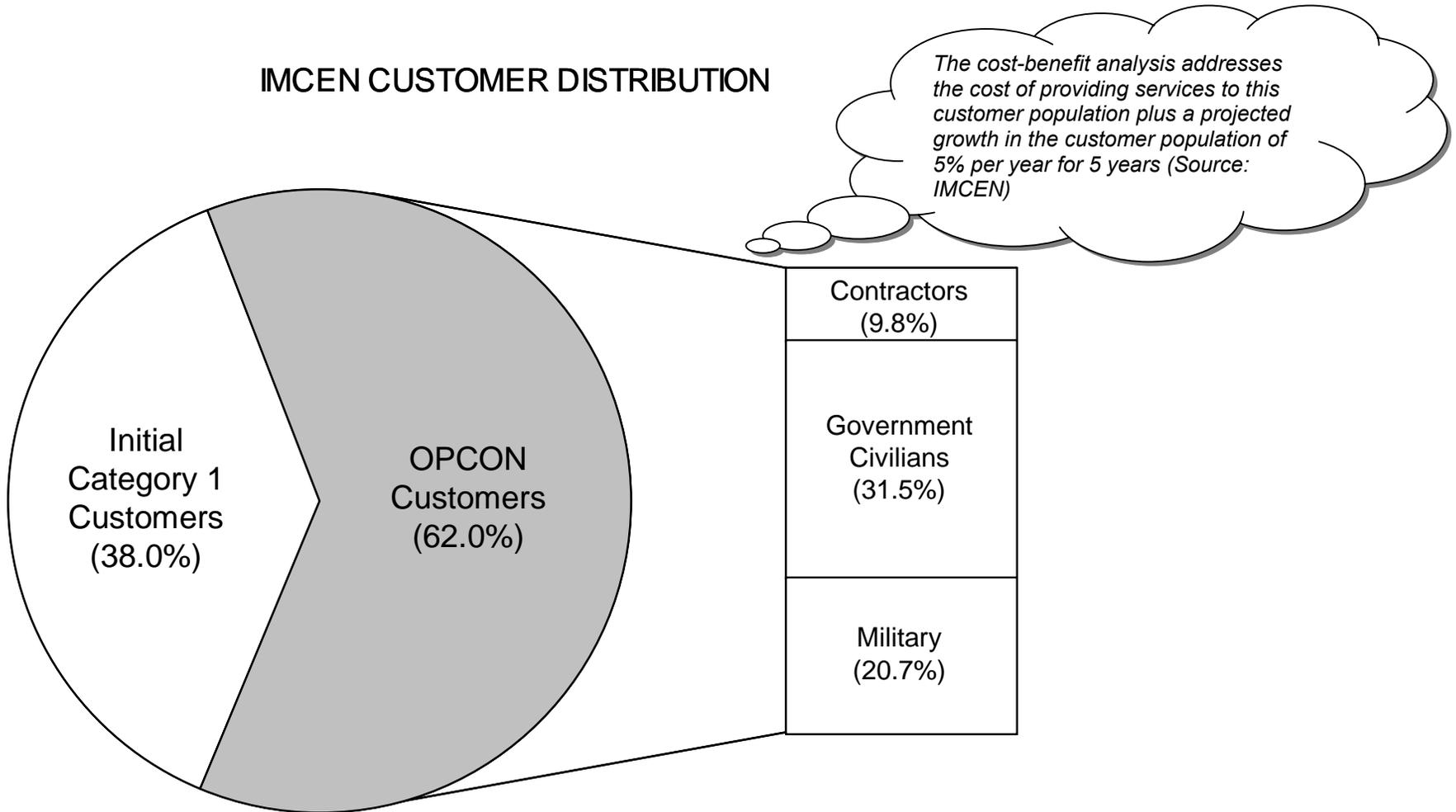
Source: IMCEN

IMCEN CUSTOMER POPULATION				
BUSINESS UNIT	MILITARY	GOVERNMENT CIVILIAN	CONTRACTOR	TOTAL
Initial Category 1	N/A	N/A	N/A	2,462
G8/DCSPRO/PAED	207	163	47	417
G6	75	163	112	350
GOMO	13	0	2	15
MPSC	55	3	4	62
DTS-W	0	83	14	97
ASA I&E	5	53	15	73
USAPA	0	115	21	136
G1/ASA M&RA	240	320	22	582
Administrative Services	7	103	1	111
ACSIM	38	151	17	206
CMH	15	105	26	146
G3	352	183	122	657
G4	136	120	44	300
ASA (ALT)	156	227	165	548
G8/ASAFM	38	249	25	312
TOTAL	1,337	2,038	637	6,474

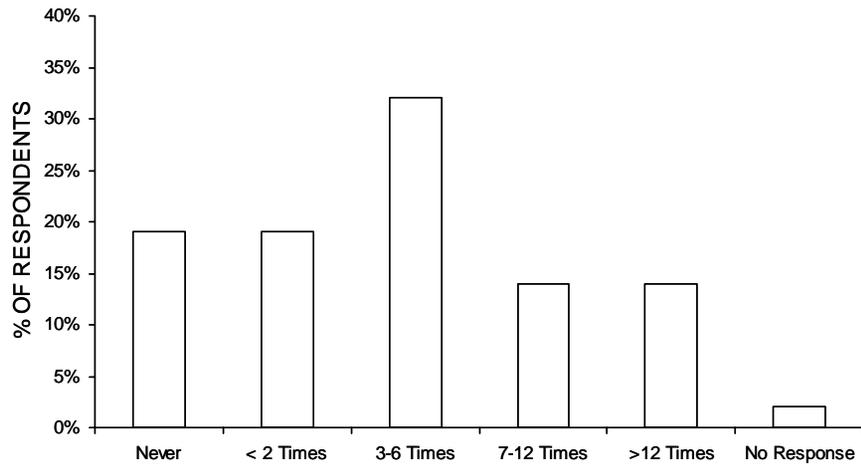
Background ...

THE CUSTOMER POPULATION INCLUDED IN THE COST-BENEFIT ANALYSIS IS 6,474...

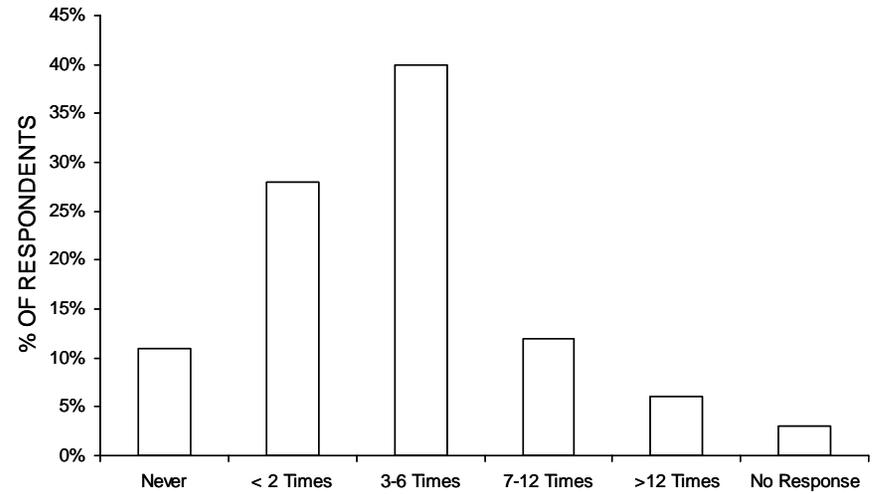
IMCEN CUSTOMER DISTRIBUTION



TIMES PER YEAR SEEKING SOFTWARE SUPPORT
(APPLICATIONS AND OPERATING SYSTEM)



TIMES PER YEAR SEEKING HARDWARE SUPPORT



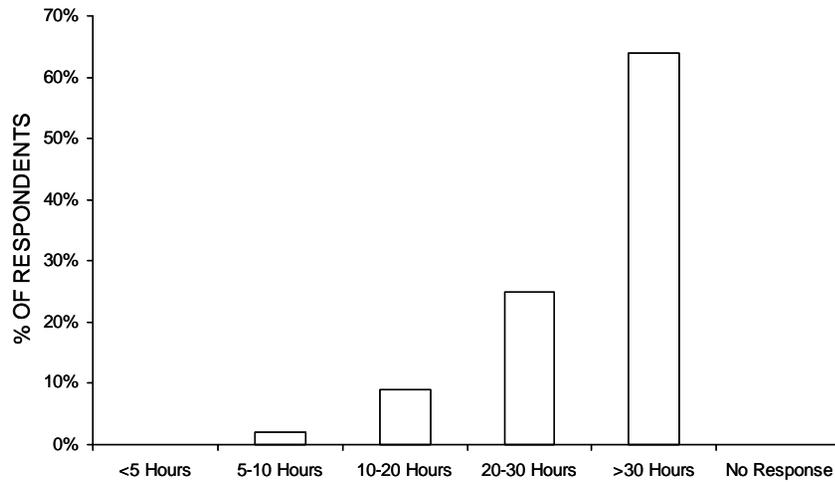
Source: IMCEN End-User Survey

These survey results help to quantify the levels and types of support required by IMCEN's customer base

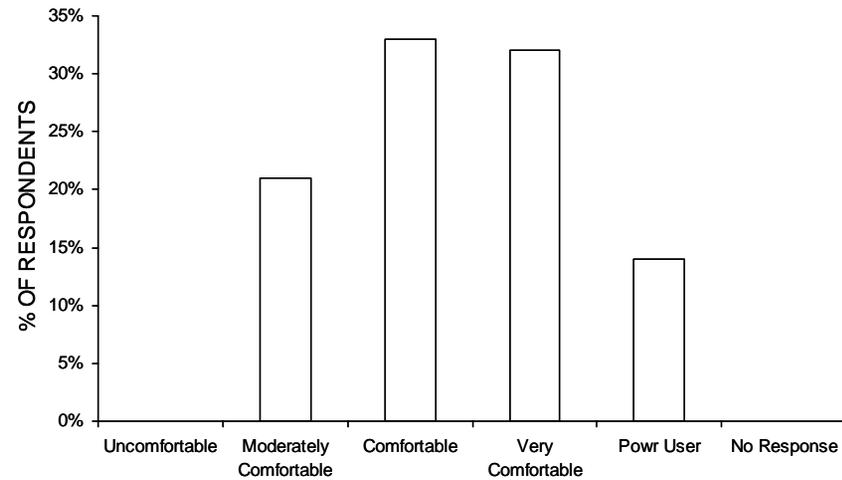
Background ...

IMCEN'S CUSTOMERS USE THEIR COMPUTERS OFTEN AND ARE MOSTLY PROFICIENT IN THEIR USE; THEY REQUEST HARDWARE SUPPORT MORE OFTEN THAN SOFTWARE SUPPORT...

COMPUTER USAGE EACH WEEK



LEVEL OF COMPUTER PROFICIENCY

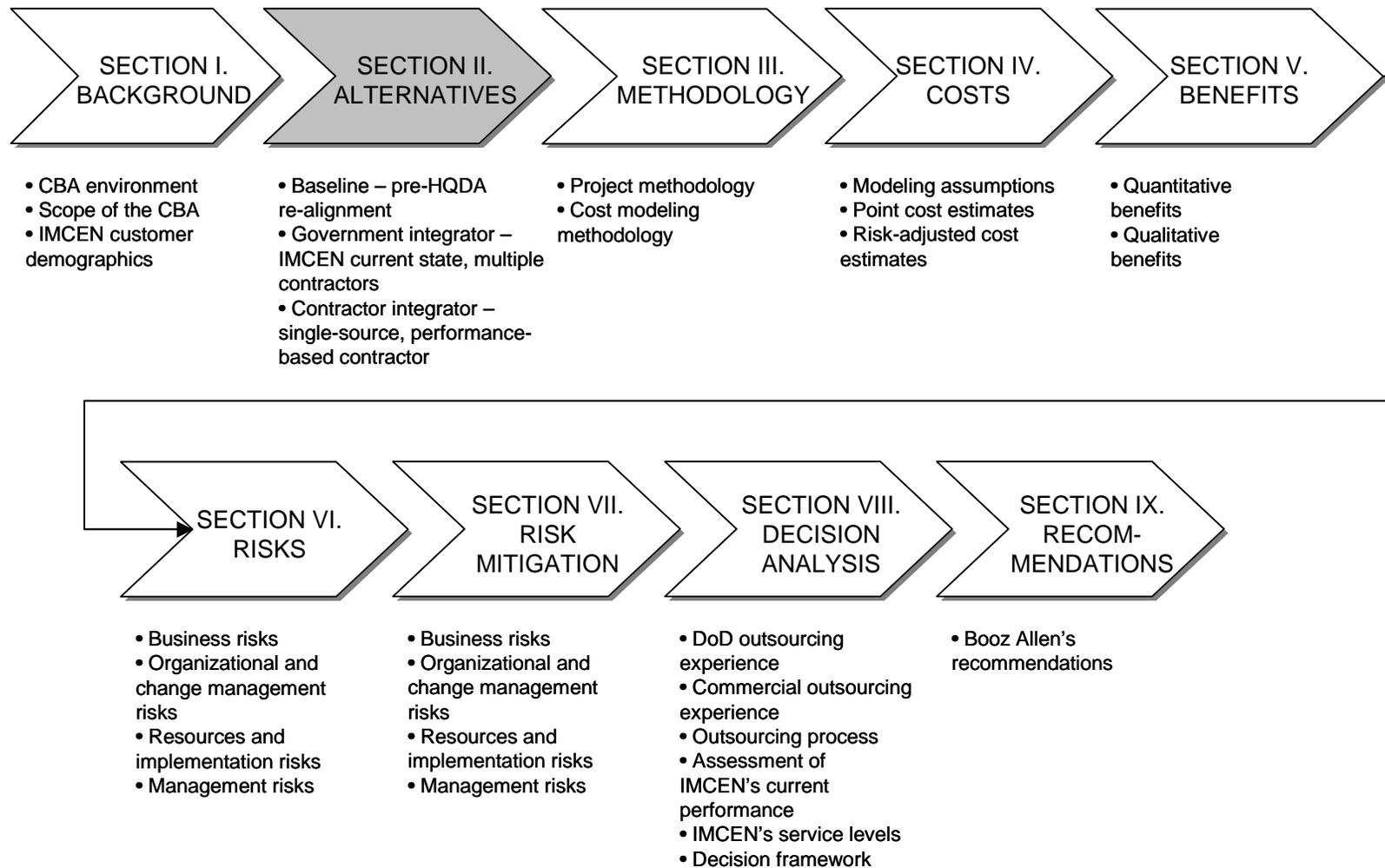


Source: IMCEN End-User Survey

These survey results provide a sense of IMCEN's customers' weekly computer activities and skill levels

COMING UP...

COST-BENEFIT ANALYSIS (CBA) DETAILED DIAGNOSTIC ROADMAP



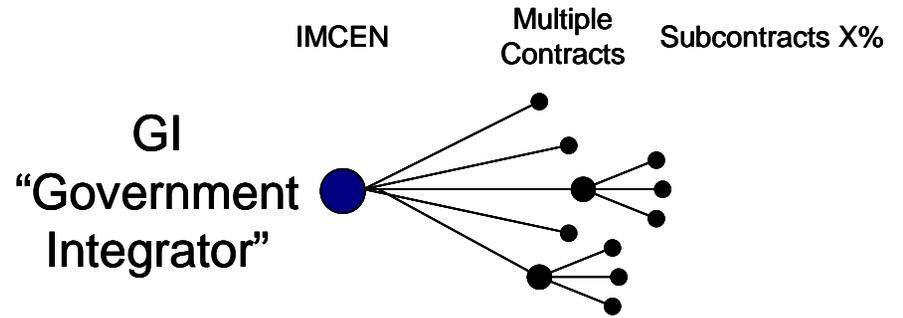
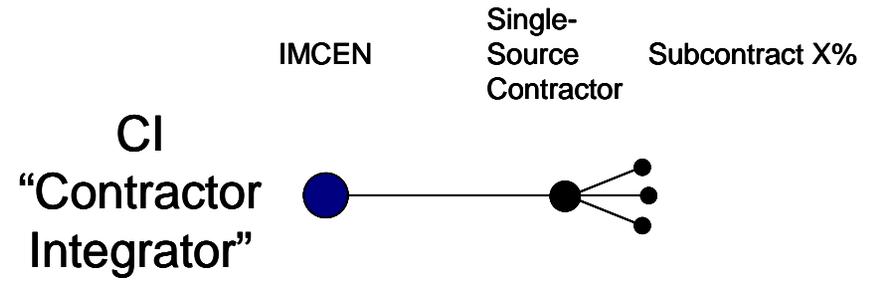
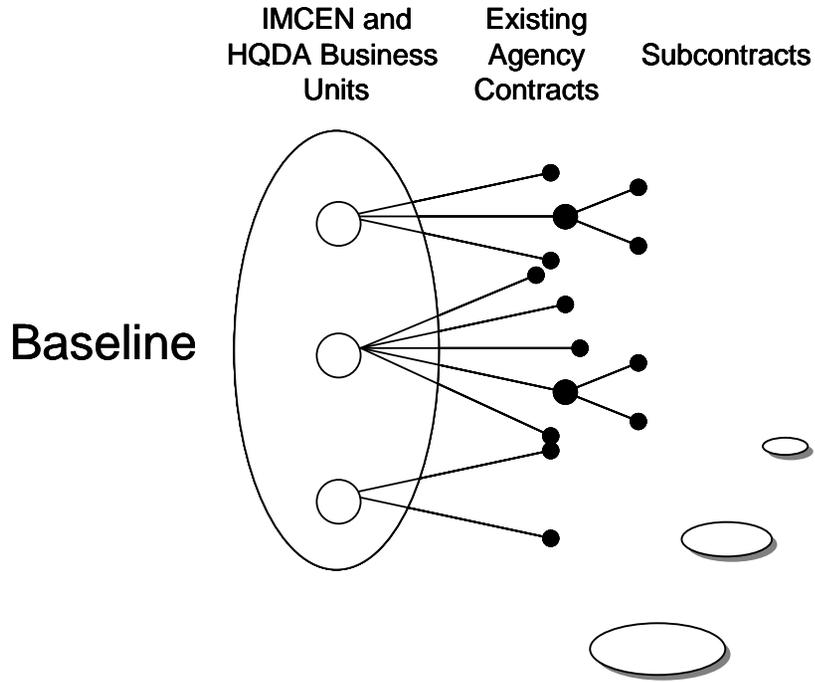
II. ALTERNATIVES

Alternatives – What’s Inside ...

THE ALTERNATIVES SECTION DESCRIBES THE FOCUS OF THE COST-BENEFIT ANALYSIS—THE ALTERNATIVES TO BE COMPARED IN TERMS OF COST, BENEFITS AND RISK...

PAGE(S)	DESCRIPTION
II-2F, II-2	Overview of the three alternatives: baseline (BL), government integrator (GI) and contractor integrator (CI). Note that the BL alternative has already been superseded by the GI alternative at IMCEN; consequently, the BL alternative is provided for comparison purposes only. Page II-2F shows only the conceptual version of the alternatives; it does not include sufficient detail to price them out. That information is provided in pages II-3F, II-3 (baseline), II-4F, II-4 (Government Integrator alternative), II-7F and II-7 (Contractor Integrator alternative)
II-3F, II-3	II-3F shows a graphic depicting the baseline alternative where desktop services are provided by both IMCEN and its future OPCON customers using a variety of contract vehicles. The main page shows the IMCEN organization as it existed prior to the FY2002 HQDA re-alignment.
II-4F, II-4	II-4F shows the GI alternative, where IMCEN provides full desktop life-cycle support to its customers. The IMCEN organizational chart as of September 30, 2002 is shown on the main page. For the purposes of the cost model, the customer base of the GI alternative is assumed to grow at a rate of 5% over 5 years
II-5F, II-5	These are the first of two sets of pages justifying which of IMCEN's activities are candidates for outsourcing. On this set of pages, the framework for making the decision is laid out
II-6F, II-6	This is the second of two sets of pages justifying which of IMCEN's activities are candidates for outsourcing. On this set of pages, the framework developed on the previous set of pages is applied to IMCEN's current organization, resulting in 9 potential candidate areas for outsourcing
II-7F, I-7	These pages use the 9 potential candidate outsourcing areas to define the CI alternative. The organization chart describes which activities will be operated entirely by contractors, those operated by government employees with a significant contractor presence, and those primarily operated by the government. The staffing comparison table provides a look at IMCEN's current staffing levels used in the GI alternative versus the best practice staffing levels used by the CI alternative
II-8	Roadmap showing which section is next

CONCEPTUAL ALTERNATIVES



These are conceptual alternatives only; they lack the detail necessary to develop a cost model. The detailed information used to develop the cost model is provided in the remainder of this section

BOOZ ALLEN EVALUATED THREE CONCEPTUAL ALTERNATIVES FOR IMCEN DESKTOP SUPPORT IN THIS COST-BENEFIT ANALYSIS...

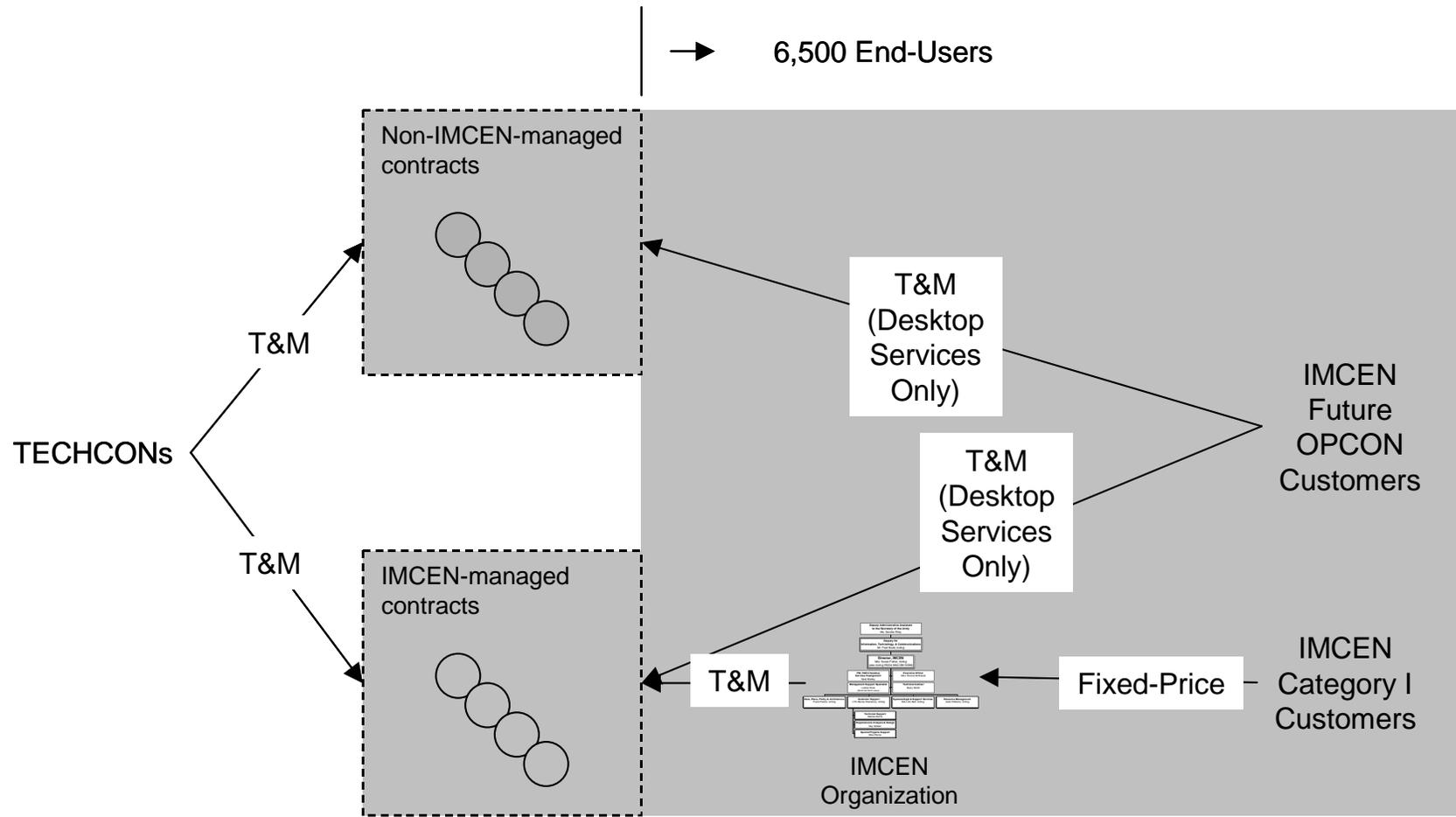
Baseline costs are included for comparison purposes only; the choice that must be made is between the government integrator alternative and the contractor integrator alternative

CONCEPTUAL ALTERNATIVE	DESCRIPTION
Baseline (BL)	The IMCEN state prior to the FY2002 HQDA re-alignment where HQDA business units were free to procure their desktop support services from IMCEN or other contracts. Costs collected for the baseline are for the same services provided by IMCEN under the government integrator and contractor integrator alternatives to ensure a fair comparison
Government Integrator (GI)	The IMCEN state after FY2002 HQDA re-alignment where specified OPCONs (approximately 6,500 end-users) transfer their personnel, vendor contracts and funds associated with the delivery of desktop services to IMCEN, which then assumes full desktop life-cycle support for those organizations in accordance with a written Service Level Agreement. IMCEN oversees multiple contractors who in turn oversee their subcontractors
Contractor Integrator (CI)	Transition from the multi-vendor Government Integrator to a single-source, performance-based, fixed (FFP) or variable (per-unit priced) contract for certain HQDA desktop support services. Services are also available on a time and materials basis to IMCEN and other HQDA organizations. IMCEN oversees the single source contractor who in turn oversees its sub-contractors

Source: IMCEN

T&M = Time and Materials contract

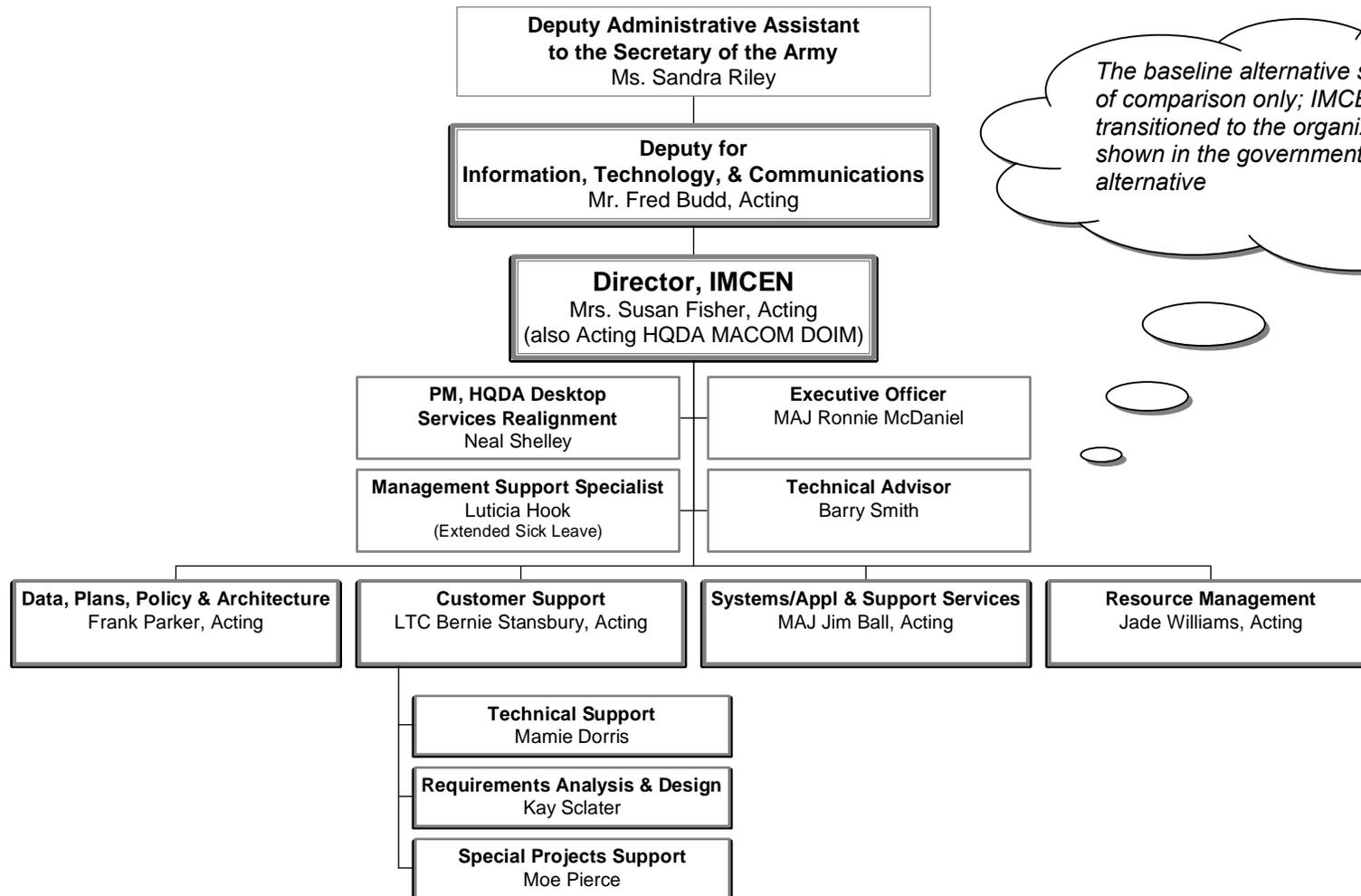
Baseline Alternative



Shaded areas indicate elements included in the analysis

Alternatives – Baseline (BL) ...

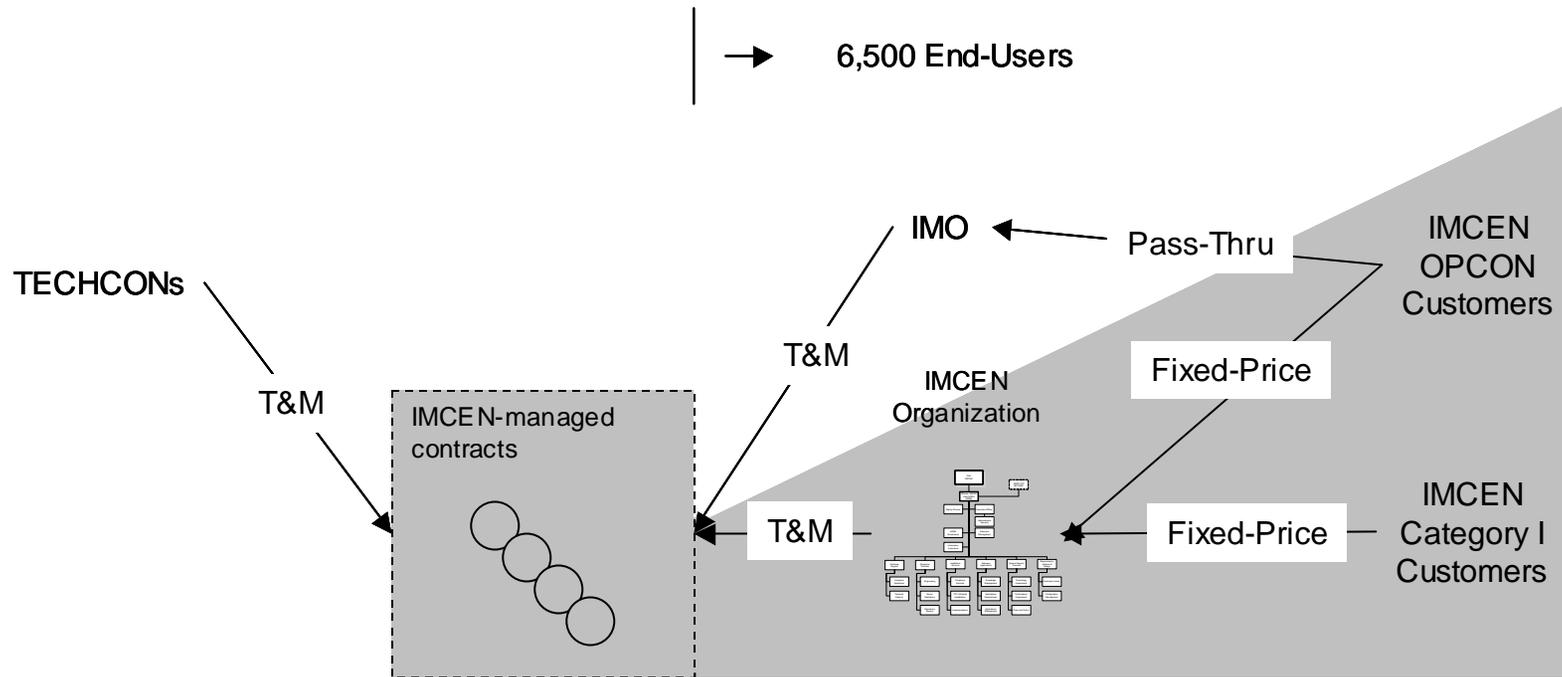
THE BASELINE DEPICTS IMCEN PRIOR TO THE FY2002 HQDA RE-ALIGNMENT (BASELINE COSTS DO NOT INCLUDE GROWTH)...



The baseline alternative serves as a point of comparison only; IMCEN has already transitioned to the organizational structure shown in the government integrator alternative

T&M = Time and Materials contracts

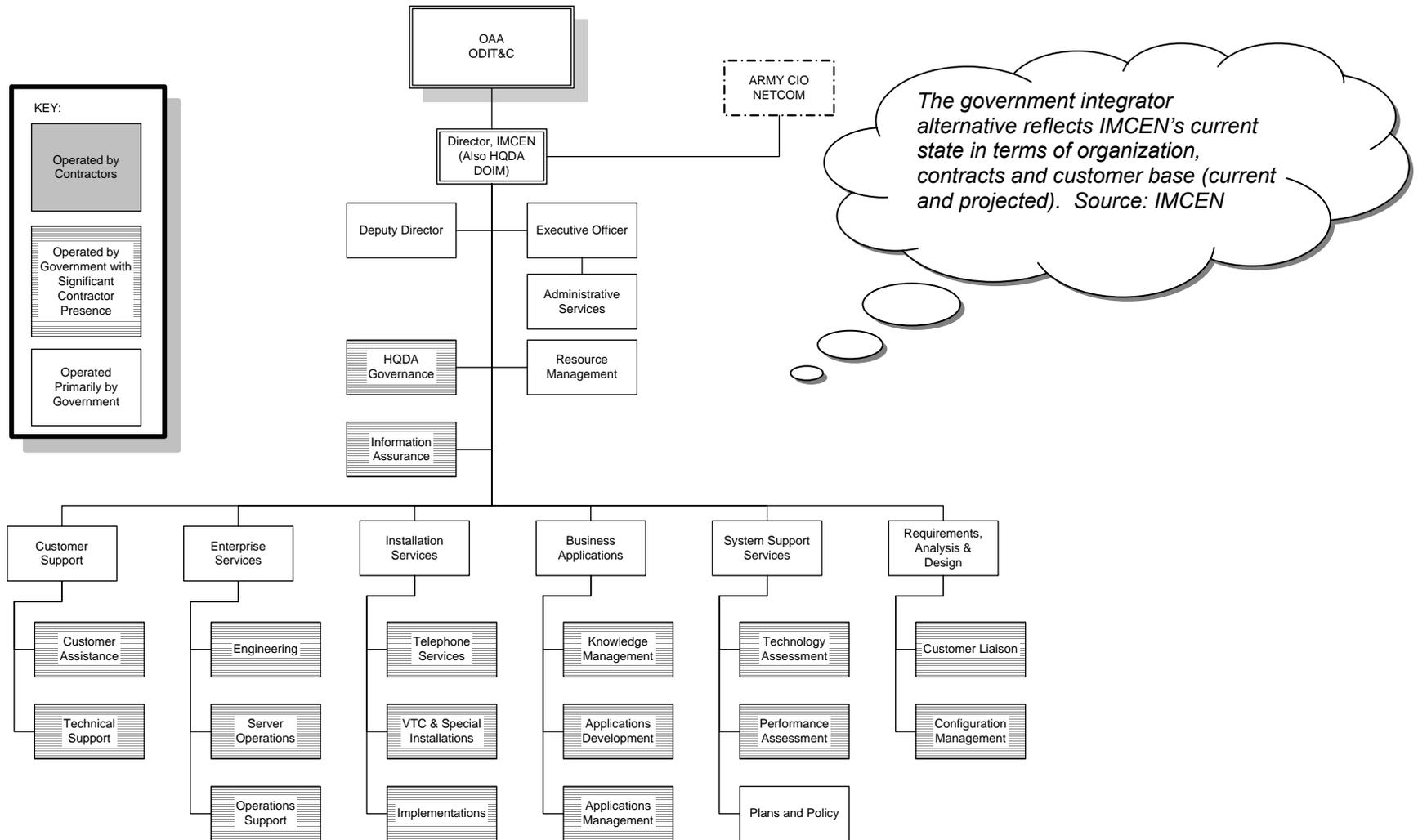
Government Integrator Alternative



Shaded areas indicate elements included in the analysis

Alternatives – Government Integrator (GI) ...

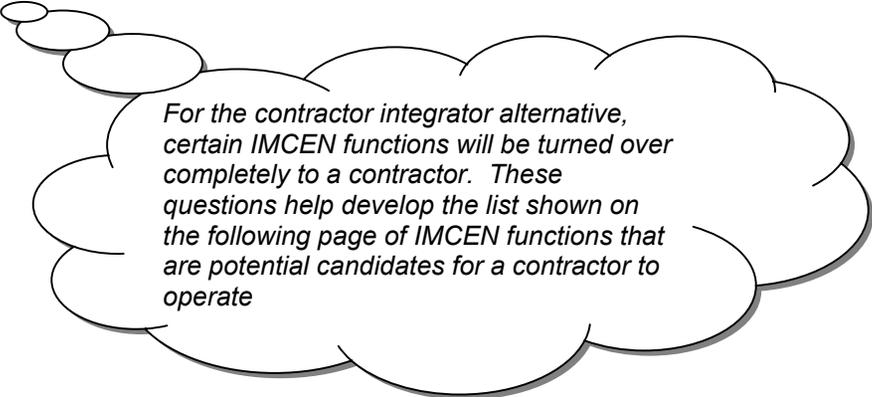
THE GOVERNMENT INTEGRATOR (GI) ALTERNATIVE USES IMCEN'S CURRENT ORGANIZATIONAL STRUCTURE AND MULTI-VENDOR CONTRACTS (GI COSTS INCLUDE GROWTH)...



QUESTIONS:

- Is the function under consideration inherently NON-governmental (for example, is it unrelated to policy or the expenditure of funds)? If NO, insource or smart source
- Can the scope of work be completely specified? If NO, insource or smart source
- Is the service available from multiple sources? If NO, insource or smart source
- Are transition (provider-to-provider) costs low? If NO, insource, smart source or market test
- Can performance be easily and accurately measured? If NO, insource or smart source

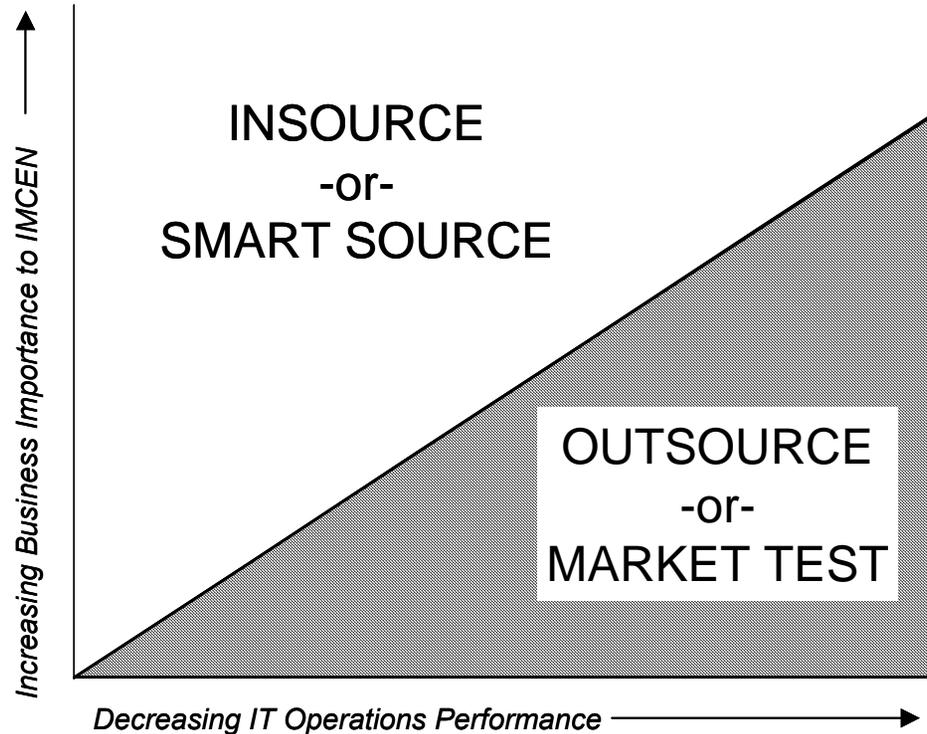
... OTHERWISE (I.E., ALL ANSWERS ARE 'YES'), OUTSOURCE



For the contractor integrator alternative, certain IMCEN functions will be turned over completely to a contractor. These questions help develop the list shown on the following page of IMCEN functions that are potential candidates for a contractor to operate

Alternatives – Contractor Integrator (CI) ...

FUNCTIONS SELECTED FOR POTENTIAL CONTRACTOR OPERATION WERE DETERMINED BY ANSWERING A SET OF QUESTIONS DESIGNED TO SELECT SOURCING OPTIONS ...



DEFINITIONS:

Insource – Work performed entirely using internal resources

Smart source – Work performed by a combination of internal and external sources (essentially staff augmentation)

Outsource – Work performed entirely by an outside organization

Market Test – Not sure which sourcing approach will yield the best results; requires further investigation

This sourcing framework was used to develop the set of questions shown in the facer that Booz Allen used to identify those IMCEN functions that are potential candidates for contractor operation in the contractor integrator alternative

TARGET FUNCTION	INHERENTLY NON-GOVERNMENTAL?	SCOPE FULLY SPECIFIED?	MULTIPLE SOURCES?	TRANSITION COSTS LOW?	PERFORMANCE MEASURABLE?	RECOM-MENDATION
Customer Support (Mgmt)	NO	YES	YES	YES	YES	Insource or smart source
Customer Assistance	YES	YES	YES	YES	YES	Outsource
Technical Support	YES	YES	YES	YES	YES	Outsource
Enterprise Services (Mgmt)	NO	YES	YES	YES	YES	Insource or smart source
Engineering	YES	YES	YES	YES	YES	Outsource
Server Operations	YES	YES	YES	YES	YES	Outsource
Operations Support	YES	YES	YES	YES	YES	Outsource
Installation Services (Mgmt)	NO	YES	YES	YES	YES	Insource or smart source
Telephone Services (Ordering)	NO	YES	YES	YES	YES	Insource or smart source
VTC & Special Installations	YES	YES	YES	YES	YES	Outsource
Implementations	YES	YES	YES	YES	YES	Outsource

Table continues below... Source: Booz Allen analysis

The shaded boxes are those functions that—based on the questions listed on the previous page—hold the most promise for contractor operation. These functions are considered contractor-operated for cost purposes in the contractor integrator alternative

Alternatives – Contractor Integrator (CI) ...

APPLYING THE OUTSOURCING FRAMEWORK TO IMCEN'S ORGANIZATIONAL STRUCTURE YIELDED NINE FUNCTIONS POTENTIALLY SUITABLE FOR CONTRACTOR OPERATION...

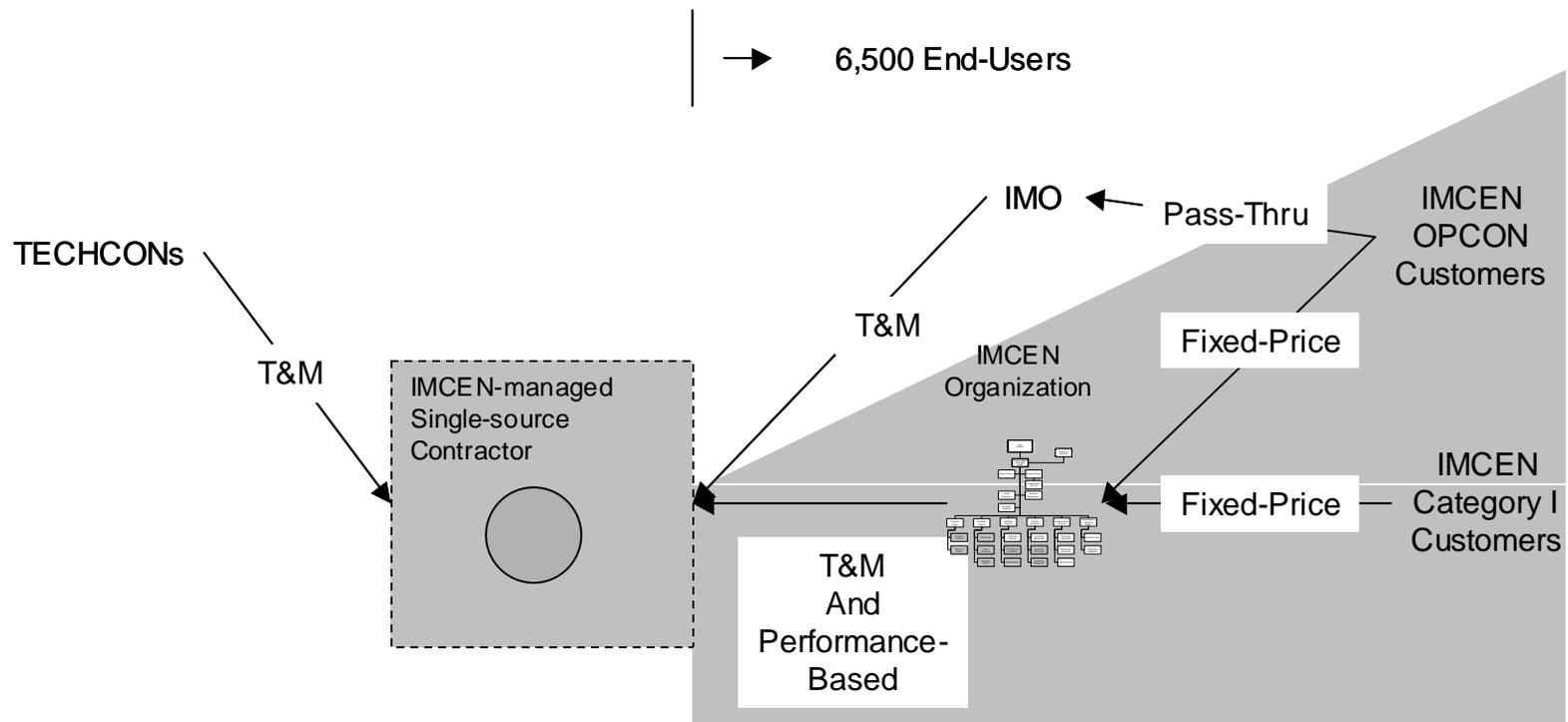
Table continued from above...

TARGET FUNCTION	INHERENTLY NON-GOVERNMENTAL?	SCOPE FULLY SPECIFIED?	MULTIPLE SOURCES?	TRANSITION COSTS LOW?	PERFORMANCE MEASURABLE?	RECOM-MENDATION
Business Applications (Mgmt)	NO	YES	YES	YES	YES	Insource or smart source
Knowledge Management	NO	NO	NO	NO	NO	Insource or smart source
Applications Development	YES	YES	YES	YES	YES	Outsource
Applications Management	YES	YES	YES	YES	YES	Outsource
System Support Services (Mgmt)	NO	NO	NO	NO	NO	Insource or smart source
Technology Assessment	YES	NO	YES	YES	NO	Insource or smart source
Performance Assessment	YES	NO	YES	YES	NO	Insource or smart source
Plans and Policy	NO	NO	NO	NO	NO	Insource or smart source
Requirements, Analysis & Design	NO	NO	YES	NO	NO	Insource or smart source
Customer Liaison	NO	NO	YES	YES	NO	Insource or smart source
Configuration Mgmt	NO	YES	YES	YES	YES	Insource or smart source

Source: Booz Allen analysis

T&M = Time and Materials contracts

Contractor Integrator Alternative

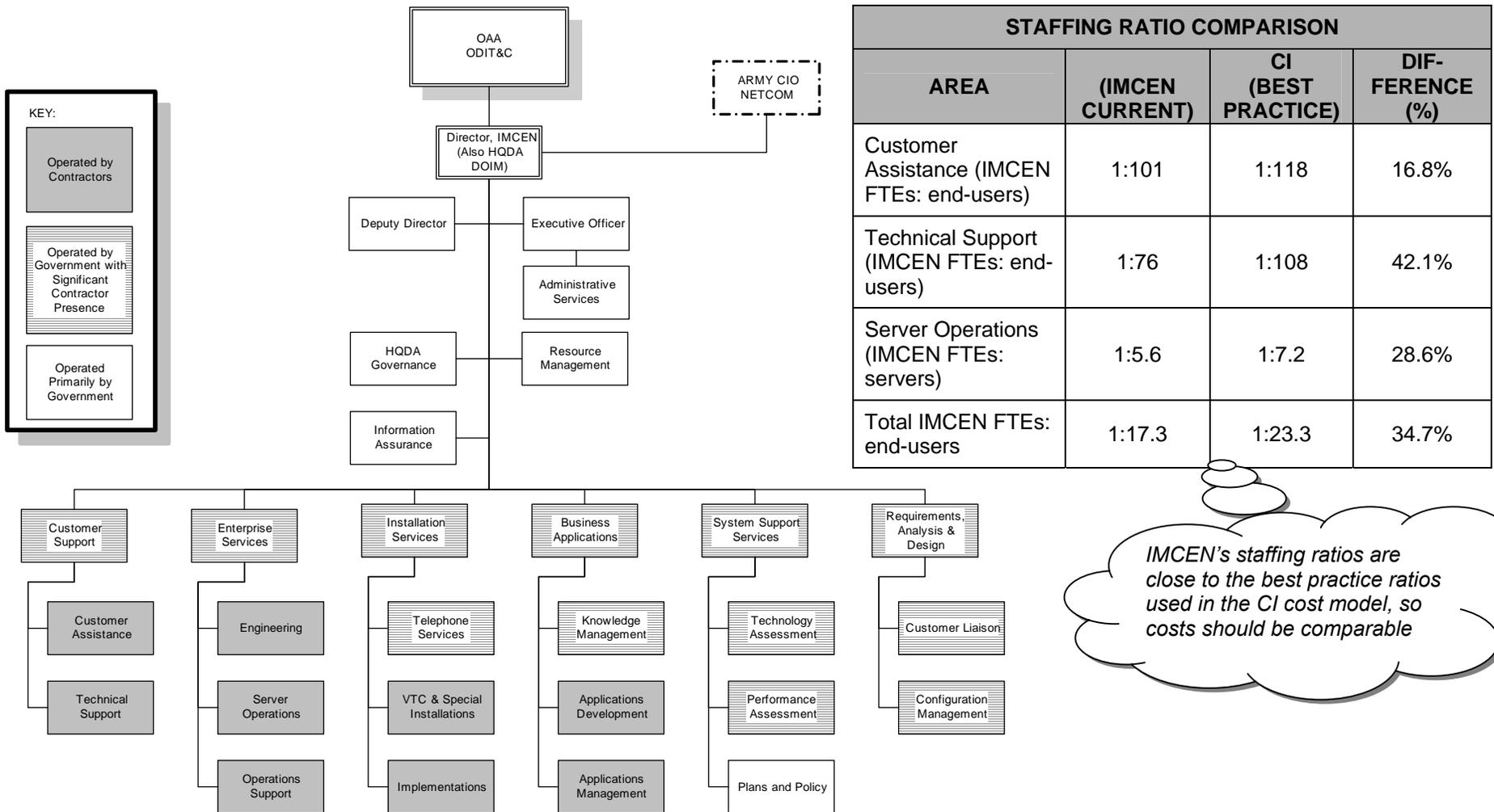


Shaded areas indicate elements included in the analysis

Alternatives – Contractor Integrator (CI) ...

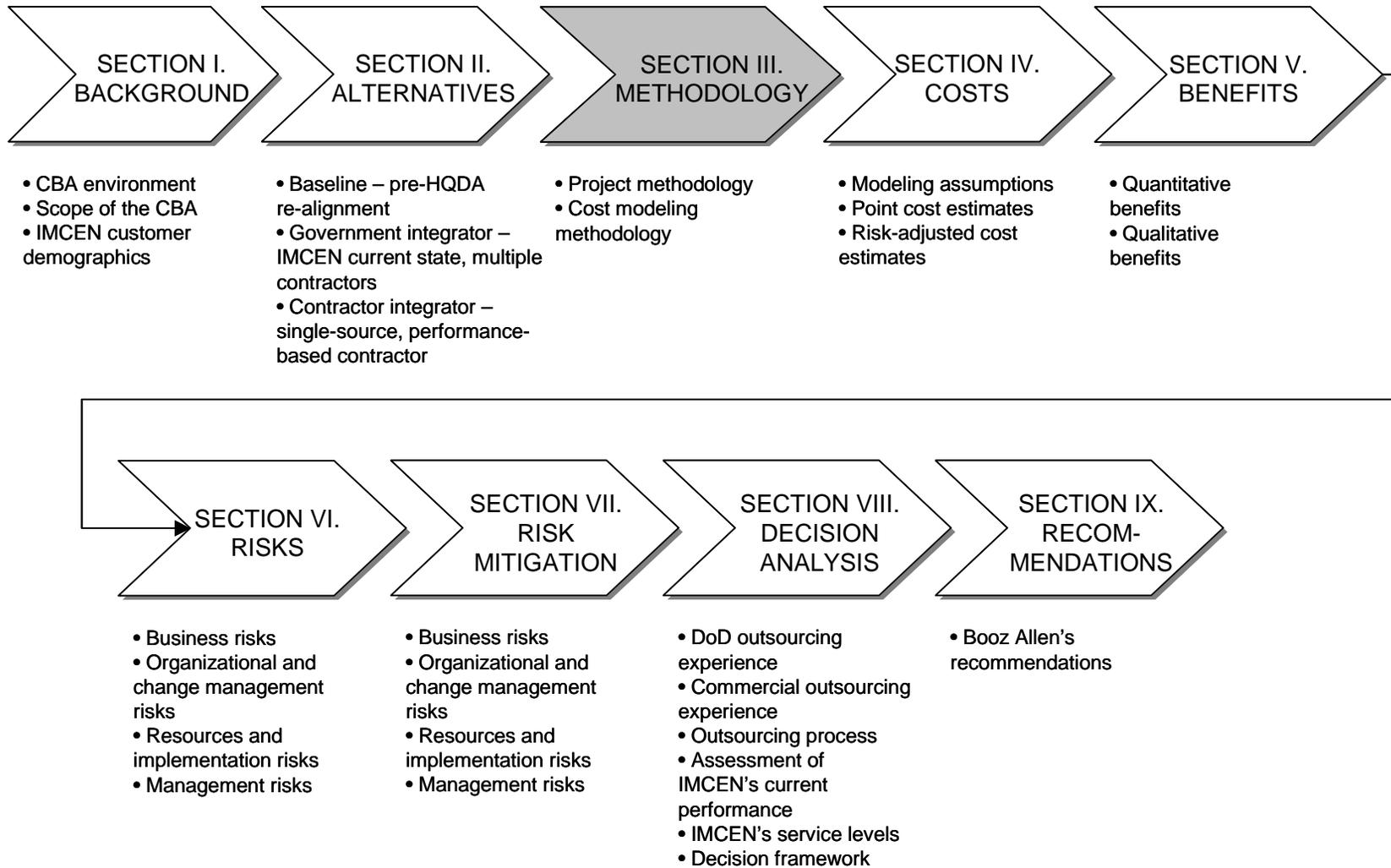
THE CONTRACTOR INTEGRATOR (CI) ALTERNATIVE INVOLVES TRANSFERRING RESPONSIBILITY FOR CERTAIN ACTIVITIES TO A SINGLE-SOURCE PERFORMANCE-BASED CONTRACTOR (CI COSTS INCLUDE GROWTH)...

Source: Gartner Group, IMCEN, and Booz Allen Analysis



COMING UP...

COST-BENEFIT ANALYSIS (CBA) DETAILED DIAGNOSTIC ROADMAP



III. METHODOLOGY

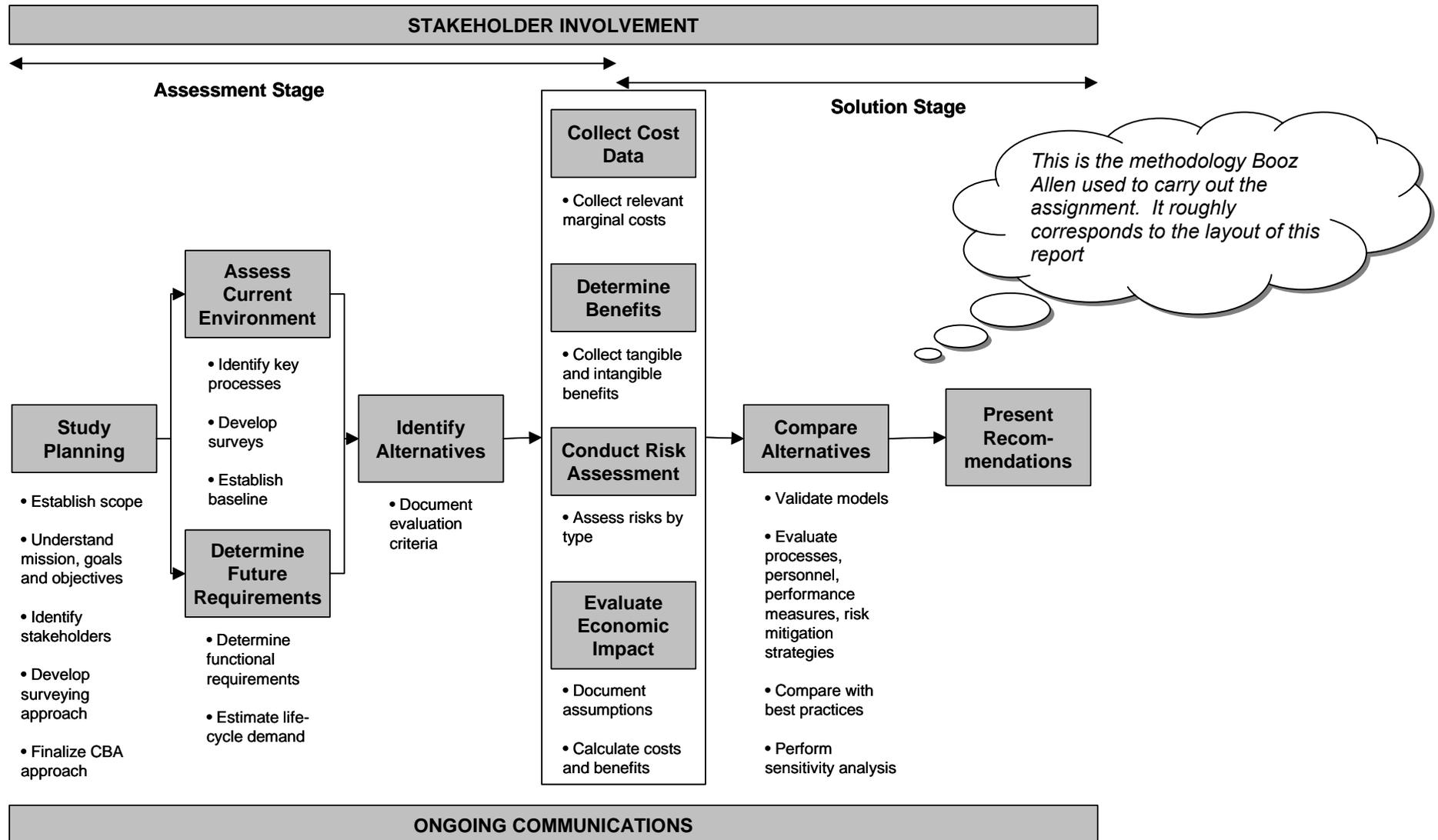
Methodology – What’s Inside ...

THE METHODOLOGY SECTIONS ANSWERS THE QUESTION “HOW WAS THE WORK PERFORMED?”...

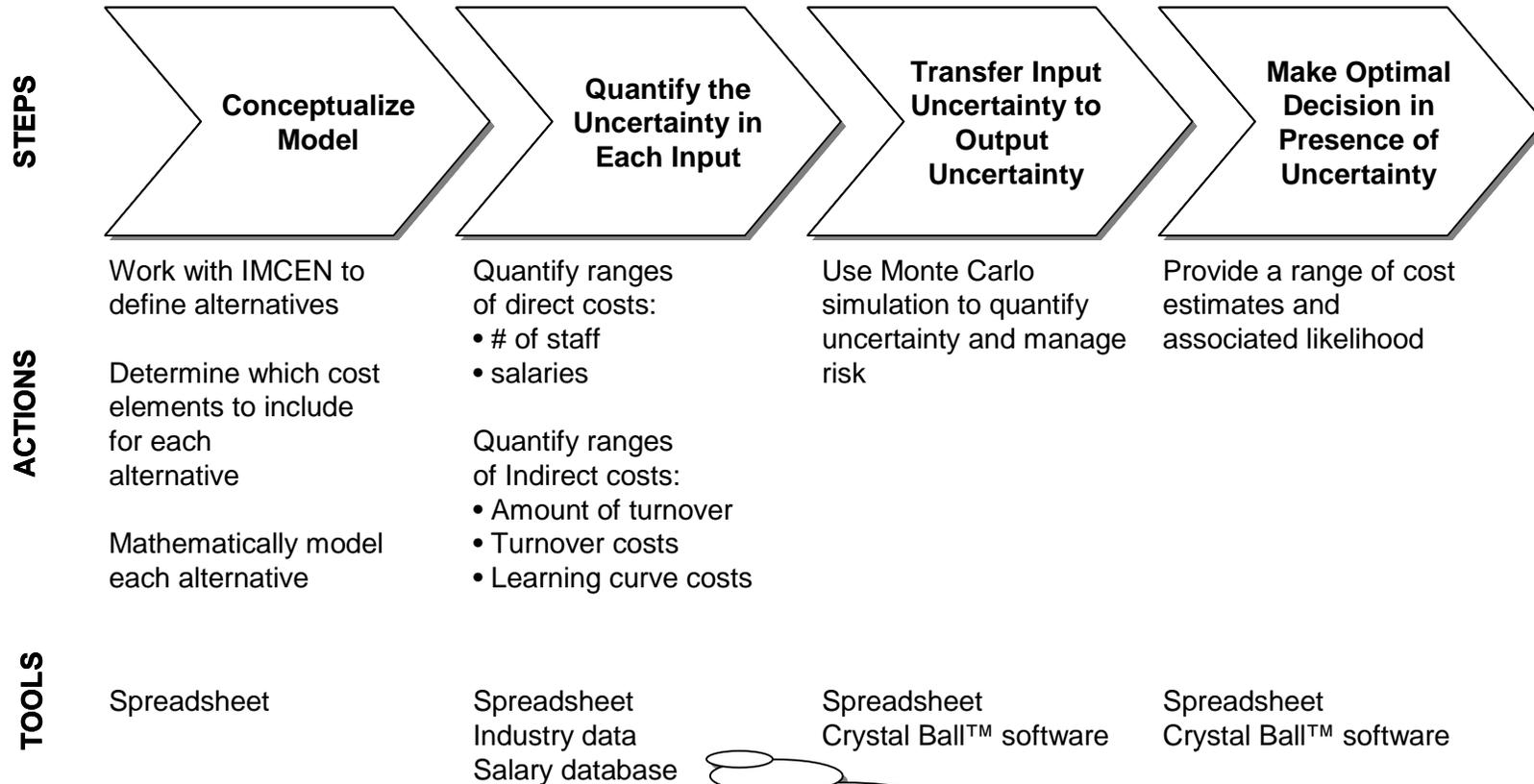
PAGE(S)	DESCRIPTION
III-2F, III-2	Depicts the overall project methodology Booz Allen used to carry out the cost-benefit analysis
III-3F, III-3	Depicts the overall cost modeling approach used by Booz Allen and explains the use of Monte Carlo simulation to translate uncertainty in the input (number of contractors, contractor salaries, level of turnover, etc.) to a range of values in the output
III-4	Roadmap showing which section is next

STEP	DESCRIPTION OF ACTIVITIES INVOLVED
Study Planning	Formulation of a cost-benefit analysis strategy for the proposed investment. Identify stakeholders, set goals and objectives for the project and finalize the financial analysis approach
Assess Current Environment and Determine Future Requirements	Review of current and future environments, including understanding of the proposed organization and contracting plans and other elements integral to the marginal analysis
Identify Viable Alternatives	Identify those alternatives to be considered in the cost-benefit analysis. In the case of IMCEN, there were two: Government Integrator and Contractor Integrator
Collect Cost Data, Determine Benefits, Conduct Risk Assessment and Evaluate Economic Impact	Collect and analyze direct and indirect, fixed and variable and recurring and non-recurring costs. Sunk costs and realized benefits were excluded from the analysis. Collect data on tangible and intangible benefits. Assess risk in terms of business risk, organizational and change management risk, project resources and implementation risks, and management risks. Calculate quantitative costs and benefits for each alternative
Compare Alternatives	Compare the alternatives to determine the best choice in terms of quantitative and qualitative measures
Present Recommendations	Present progress/status to IMCEN on a regular basis for review, clarification and guidance; present recommendations to IMCEN at the end of the study

WORKING WITH IMCEN, BOOZ ALLEN CUSTOMIZED ITS METHODOLOGY TO MEET THE SPECIFIC REQUIREMENTS OF THE STUDY...



OVERALL IMCEN MODELING APPROACH



This approach allows Booz Allen to transfer uncertainty in the input data (like the range of salaries a contractor might pay, the number of staff a contractor might choose to use for a particular activity, estimates of the amount of turnover, learning curve costs for new employees, etc.) into a range of possible costs IMCEN could reasonably expect to pay

BOOZ ALLEN USED A MONTE CARLO MODELING TECHNIQUE TO QUANTIFY AND MANAGE RISK FOR THE CONTRACTOR INTEGRATOR ALTERNATIVE...

How the Monte Carlo technique works:

1 The **number** of contractors included in this total can vary over a range defined by industry averages and IMCEN's current staffing levels

2 In addition, the **salaries** of individual contractors can also vary over a range defined by Booz Allen's external salary database and IMCEN's current salary structure

3 As a result, there is uncertainty in this number. That uncertainty can be quantified and managed by running simulations—allowing the number of contractors and their salaries to vary according to a probability distribution and recalculating this figure thousands of times. What results is a range of values and the likelihood that they will occur

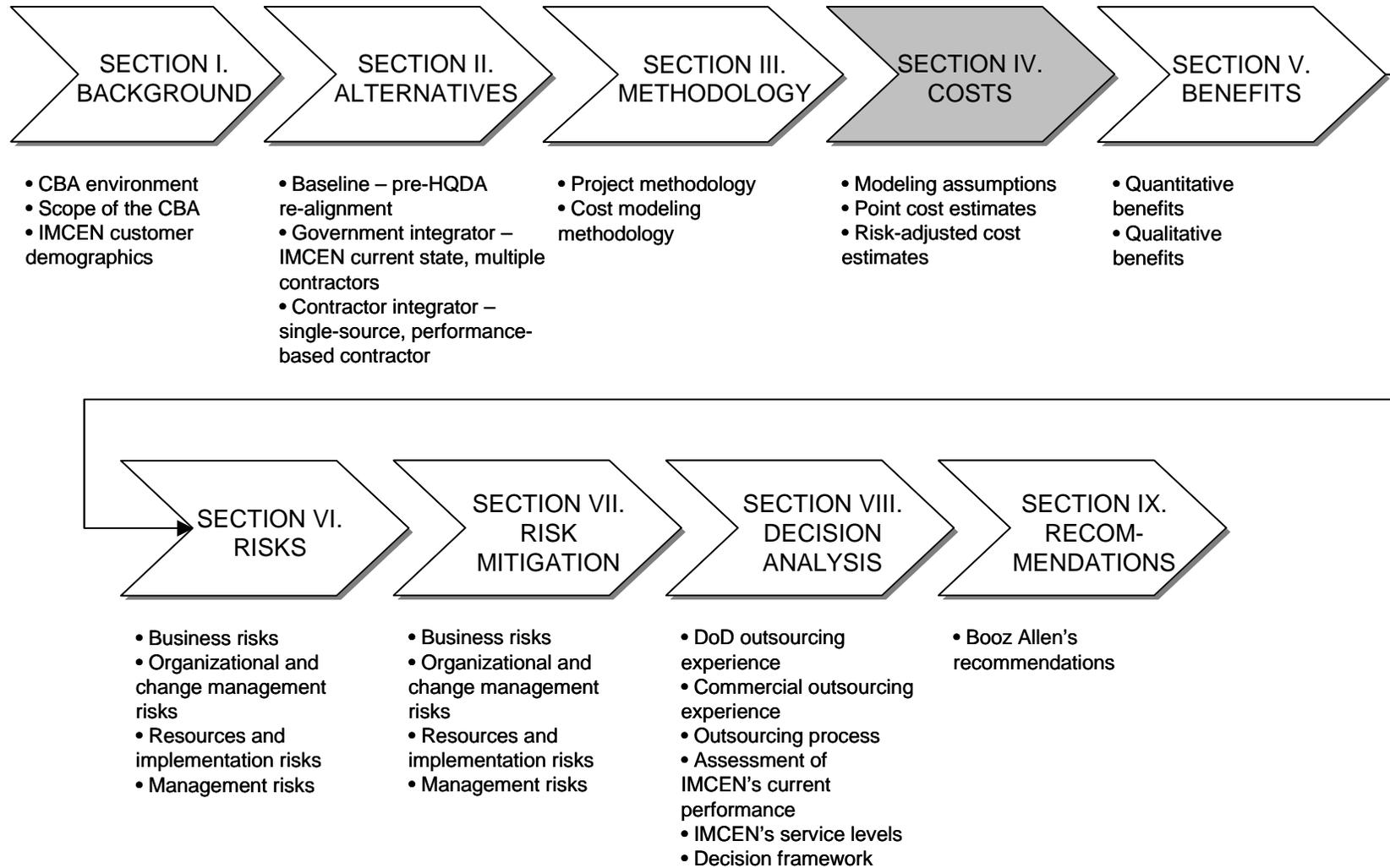
(In Thousands of Inflated dollars)	FY04				FY04-13 Total			
Contractor Integrator - Risk Adjusted	Point Estimate	Low	Most Likely	High	Point Estimate	Low	Most Likely	High
Contractor Integrator - Risk Adjusted	\$ 47,665	\$ 46,996	\$ 48,187	\$ 49,534	\$573,811	\$564,792	\$585,454	\$607,580
1.0 Direct Labor Costs	\$ 42,729	\$ 42,350	\$ 43,122	\$ 43,946	\$550,467	\$542,013	\$560,862	\$581,046
1.1 Customer Support Total	\$ 12,971	\$ 12,785	\$ 13,417	\$ 14,117	\$176,505	\$171,788	\$187,807	\$205,577
1.2 System Support Services Total	\$ 4,124	\$ 4,099	\$ 4,128	\$ 4,160	\$ 52,963	\$ 52,343	\$ 53,076	\$ 53,884
1.3 Reqmts, Analysis, & Design Total	\$ 5,731	\$ 5,679	\$ 5,743	\$ 5,815	\$ 71,574	\$ 70,274	\$ 71,880	\$ 73,720
1.4 Enterprise Services Total	\$ 6,474	\$ 6,247	\$ 6,412	\$ 6,602	\$ 66,577	\$ 60,821	\$ 65,002	\$ 69,804
1.5 Business Applications Total	\$ 8,021	\$ 7,933	\$ 8,018	\$ 8,108	\$109,187	\$106,965	\$109,125	\$111,398
1.6 Installation Services Total	\$ 2,828	\$ 2,775	\$ 2,822	\$ 2,871	\$ 40,529	\$ 39,189	\$ 40,379	\$ 41,622
1.7 IMCEN Directorate Total	\$ 1,803	\$ 1,793	\$ 1,804	\$ 1,816	\$ 22,313	\$ 22,044	\$ 22,339	\$ 22,629
1.8 Additional Costs	\$ 777	\$ 543	\$ 756	\$ 1,017	\$ 10,820	\$ 7,857	\$ 10,768	\$ 14,418
2.0 Indirect Costs	\$ 4,936	\$ 4,242	\$ 5,054	\$ 6,051	\$ 23,345	\$ 21,435	\$ 24,525	\$ 28,136
2.1 New Contractor Learning Curve	\$ 2,564	\$ 2,104	\$ 2,786	\$ 3,638	\$ 14,888	\$ 13,882	\$ 16,469	\$ 19,504
2.2 New Government Learning Curve	\$ 2,372	\$ 2,058	\$ 2,268	\$ 2,490	\$ 8,457	\$ 7,316	\$ 8,066	\$ 8,859
Total Contractor Integrator (Inflated)	\$ 47,665	\$ 46,996	\$ 48,187	\$ 49,534	\$573,811	\$564,792	\$585,454	\$607,580
Total Contractor Integrator (Constant FY04)	\$ 47,665	\$ 46,102	\$ 46,371	\$ 46,759	\$531,352	\$513,057	\$521,705	\$531,118
Total Contractor Integrator (Discounted)	\$ 47,665	\$ 44,716	\$ 43,624	\$ 42,667	\$470,280	\$440,425	\$434,383	\$428,924

4 While this provides a range of values instead of the more customary, single-value point estimate (or low, high and most likely [median]), the uncertainty in the resulting range can be quantified to any level desired

5 Every cell in the model with a range of values is treated likewise

COMING UP...

COST-BENEFIT ANALYSIS (CBA) DETAILED DIAGNOSTIC ROADMAP



IV. COSTS

Costs – What’s Inside ...

THE COSTS SECTION PRESENTS THE RESULTS OF BOOZ ALLEN’S COST MODELING OF THE BASELINE, GOVERNMENT INTEGRATOR AND CONTRACTOR INTEGRATOR ALTERNATIVES...

PAGE(S)	DESCRIPTION
IV-2F, IV-2	Documents the assumptions used in the Booz Allen cost model, and shows which assumptions were used by alternative
IV-3F, IV-3	Provides the output of the cost model for the baseline alternative. The baseline estimate is a point estimate (i.e., no Monte Carlo simulation and no ranges for input value or output costs). All costs in the BL alternative are known exactly
IV-4F, IV-4	Provides a point estimate for the GI alternative, including projected growth (5% over 5 years). The point estimate is generated by taking the most likely value for each variable (number of contractors, contractor salary, etc.) and performing a cost calculation. It provides a basis for comparison with the baseline
IV-5	Provides the risk-adjusted estimate for the GI alternative (i.e., this estimate used ranges for the variable inputs, performed a Monte Carlo simulation, and arrived at a range of output costs). The risk-adjusted range of values is a way to quantify and manage risk in the face of uncertainty in the inputs
IV-6F, IV-6	Provides a point estimate for the CI alternative, including projected growth (5% over 5 years). The point estimate is generated by taking the most likely value for each variable (number of contractors, contractor salary, etc.) and performing a cost calculation. It provides a basis for comparison with the baseline
IV-7	Provides the risk-adjusted estimate for the CI alternative (i.e., this estimate used ranges for the variable inputs, performed a Monte Carlo simulation, and arrived at a range of output costs). The risk-adjusted range of values is a way to quantify and manage risk in the face of uncertainty in the inputs
IV-8	Plots the risk adjusted GI and CI costs versus confidence level and provides the BL costs as a point of comparison. The greater range of values for the CI versus GI alternative reflects the increased uncertainty in staffing levels, salary etc. in those activities operated by contractors
IV-9	Roadmap showing which section is next

General Cost Estimating Methodology...

After the alternatives were defined, the business analysis team allocated costs to detailed categories in an effort to derive a complete cost estimate. Because the estimates for both alternatives are based on a **marginal analysis**, costs that stay the same across the alternatives, such as hardware and software costs, are excluded from the estimates. The estimates are broken into **direct costs** (costs that must be incurred and paid for by IMCEN) and **indirect costs** (costs representing losses in productivity or service that may not manifest themselves in actual costs to IMCEN). To populate the cost model the business analysis team reviewed documentation, interviewed IMCEN staff, and used professional and engineering judgments.

The Government Integrator alternative acts as a foundation from which the Contractor Integrator alternative was estimated. Primary sources for estimate data were current and previous spend plans, outsourcing purchase history, and profiles of the end-user organizations. The estimate used a “bottom-up” approach, meaning that each estimate is a function of many inputs and that costs were estimated on as minute a level as possible.

In addition, because data were sometimes not available or precise, all assumptions and engineering judgments are supported by sufficient justification. In keeping with standard cost estimating practices, where data were inexact, low and high ranges were assigned. **Crystal Ball®**, an application that performs **Monte Carlo analysis**, takes these ranges and distribution assumptions as input. As output, Crystal Ball® delivers overall cost estimates with results in ranges of low, high, and most likely. Further, Crystal Ball® helps to perform a sensitivity analysis on the variables to determine which variables have the greatest effect on the total cost of an alternatives (see “Appendix C: Sensitivity Analysis” for more details).

Costs were estimated using three types of dollars: constant (FY2004), inflated, and discounted. **Constant dollars** – not incorporating inflation or the time value of money – are the starting point. **Inflated dollars** are used to determine how much money will be required at future times. **Discounted dollars** are presented for comparative purposes; they represent future outflows in today's dollars, reflecting the time value of money. Each cost table is defined and identifies the types of dollars included.

Costs – Estimating Assumptions ...

COSTS WERE ESTIMATED ACCORDING TO THE FOLLOWING ASSUMPTIONS FOR EACH ALTERNATIVE...

COST ESTIMATING ASSUMPTIONS	BL	GI	CI
For the CI and GI Alternatives, new contracts will be phased-in linearly beginning FY2004 and ending FY2005 (data source: IMCEN).		✓	✓
Military Personnel will remain in all three alternatives (data source: IMCEN).	✓	✓	✓
IMCEN is directly responsible for 6474 end-users and 181 servers, with each expected to increase at 5% per year for 5 years (data source: IMCEN).		✓	✓
Inflation factors (1.94 percent for budgetary purposes) and real discount rate (3.10 percent for comparative purposes) are drawn from OMB A-94.	✓	✓	✓
Sunk or prior year costs are not included (data source: IMCEN).	✓	✓	✓
All contractor and government labor costs are loaded with 32.85 percent benefits, which include retirement, health, and Medicare benefits, and 12 percent overhead based on OMB A-76 guidance.	✓	✓	✓
Contractor labor costs, where exact costs were not available, are taken from Booz Allen's external salary database.			✓
The labor step 9 is used for estimating government personnel salaries.	✓	✓	✓
There are 1860 work hours in a year (data source: IMCEN).	✓	✓	✓
In the GI alternative, IMCEN manages a total of 7 different contracts (data source: IMCEN).			✓
Industry standards, taken from the Gartner Group surveys, are used to estimate the staffing levels for three organizational pieces of the Contractor Integrator alternative: Customer Assistance, Technical Support, and Server Operations (see "Appendix A: Cost Estimating Detail" for more information).			✓
Two contractor supervisors are needed in total to manage the above three organizational pieces (data source: Booz Allen)			✓
The transition to the contractor(s) in both the CI and GI alternatives is expected to take one year to complete with participation increasing linearly.		✓	✓
The percentage of government staff moving from technical operations to program management that are expected to be dissatisfied and quit their new roles is between 5 and 10% (data source: Booz Allen).			✓
The percentage of the new contractor staff for the performance-based contract that will come from the hiring of old government staff is between 5 and 10% (data source: Booz Allen).			✓
The percentage of contractors in the GI alternative that are hired by the new single-source contractor is expected to be 60% (data source: Booz Allen).			✓
The indirect costs associated with employee turnover are estimated from Gartner Group data (see "Appendix A: Cost Estimating Detail").			✓
47.1% of the CI contract value will go to subcontractors who charge 6% on top of their contract value (data source: IMCEN and Booz Allen).			✓
Between 5 and 10% of the existing contract value is dedicated to small business subcontractors (data source: IMCEN).		✓	

KEY: BL = Baseline; GI = Government Integrator; CI = Contractor Integrator

The Table

The Total Costs table for this marginal analysis of the Baseline is broken into “OPCONs’ support contract costs” and “IMCEN’s existing organization costs.”

Specific Methodology

Element 1.0 – OPCONs’ Support Contract Costs

Each of elements 1.1 through 1.15 is drawn from the “Fast Track” datasheets for each newly acquired organizational unit. The contract costs for each organizational unit represents the expenses in either 2001 or 2002 that were paid to contractors to support the organizational unit’s desktop support requirements. Inflating these costs yields the costs for each of the years FY2004 through FY2013 that would be reasonably expected if the organizations were to maintain the same level of desktop support. **(Note that, unlike in the Government Integrator and Contractor Integrator alternatives, there is no customer population growth taken into account.)**

Element 2.0 – Existing IMCEN Organization

Element 2.0 shows the costs of maintaining IMCEN’s organization “as is” without increasing its customer base. In the Government Integrator alternative, IMCEN is the same staff-wise as it was in the Baseline with the exception of the addition of the new staff from the OPCONs. Thus, the cost of IMCEN’s old organization is calculated by subtracting the cost of the new staff from the OPCONs (OPCONs’ support contracts) from the overall cost of the Government Integrator alternative.

Costs – BL Point Estimate (No Growth)...

THE BASELINE IS ESTIMATED TO COST \$473.2 MILLION IN INFLATED DOLLARS OVER 10 YEARS...

<i>(In Thousands of Constant FY04 dollars)</i>	FY04	FY05	FY06	FY07	FY08	FY09-13	FY04-13
Baseline - Point Estimate	\$ 43,336	\$ 44,177	\$ 45,034	\$ 45,908	\$ 46,798	\$ 247,967	\$ 473,220
1.0 OPCONs' Support Contract Costs	\$ 17,162	\$ 17,495	\$ 17,834	\$ 18,180	\$ 18,533	\$ 98,198	\$ 187,401
1.1 ACSIM	\$ 467	\$ 477	\$ 486	\$ 495	\$ 505	\$ 2,675	\$ 5,105
1.2 Admin Services	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
1.3 ASA I&E	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
1.4 ASA(ALT)	\$ 1,876	\$ 1,913	\$ 1,950	\$ 1,988	\$ 2,026	\$ 10,737	\$ 20,490
1.5 CMH	\$ 157	\$ 160	\$ 163	\$ 166	\$ 169	\$ 896	\$ 1,710
1.6 DTS-W	\$ 1,663	\$ 1,695	\$ 1,728	\$ 1,761	\$ 1,796	\$ 9,514	\$ 18,156
1.7 G1/ASA M&RA	\$ 2,746	\$ 2,799	\$ 2,854	\$ 2,909	\$ 2,965	\$ 15,713	\$ 29,986
1.8 G3	\$ 5,194	\$ 5,295	\$ 5,397	\$ 5,502	\$ 5,609	\$ 29,719	\$ 56,716
1.9 G4	\$ 2,806	\$ 2,860	\$ 2,916	\$ 2,972	\$ 3,030	\$ 16,054	\$ 30,638
1.10 G6	\$ 227	\$ 231	\$ 235	\$ 240	\$ 245	\$ 1,296	\$ 2,474
1.11 G8/ASAFM	\$ 811	\$ 826	\$ 842	\$ 859	\$ 875	\$ 4,638	\$ 8,851
1.12 G8/DCSPRO/PAED	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
1.13 GOMO	\$ 31	\$ 32	\$ 32	\$ 33	\$ 34	\$ 178	\$ 340
1.14 MPSC	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
1.15 USAPA	\$ 1,184	\$ 1,207	\$ 1,231	\$ 1,255	\$ 1,279	\$ 6,777	\$ 12,934
2.0 Existing IMCEN Organization	\$ 26,175	\$ 26,682	\$ 27,200	\$ 27,728	\$ 28,266	\$ 149,769	\$ 285,819
Total Baseline (Inflated)	\$ 43,336	\$ 44,177	\$ 45,034	\$ 45,908	\$ 46,798	\$ 247,967	\$ 473,220
Total Baseline (Constant FY04)	\$ 43,336	\$ 43,336	\$ 43,336	\$ 43,336	\$ 43,336	\$ 216,681	\$ 433,362
Total Baseline (Discounted)	\$ 43,336	\$ 42,033	\$ 40,769	\$ 39,543	\$ 38,354	\$ 175,152	\$ 379,189

The Table

The Total Costs table for this marginal analysis of the Government Integrator alternative is broken into “direct labor costs” and “indirect costs.” Direct costs are costs that must be incurred and paid for by IMCEN; indirect costs represent losses in productivity or service that may not manifest themselves in actual costs to IMCEN.

Specific Methodology*Element 1.0 – Direct Labor Costs*

Each of elements 1.1 through 1.7 is estimated using staffing levels (in full-time equivalents) provided by IMCEN. Staffing levels for contractors were multiplied by their current labor rates, which were also provided by IMCEN. Staffing levels for government and military personnel were multiplied by fully burdened general schedule rates.

Element 1.8, Additional Costs, considers the cost of using subcontractors. Because the contractor labor rates provided by IMCEN were actual rates already burdened with any subcontractor pass-through fee, there are no relevant additional costs in this alternative.

Element 2.0 – Indirect Costs

Elements 2.1 and 2.2 represent the relative inefficiency of new employees. These costs are captured according to guidelines stipulated by The Gartner Group as described in the cost estimating assumptions section of this document. These costs represent losses in productivity or service that may not manifest themselves as actual costs to IMCEN. That is, IMCEN may not actually need to hire more people to cope with the temporary inefficiency of new employees. These costs also include the costs for recruiting and hiring new employees as well as the sunk costs (i.e., training costs) previously invested in the departed employees. In the case of the Government Integrator alternative, the only learning curve costs stem from the natural growth rate of IMCEN as they gradually increase their customer base.

Costs – GI Alternative Point Estimate (With Growth) ...

WITHOUT TAKING UNCERTAINTY INTO ACCOUNT, THE GOVERNMENT INTEGRATOR ALTERNATIVE IS ESTIMATED TO COST \$580.2 MILLION IN INFLATED DOLLARS OVER 10 YEARS...

<i>(In Thousands of Inflated dollars)</i>	FY04	FY05	FY06	FY07	FY08	FY09-13	FY04-13
Government Integrator - Point Estimate	\$ 43,336	\$ 48,866	\$ 52,305	\$ 55,986	\$ 59,926	\$ 319,732	\$ 580,151
1.0 Direct Labor Costs	\$ 43,336	\$ 46,386	\$ 49,650	\$ 53,144	\$ 56,884	\$ 316,476	\$ 565,875
1.1 Customer Support Total	\$ 12,391	\$ 13,263	\$ 14,196	\$ 15,195	\$ 16,264	\$ 90,487	\$ 161,796
1.2 System Support Services Total	\$ 4,196	\$ 4,491	\$ 4,807	\$ 5,146	\$ 5,508	\$ 30,643	\$ 54,790
1.3 Reqmts, Analysis, & Design Total	\$ 5,995	\$ 6,417	\$ 6,869	\$ 7,352	\$ 7,869	\$ 43,781	\$ 78,283
1.4 Enterprise Services Total	\$ 7,935	\$ 8,493	\$ 9,091	\$ 9,730	\$ 10,415	\$ 57,945	\$ 103,608
1.5 Business Applications Total	\$ 7,659	\$ 8,198	\$ 8,775	\$ 9,392	\$ 10,053	\$ 55,933	\$ 100,010
1.6 Installation Services Total	\$ 2,536	\$ 2,714	\$ 2,905	\$ 3,110	\$ 3,329	\$ 18,519	\$ 33,113
1.7 IMCEN Directorate Total	\$ 1,904	\$ 2,037	\$ 2,181	\$ 2,334	\$ 2,499	\$ 13,901	\$ 24,856
1.8 Additional Costs	\$ 721	\$ 772	\$ 826	\$ 885	\$ 947	\$ 5,267	\$ 9,418
2.0 Indirect Costs	\$ 0	\$ 2,481	\$ 2,655	\$ 2,842	\$ 3,042	\$ 3,256	\$ 14,276
2.1 New Contractor Turnover Costs	\$ 0	\$ 1,799	\$ 1,925	\$ 2,061	\$ 2,206	\$ 2,361	\$ 10,351
2.2 New Government Turnover Costs	\$ 0	\$ 682	\$ 730	\$ 781	\$ 836	\$ 895	\$ 3,925
Total Government Integrator (Inflated)	\$ 43,336	\$ 48,866	\$ 52,305	\$ 55,986	\$ 59,926	\$ 319,732	\$ 580,151
Total Government Integrator (Constant FY04)	\$ 43,336	\$ 47,936	\$ 50,333	\$ 52,850	\$ 55,492	\$ 279,504	\$ 529,452
Total Government Integrator (Discounted)	\$ 43,336	\$ 46,495	\$ 47,352	\$ 48,225	\$ 49,113	\$ 226,082	\$ 460,604

Costs – GI Alternative Risk-Adjusted Estimate (With Growth) ...

TAKING UNCERTAINTY INTO ACCOUNT, THE GOVERNMENT INTEGRATOR ALTERNATIVE IS ESTIMATED TO COST BETWEEN \$576.8 MILLION AND \$583.2 MILLION IN INFLATED DOLLARS OVER 10 YEARS...

<i>(In Thousands of Inflated dollars)</i>	FY04				FY04-13 Total			
	Point Estimate	Low	Most Likely	High	Point Estimate	Low	Most Likely	High
Government Integrator - Risk Adjusted								
Government Integrator - Risk Adjusted	\$ 43,336	\$ 43,090	\$ 43,296	\$ 43,542	\$580,151	\$576,804	\$579,831	\$583,238
1.0 Direct Labor Costs	\$ 43,336	\$ 43,090	\$ 43,296	\$ 43,542	\$565,875	\$562,663	\$565,352	\$568,567
1.1 Customer Support Total	\$ 12,391	\$ 12,391	\$ 12,391	\$ 12,391	\$161,796	\$161,796	\$161,796	\$161,796
1.2 System Support Services Total	\$ 4,196	\$ 4,196	\$ 4,196	\$ 4,196	\$ 54,790	\$ 54,790	\$ 54,790	\$ 54,790
1.3 Reqmts, Analysis, & Design Total	\$ 5,995	\$ 5,995	\$ 5,995	\$ 5,995	\$ 78,283	\$ 78,283	\$ 78,283	\$ 78,283
1.4 Enterprise Services Total	\$ 7,935	\$ 7,935	\$ 7,935	\$ 7,935	\$103,608	\$103,608	\$103,608	\$103,608
1.5 Business Applications Total	\$ 7,659	\$ 7,659	\$ 7,659	\$ 7,659	\$100,010	\$100,010	\$100,010	\$100,010
1.6 Installation Services Total	\$ 2,536	\$ 2,536	\$ 2,536	\$ 2,536	\$ 33,113	\$ 33,113	\$ 33,113	\$ 33,113
1.7 IMCEN Directorate Total	\$ 1,904	\$ 1,904	\$ 1,904	\$ 1,904	\$ 24,856	\$ 24,856	\$ 24,856	\$ 24,856
1.8 Additional Costs	\$ 721	\$ 475	\$ 681	\$ 927	\$ 9,418	\$ 6,207	\$ 8,896	\$ 12,111
2.0 Indirect Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 14,276	\$ 13,166	\$ 14,463	\$ 15,794
2.1 New Contractor Learning Curve	\$ 0	\$ 0	\$ 0	\$ 0	\$ 10,351	\$ 9,546	\$ 10,487	\$ 11,452
2.2 New Government Learning Curve	\$ 0	\$ 0	\$ 0	\$ 0	\$ 3,925	\$ 3,619	\$ 3,976	\$ 4,342
Total Contractor Integrator (Inflated)	\$ 43,336	\$ 43,090	\$ 43,296	\$ 43,542	\$580,151	\$576,804	\$579,831	\$583,238
Total Contractor Integrator (Constant FY04)	\$ 43,336	\$ 42,270	\$ 41,664	\$ 41,103	\$537,233	\$523,968	\$516,694	\$509,839
Total Contractor Integrator (Discounted)	\$ 43,336	\$ 40,999	\$ 39,196	\$ 37,506	\$475,475	\$449,792	\$430,211	\$411,740

The Table

The Total Costs table for this marginal analysis of the Contractor Integrator alternative is broken into “direct labor costs” and “indirect costs.” Direct costs are costs that must be incurred and paid for by IMCEN; indirect costs represent losses in productivity or service that may not manifest themselves in actual costs to IMCEN.

Specific Methodology

Element 1.0 – Direct Labor Costs

Each of elements 1.1 through 1.7 are estimated using staffing levels (in full-time equivalents) either provided by IMCEN or by industry standards taken from The Gartner Group. Contractor salaries are taken from Booz Allen’s external salary database for the Washington, DC metropolitan area. Government and military salaries are taken from published general schedule rates. Each organizational group within IMCEN is looked at individually to determine costs in this alternative. Some organizational groups go virtually unchanged from that of the Government Integrator alternative. But other groups have increased or decreased staffing levels. Staffing levels increase and decrease when government personnel are switched from one group that is to become fully outsourced to another group that is selectively outsourced. The staffing levels of certain organizational groups (Customer Service, Technical Support, and Server Operations) are determined by industry standard staffing ratios surveyed by The Gartner Group, as described in “Appendix A: Cost Estimating Detail.”

Element 1.8, Additional Costs, considers the cost of using subcontractors. The program management cost for a contractor to manage the subcontractor is passed through to the government; this cost is captured here in accordance with assumptions previously described in the cost estimating assumptions section.

Element 2.0 – Indirect Costs

Elements 2.1 and 2.2 represent the relative inefficiency of new employees. These costs are captured according to guidelines stipulated by The Gartner Group as described in the cost estimating assumptions section of this document. These costs represent losses in productivity or service that may not manifest themselves as actual costs to IMCEN. That is, IMCEN may not actually need to hire more people to cope with the temporary inefficiency of new employees. These costs also include the costs for recruiting and hiring new employees as well as the sunk costs (i.e., training costs) previously invested in the departed employees. Part of the learning curve costs stem from the natural growth rate of IMCEN as they gradually increase their customer base. Additionally, the New Government Personnel line includes the cost for those government employees moving from technical roles to program management roles as a result of their organizational block becoming fully outsourced. Likewise, the New Contractor Personnel line includes costs for those employees of the new single-source contractor who had not previously worked for IMCEN.

Costs – CI Alternative Point Estimate (With Growth) ...

WITHOUT TAKING UNCERTAINTY INTO ACCOUNT, THE CONTRACTOR INTEGRATOR ALTERNATIVE IS ESTIMATED TO COST \$573.8 MILLION IN INFLATED DOLLARS OVER 10 YEARS...

<i>(In Thousands of Inflated dollars)</i>	FY04	FY05	FY06	FY07	FY08	FY09-13	FY04-13
Contractor Integrator - Point Estimate	\$ 47,665	\$ 52,062	\$ 50,814	\$ 54,390	\$ 58,217	\$ 310,664	\$ 573,811
1.0 Direct Labor Costs	\$ 42,729	\$ 45,072	\$ 48,244	\$ 51,639	\$ 55,272	\$ 307,512	\$ 550,467
1.1 Customer Support Total	\$ 12,971	\$ 14,517	\$ 15,538	\$ 16,632	\$ 17,802	\$ 99,044	\$ 176,505
1.2 System Support Services Total	\$ 4,124	\$ 4,335	\$ 4,641	\$ 4,967	\$ 5,317	\$ 29,579	\$ 52,963
1.3 Reqmts, Analysis, & Design Total	\$ 5,731	\$ 5,845	\$ 6,256	\$ 6,696	\$ 7,168	\$ 39,878	\$ 71,574
1.4 Enterprise Services Total	\$ 6,474	\$ 5,335	\$ 5,711	\$ 6,113	\$ 6,543	\$ 36,401	\$ 66,577
1.5 Business Applications Total	\$ 8,021	\$ 8,980	\$ 9,612	\$ 10,289	\$ 11,013	\$ 61,271	\$ 109,187
1.6 Installation Services Total	\$ 2,828	\$ 3,347	\$ 3,582	\$ 3,834	\$ 4,104	\$ 22,833	\$ 40,529
1.7 IMCEN Directorate Total	\$ 1,803	\$ 1,821	\$ 1,949	\$ 2,086	\$ 2,233	\$ 12,422	\$ 22,313
1.8 Additional Costs	\$ 777	\$ 892	\$ 954	\$ 1,021	\$ 1,093	\$ 6,083	\$ 10,820
2.0 Indirect Costs	\$ 4,936	\$ 6,990	\$ 2,570	\$ 2,751	\$ 2,945	\$ 3,152	\$ 23,345
2.1 New Contractor Turnover Costs	\$ 2,564	\$ 4,019	\$ 1,869	\$ 2,001	\$ 2,142	\$ 2,292	\$ 14,888
2.2 New Government Turnover Costs	\$ 2,372	\$ 2,971	\$ 701	\$ 750	\$ 803	\$ 860	\$ 8,457
Total Contractor Integrator (Inflated)	\$ 47,665	\$ 52,062	\$ 50,814	\$ 54,390	\$ 58,217	\$ 310,664	\$ 573,811
Total Contractor Integrator (Constant FY04)	\$ 47,665	\$ 51,071	\$ 48,898	\$ 51,343	\$ 53,910	\$ 271,576	\$ 524,464
Total Contractor Integrator (Discounted)	\$ 47,665	\$ 49,536	\$ 46,002	\$ 46,850	\$ 47,713	\$ 219,670	\$ 457,435

Costs – CI Alternative Risk-Adjusted Estimate (With Growth) ...

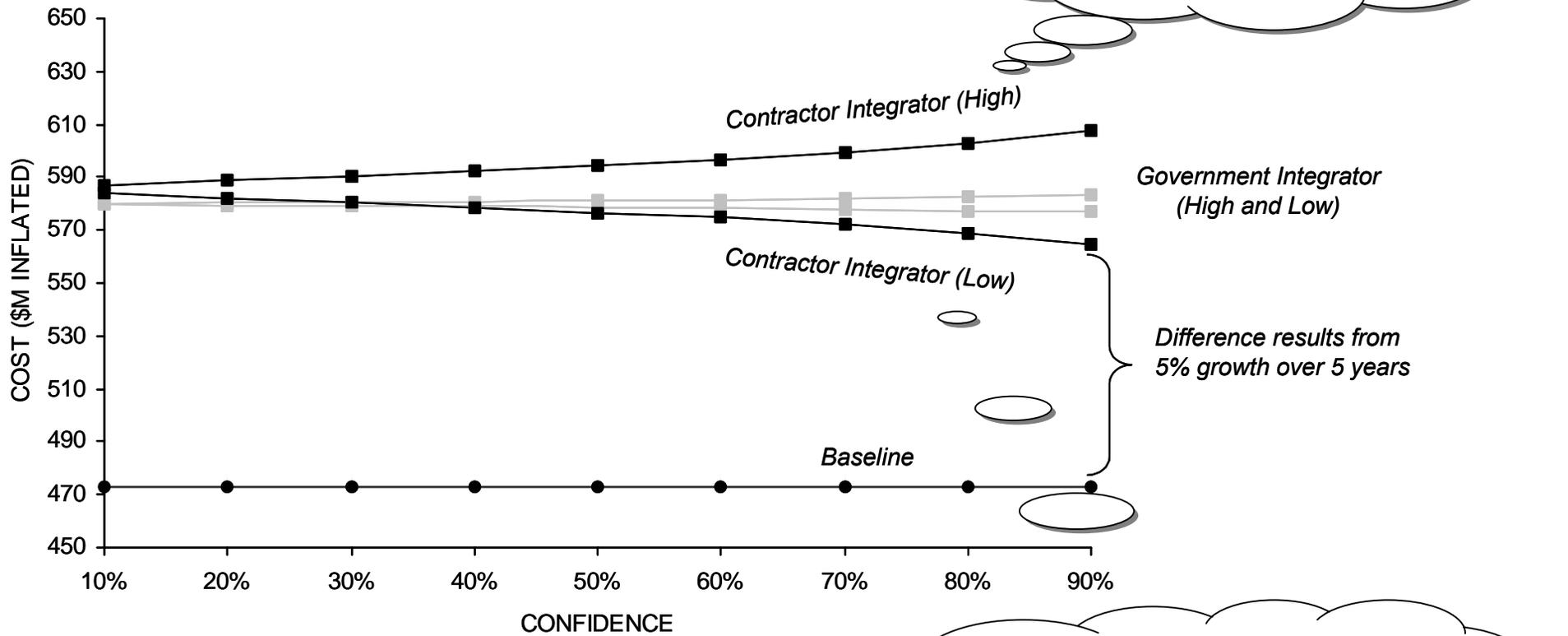
TAKING UNCERTAINTY INTO ACCOUNT, THE CONTRACTOR INTEGRATOR ALTERNATIVE IS ESTIMATED TO COST BETWEEN \$564.8 MILLION AND \$607.6 MILLION IN INFLATED DOLLARS OVER 10 YEARS...

<i>(In Thousands of Inflated dollars)</i>	FY04				FY04-13 Total			
	Point Estimate	Low	Most Likely	High	Point Estimate	Low	Most Likely	High
Contractor Integrator - Risk Adjusted	\$ 47,665	\$ 46,996	\$ 48,187	\$ 49,534	\$573,811	\$564,792	\$585,454	\$607,580
1.0 Direct Labor Costs	\$ 42,729	\$ 42,350	\$ 43,122	\$ 43,946	\$ 550,467	\$ 542,013	\$ 560,862	\$ 581,046
1.1 Customer Support Total	\$ 12,971	\$ 12,785	\$ 13,417	\$ 14,117	\$ 176,505	\$ 171,788	\$ 187,807	\$ 205,577
1.2 System Support Services Total	\$ 4,124	\$ 4,099	\$ 4,128	\$ 4,160	\$ 52,963	\$ 52,343	\$ 53,076	\$ 53,884
1.3 Reqmts, Analysis, & Design Total	\$ 5,731	\$ 5,679	\$ 5,743	\$ 5,815	\$ 71,574	\$ 70,274	\$ 71,880	\$ 73,720
1.4 Enterprise Services Total	\$ 6,474	\$ 6,247	\$ 6,412	\$ 6,602	\$ 66,577	\$ 60,821	\$ 65,002	\$ 69,804
1.5 Business Applications Total	\$ 8,021	\$ 7,933	\$ 8,018	\$ 8,108	\$ 109,187	\$ 106,965	\$ 109,125	\$ 111,398
1.6 Installation Services Total	\$ 2,828	\$ 2,775	\$ 2,822	\$ 2,871	\$ 40,529	\$ 39,189	\$ 40,379	\$ 41,622
1.7 IMCEN Directorate Total	\$ 1,803	\$ 1,793	\$ 1,804	\$ 1,816	\$ 22,313	\$ 22,044	\$ 22,339	\$ 22,629
1.8 Additional Costs	\$ 777	\$ 543	\$ 756	\$ 1,017	\$ 10,820	\$ 7,857	\$ 10,768	\$ 14,418
2.0 Indirect Costs	\$ 4,936	\$ 4,242	\$ 5,054	\$ 6,051	\$ 23,345	\$ 21,435	\$ 24,525	\$ 28,136
2.1 New Contractor Learning Curve	\$ 2,564	\$ 2,104	\$ 2,786	\$ 3,638	\$ 14,888	\$ 13,882	\$ 16,469	\$ 19,504
2.2 New Government Learning Curve	\$ 2,372	\$ 2,058	\$ 2,268	\$ 2,490	\$ 8,457	\$ 7,316	\$ 8,066	\$ 8,859
Total Contractor Integrator (Inflated)	\$ 47,665	\$ 46,996	\$ 48,187	\$ 49,534	\$573,811	\$564,792	\$585,454	\$607,580
Total Contractor Integrator (Constant FY04)	\$ 47,665	\$ 46,102	\$ 46,371	\$ 46,759	\$531,362	\$513,057	\$521,705	\$531,118
Total Contractor Integrator (Discounted)	\$ 47,665	\$ 44,716	\$ 43,624	\$ 42,667	\$470,280	\$440,425	\$434,383	\$428,924

Costs – Alternative Comparison ...

ADJUSTED FOR UNCERTAINTY, THE CI ALTERNATIVE COULD COST AS MUCH AS \$30.8 MILLION MORE THAN THE GI ALTERNATIVE OR SAVE AS MUCH AS \$18.4 MILLION OVER 10 YEARS...

RANGE OF COSTS BY ALTERNATIVE



Cost for the two alternatives is about equal, effectively eliminating cost as a discriminator between the two alternatives

Government Integrator (High and Low)

Contractor Integrator (High)

Contractor Integrator (Low)

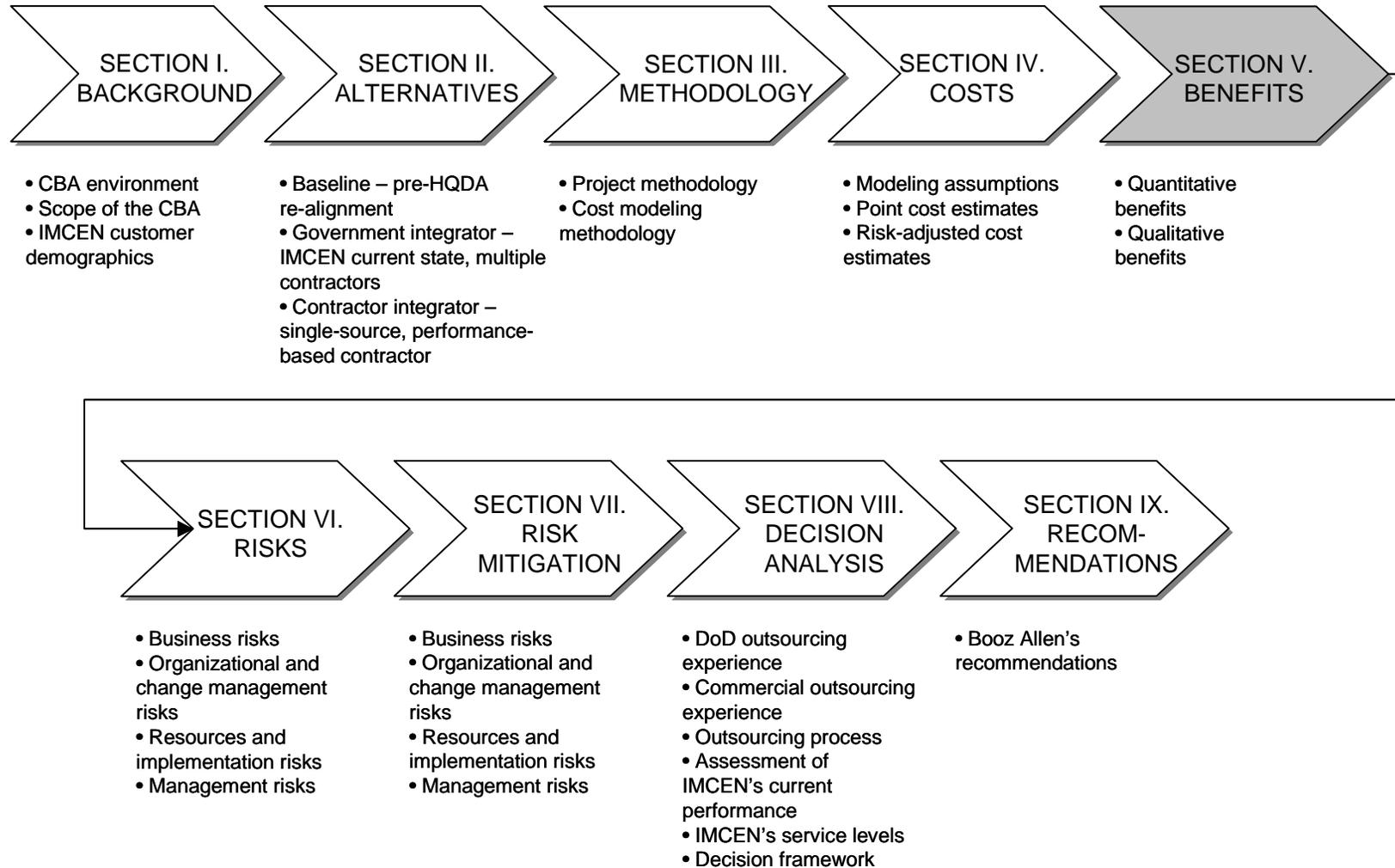
Baseline

Difference results from 5% growth over 5 years

The cost estimate for the contractor integrator alternative has a wider range because of the uncertainty in the input values for number of staff, salary and learning curve costs

COMING UP...

COST-BENEFIT ANALYSIS (CBA) DETAILED DIAGNOSTIC ROADMAP



V. BENEFITS

Benefits – What’s Inside ...

THE BENEFITS SECTION COMPARES THE QUANTITATIVE AND QUALITATIVE BENEFITS OF THE GOVERNMENT INTEGRATOR AND CONTRACTOR INTEGRATOR ALTERNATIVES...

PAGE(S)	DESCRIPTION
V-2F, V-2	Depicts the CI versus GI alternative quantitative benefits. These figures are risk-adjusted, so the CI alternative could potentially cost up to \$15.3 million more than the GI alternative—or as much as \$23.1 million in inflated dollars less than the GI alternative—depending on how a successful bidder elects to staff the contract. All of this variation results from the uncertainty created by the outsourced activities in the CI alternative
V-3F, V-4	Benefits scoring for the GI v. CI alternatives. The CI has a slightly higher benefits score. The calculation of the score is shown in the table on page V-3F. The rankings and likelihood figures shown were provided by the IMCEN staff during a benefits and risks assessment workshop.
V-4	Roadmap showing which section is next

THE TABLE

The Total Savings table comprises the different cost categories in which the Contractor Integrator alternative may be compared to the Government Integrator alternative. The total savings is divided into three sections: “program management savings,” “industry standards implementation,” and “other labor savings.” Negative numbers in this table reflect *cost* not savings.

Specific Methodology

Element 3.0 – Direct Labor Savings

Element 3.1, Program Management Savings, captures savings created as layers of old contractor management are consolidated into a single layer as in the single-source contract defining the Contractor Integrator alternative. To determine this cost, the cost of contractor program managers is multiplied by the number of new contracts divided by the number of old contracts.

Element 3.2, Industry Standards Implementation savings, are the savings resultant from new contractors using more efficient technical support, customer support, and server operations personnel ratios. This savings is the difference in cost of specific organizational blocks between the Baseline and Contractor Integrator alternatives.

Element 3.3, Other Labor Savings captures a mix of savings (or costs), such as the decreased (or increased) salaries of new contractors and the cost of keeping government personnel while filling their old positions with new contractor staff (as is the case when outsourcing whole portions of the organization). This savings is calculated by simply subtracting the sum of Elements 3.1 and 3.2 from the total cost difference between the Government Integrator and Contractor Integrator alternatives.

Benefits – CI v. GI Quantitative Benefits ...

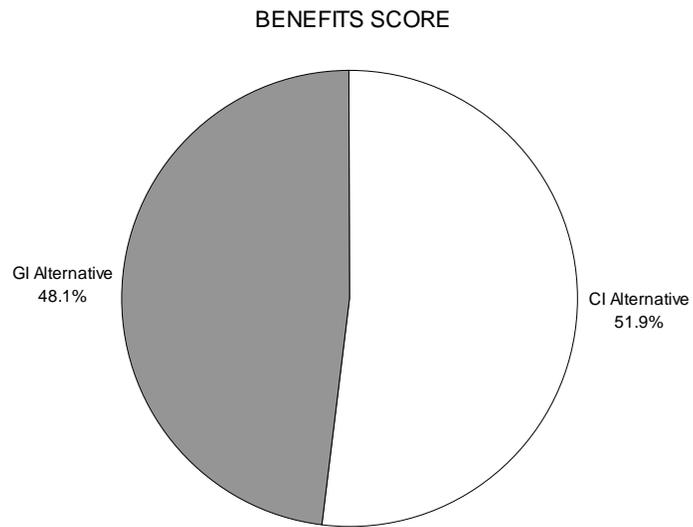
THE CI ALTERNATIVE COULD COST FROM \$15.3 MILLION MORE TO \$23.1 MILLION LESS (IN INFLATED DOLLARS) OVER 10 YEARS WHEN COMPARED TO THE GI ALTERNATIVE...

<i>(In Thousands of Inflated dollars)</i>	FY04	FY05	FY06	FY07	FY08	FY09-13	FY04-13
CI Direct Savings - Point Estimate	\$ 608	\$ 1,314	\$ 1,406	\$ 1,505	\$ 1,611	\$ 8,964	\$ 15,408
3.0 Direct Labor Savings	\$ 608	\$ 1,314	\$ 1,406	\$ 1,505	\$ 1,611	\$ 8,964	\$ 15,408
3.1 Program Management Savings	\$ 811	\$ 1,753	\$ 1,876	\$ 2,008	\$ 2,149	\$ 11,959	\$ 20,556
3.2 Industry Standards Implementation	\$ 1,052	\$ 2,275	\$ 2,435	\$ 2,606	\$ 2,789	\$ 15,518	\$ 26,675
3.3 Other Labor Savings	\$ (1,255)	\$ (2,713)	\$ (2,904)	\$ (3,109)	\$ (3,328)	\$ (18,513)	\$ (31,822)
Total Contractor Integrator (Inflated)	\$ 608	\$ 1,314	\$ 1,406	\$ 1,505	\$ 1,611	\$ 8,964	\$ 15,408
Total Contractor Integrator (Constant FY04)	\$ 608	\$ 1,289	\$ 1,353	\$ 1,421	\$ 1,492	\$ 7,833	\$ 13,996
Total Contractor Integrator (Discounted)	\$ 608	\$ 1,250	\$ 1,273	\$ 1,297	\$ 1,320	\$ 6,332	\$ 12,079

<i>(In Thousands of Inflated dollars)</i>	FY04				FY04-13 Total			
	Point Estimate	Low	Most Likely	High	Point Estimate	Low	Most Likely	High
CI Direct Savings - Risk Adjusted	\$ 608	\$ (603)	\$ 182	\$ 910	\$ 15,408	\$ (15,288)	\$ 4,619	\$ 23,086
3.0 Direct Labor Savings	\$ 608	\$ (603)	\$ 182	\$ 910	\$ 15,408	\$ (15,288)	\$ 4,619	\$ 23,086
3.1 Program Management Savings	\$ 811	\$ 759	\$ 812	\$ 868	\$ 20,556	\$ 19,237	\$ 20,599	\$ 22,017
3.2 Industry Standards Implementation	\$ 1,052	\$ (154)	\$ 584	\$ 1,257	\$ 26,675	\$ (3,907)	\$ 14,815	\$ 31,871
3.3 Other Labor Savings	\$ (1,255)	\$ (1,435)	\$ (1,210)	\$ (999)	\$ (31,822)	\$ (36,385)	\$ (30,683)	\$ (25,335)
Total Contractor Integrator (Inflated)	\$ 608	\$ (603)	\$ 182	\$ 910	\$ 15,408	\$ (15,288)	\$ 4,619	\$ 23,086
Total Contractor Integrator (Constant FY04)	\$ 608	\$ (591)	\$ 175	\$ 859	\$ 14,268	\$ (13,887)	\$ 4,116	\$ 20,181
Total Contractor Integrator (Discounted)	\$ 608	\$ (574)	\$ 165	\$ 784	\$ 12,628	\$ (11,921)	\$ 3,427	\$ 16,298

Benefit	Ranking	Likelihood		Weighted Score (Ranking x Likelihood)	
		GI	CI	GI	CI
Leverage through contractor specialization	23.5%	60.0%	76.0%	0.1410	0.1786
Improved access to knowledge/expertise	23.5%	56.0%	76.0%	0.1316	0.1786
Focus on growth of core business	19.1%	52.0%	36.0%	0.0993	0.0688
More rapid implementation of targeted goals	16.2%	76.0%	68.0%	0.1231	0.1102
Contractor tracks/recommends new technology as appropriate	6.7%	64.0%	80.0%	0.0429	0.0536
Fixed costs turned into variable costs	6.2%	56.0%	60.0%	0.0347	0.0372
No additional in-house staffing requirements	4.8%	60.0%	48.0%	0.0288	0.0230
				0.6014	0.6500
				48.1%	51.9%

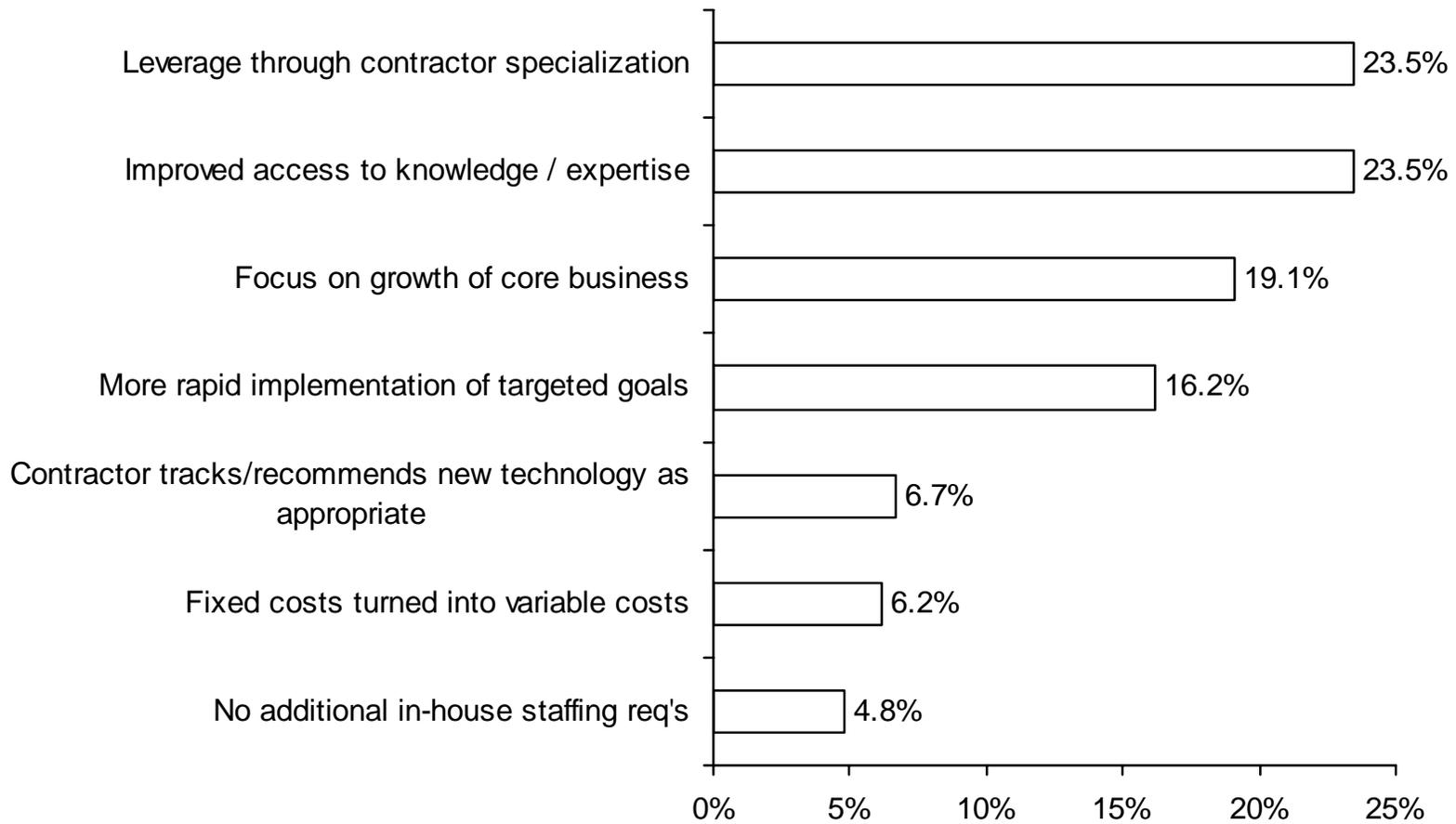
Total =
 $\sum \text{ranking}_i \cdot \text{likelihood}_i$



Benefits – Qualitative ...

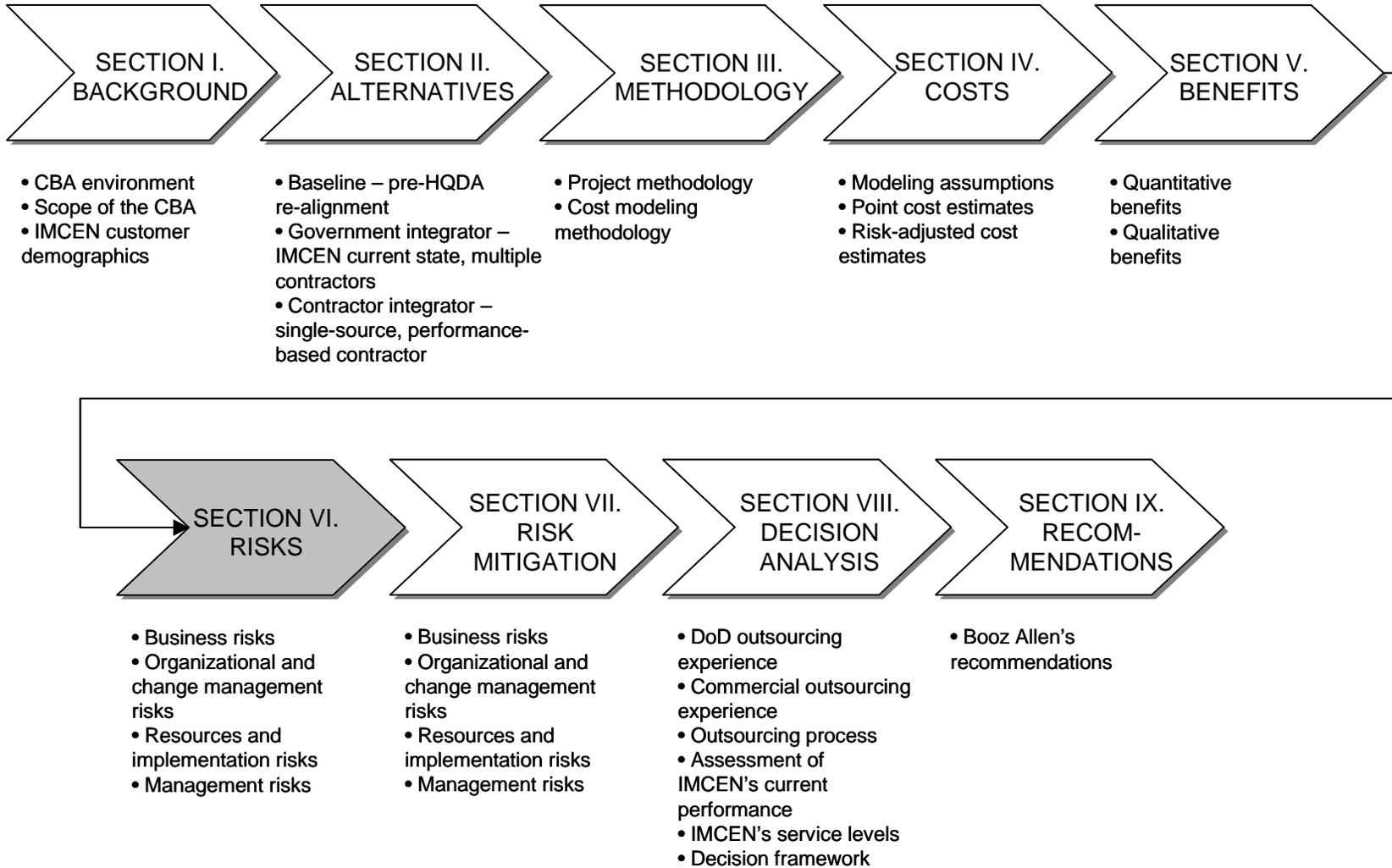
IMCEN PUTS A HIGH VALUE ON ORGANIZATIONAL EFFICIENCY AND EFFECTIVENESS...

BENEFITS RANKINGS



COMING UP...

COST-BENEFIT ANALYSIS (CBA) DETAILED DIAGNOSTIC ROADMAP



VI. RISKS

Risks – What’s Inside ...

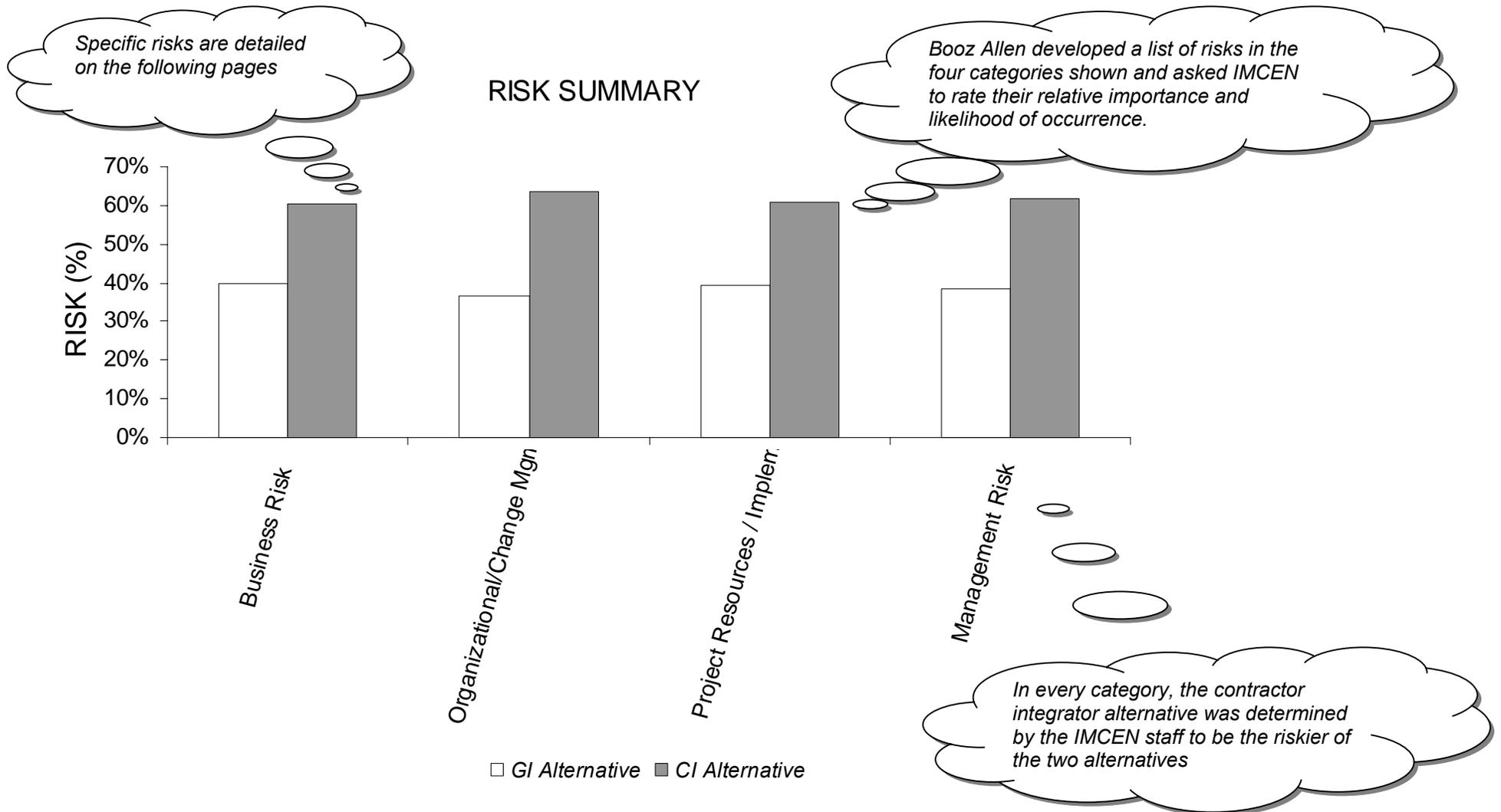
THE RISKS SECTION PROVIDES THE IMCEN’S STAFF EVALUATION OF THE RISKS INHERENT IN THE GOVERNMENT INTEGRATOR AND CONTRACTOR INTEGRATOR ALTERNATIVES...

PAGE(S)	DESCRIPTION
VI-2	Summary of all risks as scored by IMCEN staff during the risks and benefits assessment workshop. In all four categories, the risk of the CI alternative is significantly higher than that of the GI alternative
VI-3F, VI-3	Break out of the business risks as scored by IMCEN staff during the risks and benefits assessment workshop. The graph on VI-3 shows IMCEN’s ranking of the risks by importance and the table on VI-3F shows IMCEN’s likelihood scores (by risk) as well as the risk score calculation
VI-4F, VI-4	Break out of the organizational and change management risks as scored by IMCEN staff during the risks and benefits assessment workshop. The graph on VI-4 shows IMCEN’s ranking of the risks by importance and the table on VI-4F shows IMCEN’s likelihood scores (by risk) as well as the risk score calculation
VI-5F, VI-5	Break out of the project resources and implementation risks as scored by IMCEN staff during the risks and benefits assessment workshop. The graph on VI-5 shows IMCEN’s ranking of the risks by importance and the table on VI-5F shows IMCEN’s likelihood scores (by risk) as well as the risk score calculation
VI-6F, VI-6	Break out of the management risks as scored by IMCEN staff during the risks and benefits assessment workshop. The graph on VI-6 shows IMCEN’s ranking of the risks by importance and the table on VI-6F shows IMCEN’s likelihood scores (by risk) as well as the risk score calculation
VI-7	Roadmap showing which section is next

Risks – Summary ...

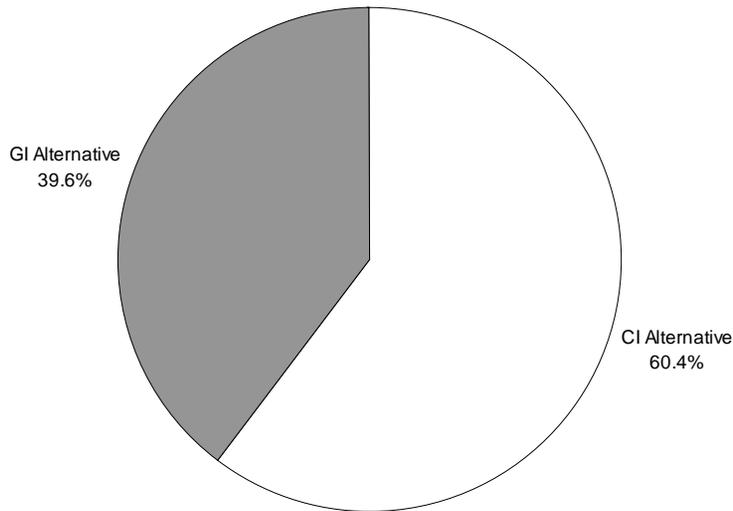
IMCEN'S GREATEST RISKS ARE ASSOCIATED WITH THE CONTRACTOR INTEGRATOR ALTERNATIVE...

Note: each alternative's risk score is relative to the other alternative; thus, both scores sum to 100% for each category.



Business Risk	Ranking	Likelihood		Weighted Score (Ranking x Likelihood)	
		GI	CI	GI	CI
Best contractors are not identified or do not respond to RFP	24.4%	28.0%	32.0%	0.0683	0.0781
Chance that the contractor would be replaced because they underperformed / quit	18.1%	32.0%	48.0%	0.0579	0.0869
IMCEN's vulnerability to failure under the proposed alternative	16.6%	28.0%	60.0%	0.0465	0.0996
Contractor and IMCEN are weak in the same areas	10.9%	28.0%	40.0%	0.0305	0.0436
Work is not adequately specified in the RFP, causing disputes with the contractor	10.9%	40.0%	64.0%	0.0436	0.0698
IMCEN underestimates the amount of work they do and PWS is nor representative	8.9%	44.0%	76.0%	0.0392	0.0676
Customer perception that the alternative fails to deliver anything they need / want	7.4%	40.0%	52.0%	0.0296	0.0385
Misalignment of proposed alternatives to HQDA's business strategy	2.8%	48.0%	60.0%	0.0134	0.0168
				0.3290	0.5008
				39.6%	60.4%

BUSINESS RISKS SCORE



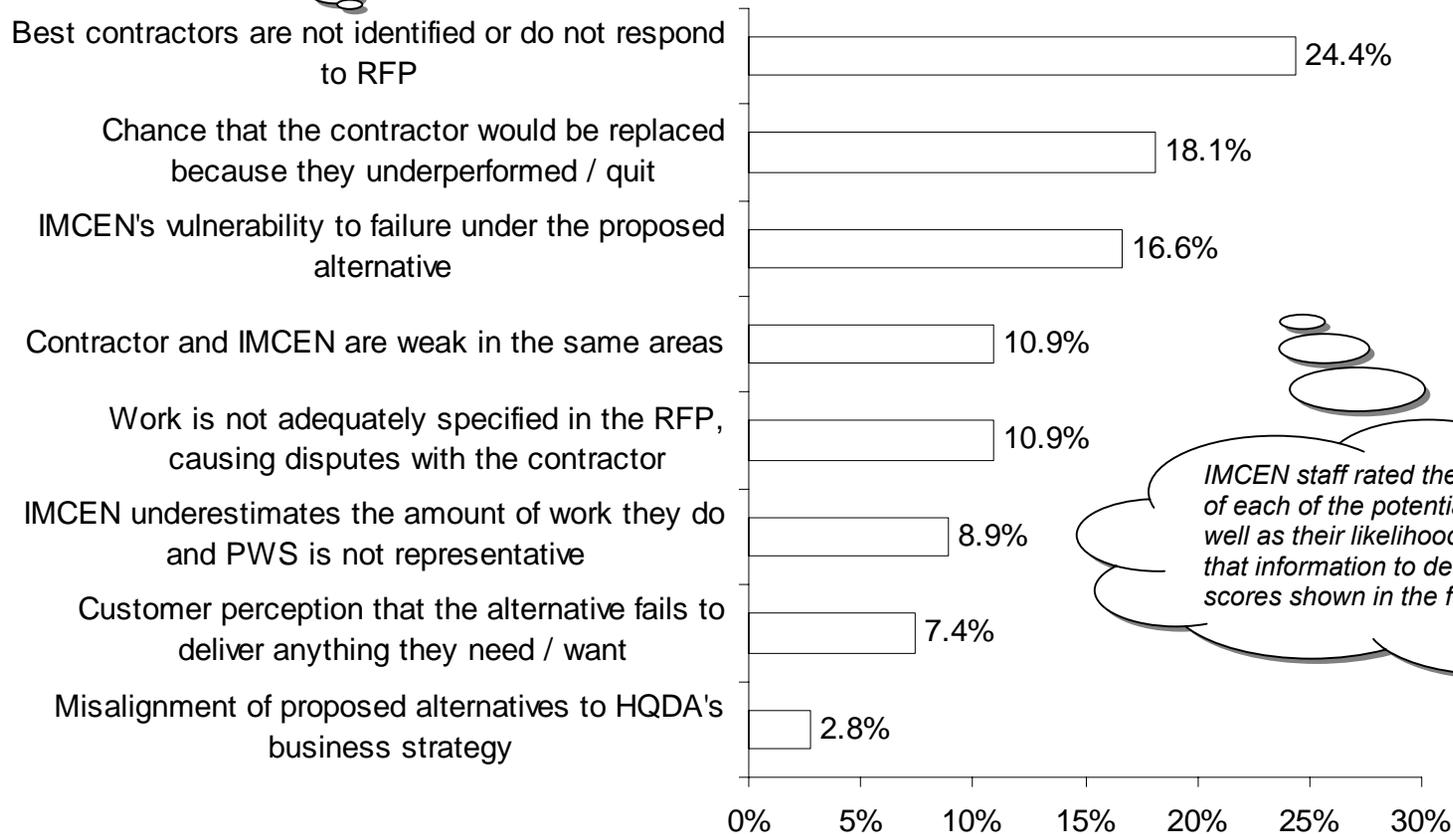
Total = $\sum ranking_i \cdot likelihood_i$

Risks – Business Risks ...

IMCEN'S MOST SERIOUS BUSINESS RISKS INVOLVE DISRUPTIONS IN SERVICE AND POSSIBLE POOR PERFORMANCE...

Booz Allen's list of potential business risks

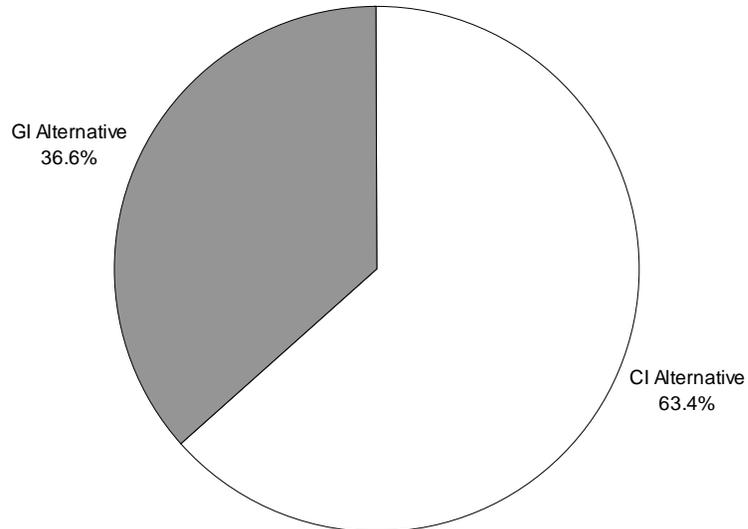
BUSINESS RISK RANKINGS



IMCEN staff rated the relative importance of each of the potential business risks as well as their likelihood. Booz Allen used that information to develop the weighted scores shown in the facer

Organizational and Change Management Risks	Ranking	Likelihood		Weighted Score (Ranking x Likelihood)	
		GI	CI	GI	CI
Stakeholders not able to cope with amount of proposed changes	51.6%	36.0%	64.0%	0.1858	0.3302
No customer feedback mechanism in place to deal with complaints	16.9%	32.0%	44.0%	0.0541	0.0744
Government employees unwilling / unable to perform roles	13.4%	32.0%	60.0%	0.0429	0.0804
Lack of support from IMCEN staff for proposed changes	13.0%	32.0%	56.0%	0.0416	0.0728
Existing staff resign, resulting in loss of corporate memory	5.1%	32.0%	64.0%	<u>0.0163</u>	<u>0.0326</u>
				0.3406	0.5904
				36.6%	63.4%

ORGANIZATIONAL AND CHANGE MANAGEMENT RISKS SCORE



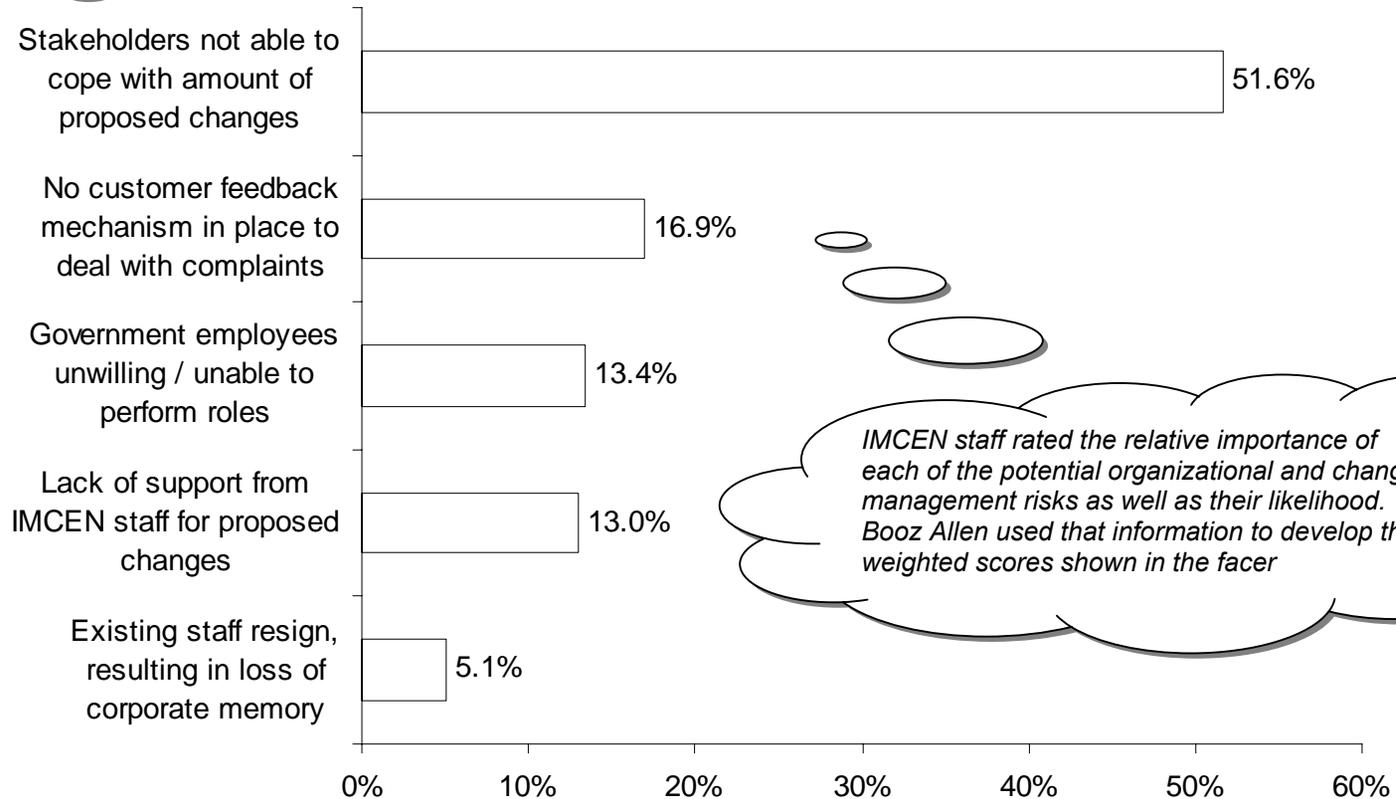
$$Total = \sum ranking_i \cdot likelihood_i$$

Risks – Organizational and Change Management Risks ...

IMCEN'S MOST SERIOUS ORGANIZATIONAL AND CHANGE MANAGEMENT RISKS ARE THOSE THAT NEGATIVELY IMPACT THEIR CUSTOMER ORGANIZATIONS...

Booz Allen's list of potential organizational and change management risks

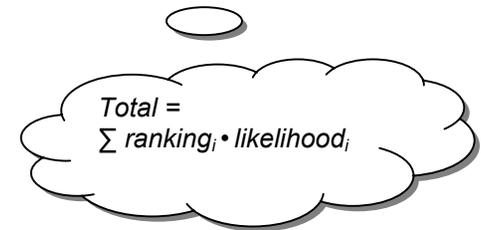
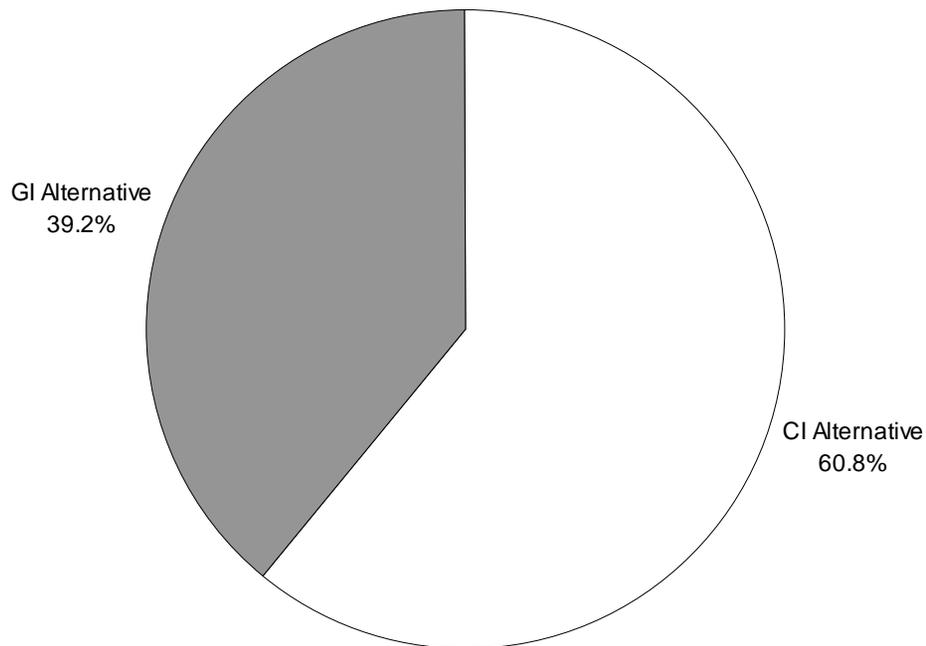
ORGANIZATIONAL AND CHANGE MANAGEMENT RISK RANKINGS



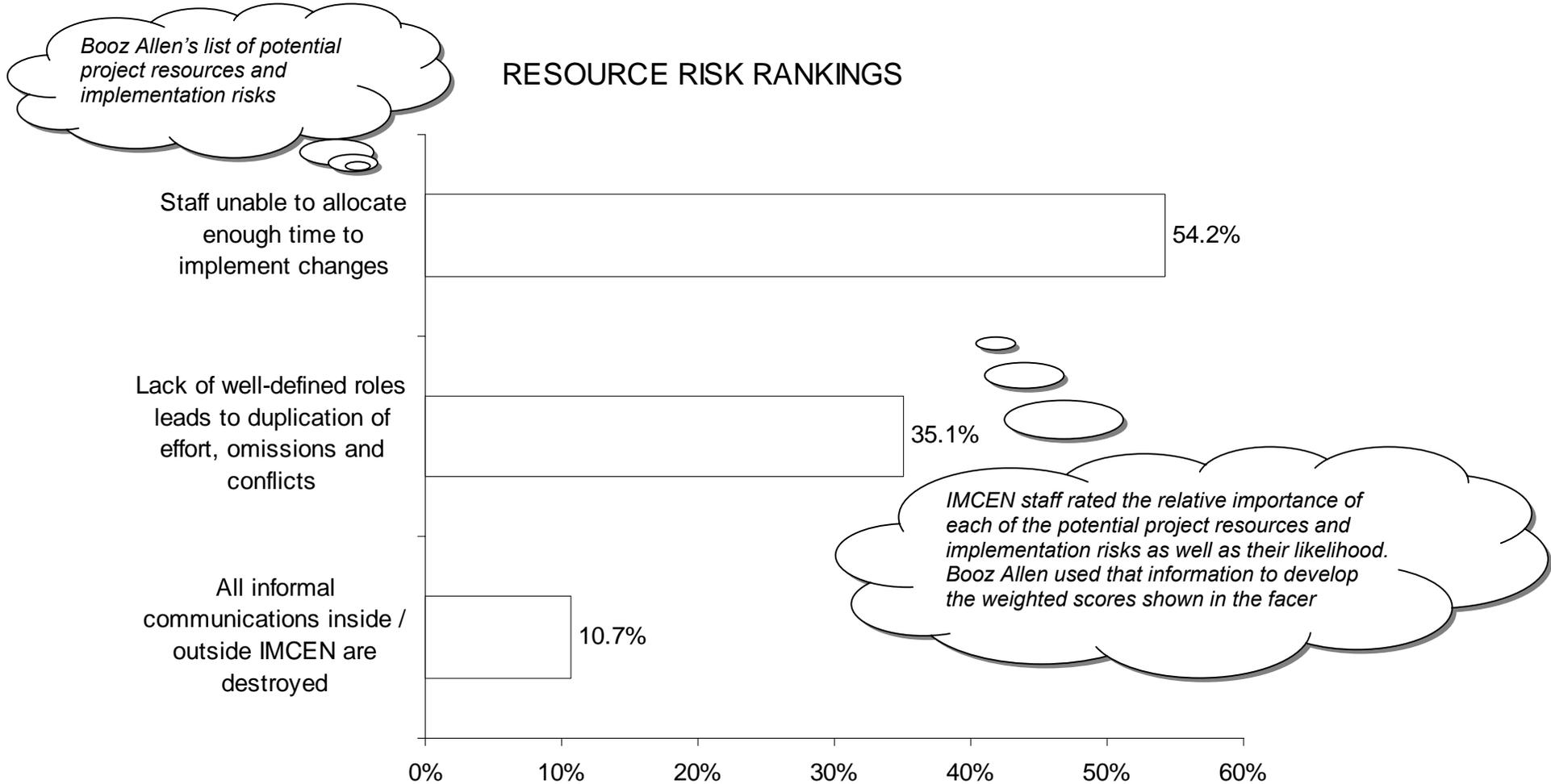
IMCEN staff rated the relative importance of each of the potential organizational and change management risks as well as their likelihood. Booz Allen used that information to develop the weighted scores shown in the facer

Project Resources and Implementation Risk	Ranking	Likelihood		Weighted Score (Ranking x Likelihood)	
		GI	CI	GI	CI
Staff unable to allocate enough time to implement changes	54.2%	44.0%	60.0%	0.2385	0.3252
Lack of well-defined roles leads to duplication of effort, omissions and conflicts	35.1%	36.0%	64.0%	0.1264	0.2246
All informal communications inside / outside IMCEN are destroyed	10.7%	24.0%	52.0%	<u>0.0257</u>	<u>0.0556</u>
				0.3905	0.6055
				39.2%	60.8%

RESOURCE RISKS SCORE

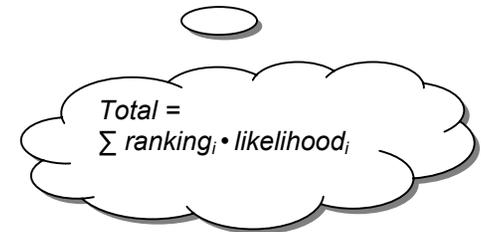
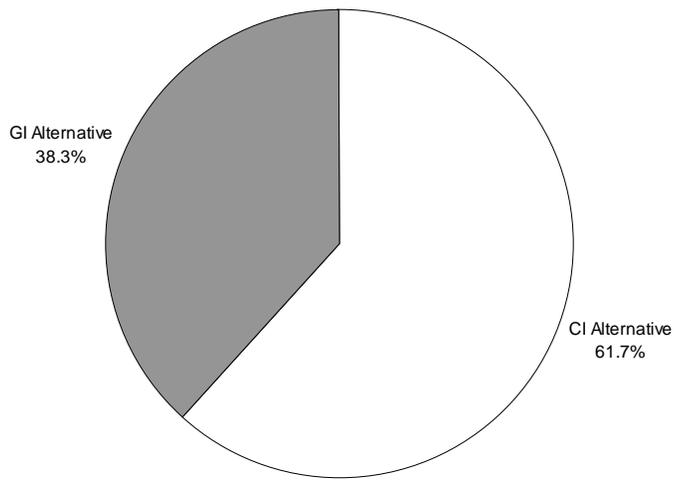


IMCEN'S MOST SERIOUS PROJECT RESOURCES AND IMPLEMENTATION RISK IS THE AVAILABILITY OF ITS STAFF...



Management Risk	Ranking	Likelihood		Weighted Score (Ranking x Likelihood)	
		GI	CI	GI	CI
Contractor(s) experience start-up problems	22.9%	44.0%	84.0%	0.1008	0.1924
Post-contract management infrastructure / processes not put in place	21.5%	40.0%	64.0%	0.0860	0.1376
Customers develop unrealistic expectations of contractor performance	16.1%	44.0%	56.0%	0.0708	0.0902
IMCEN's relationship with the contractor deteriorates over time	10.9%	32.0%	64.0%	0.0349	0.0698
Transition to new environment poorly planned / handled	9.4%	36.0%	68.0%	0.0338	0.0639
Planning and technology responsibilities are unclear between IMCEN and the contractor	9.3%	28.0%	68.0%	0.0260	0.0632
Performance measures do not accurately assess contractor performance	5.4%	56.0%	8.0%	0.0302	0.0043
Failure to baseline existing services / costs causes problems later	4.5%	52.0%	72.0%	0.0234	0.0324
				0.4060	0.6538
				38.3%	61.7%

MANAGEMENT RISKS SCORE

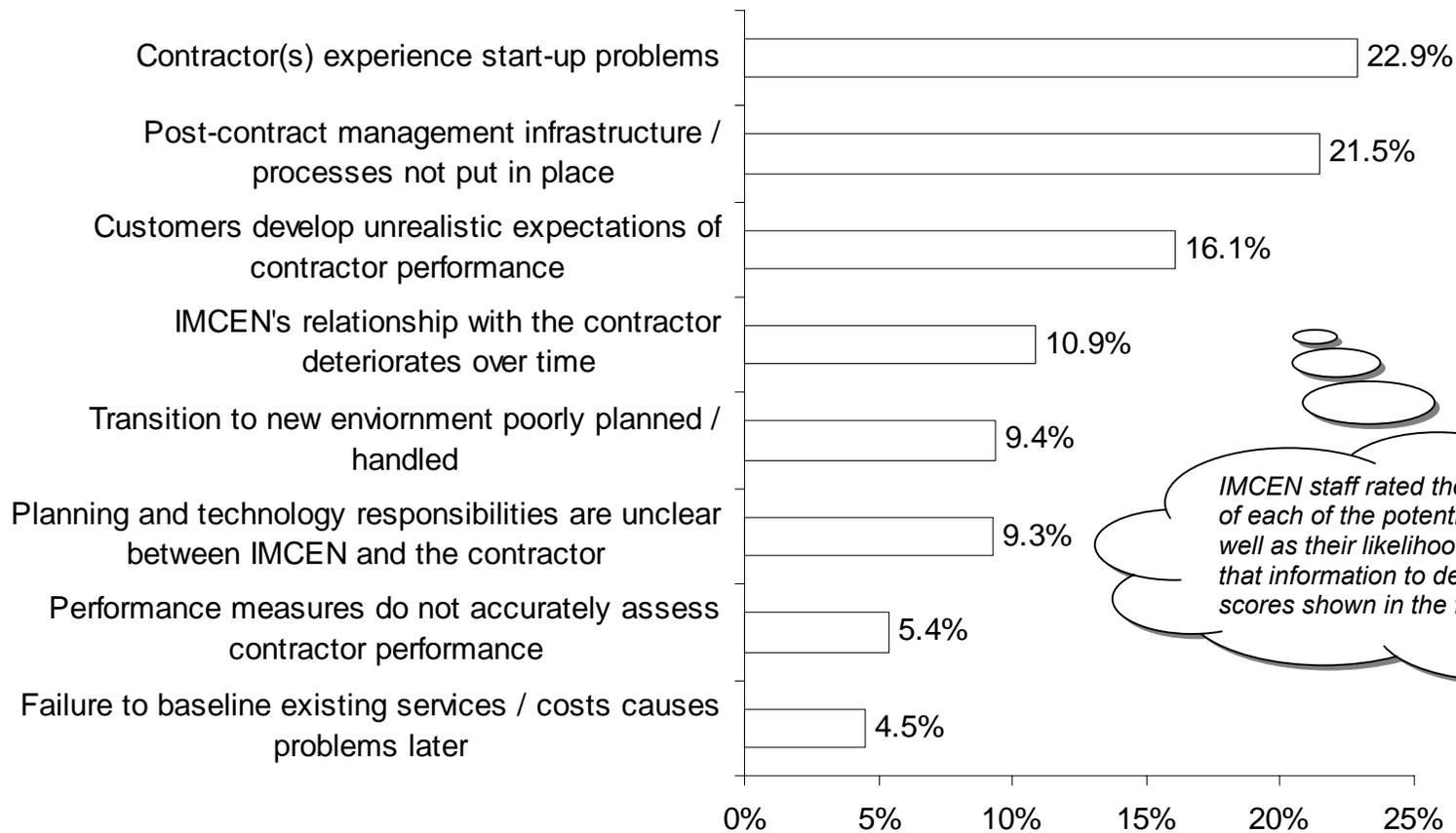


Risks – Management Risks ...

IMCEN'S MOST SERIOUS MANAGEMENT RISKS INVOLVE A SMOOTH TRANSITION AND MANAGING CUSTOMER EXPECTATIONS...

Booz Allen's list of potential management risks

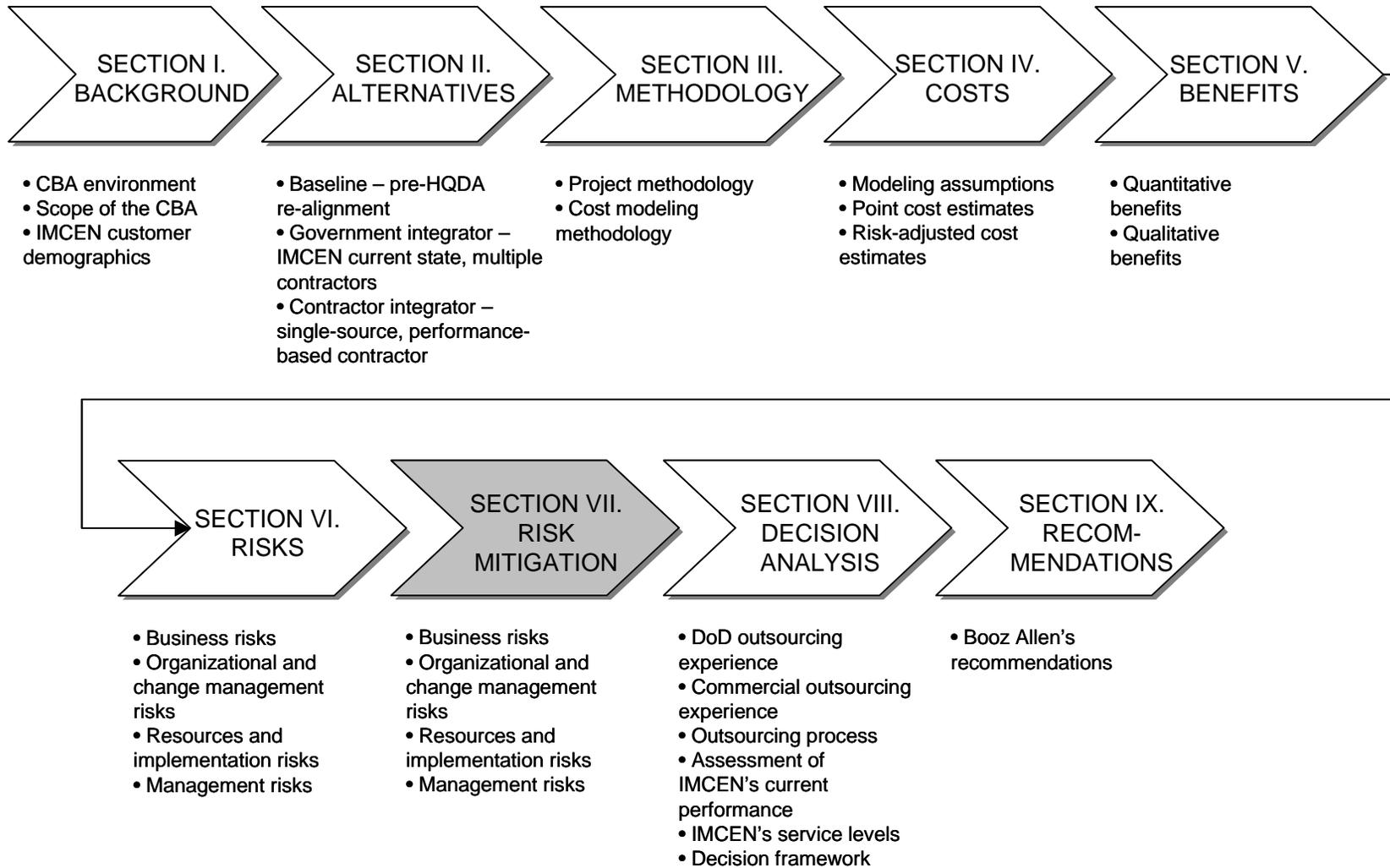
MANAGEMENT RISK RANKINGS



IMCEN staff rated the relative importance of each of the potential business risks as well as their likelihood. Booz Allen used that information to develop the weighted scores shown in the facer

COMING UP...

COST-BENEFIT ANALYSIS (CBA) DETAILED DIAGNOSTIC ROADMAP



VII. RISK MITIGATION

Risk Mitigation – What’s Inside ...

THE RISK MITIGATION SECTION DETAILS BOOZ ALLEN’S RECOMMENDATIONS FOR MITIGATING THE RISKS IDENTIFIED AND RATED IN THE RISKS SECTION...

PAGE(S)	DESCRIPTION
VII-2	Risk mitigation strategies for IMCEN business risks to be carried forward into the PWS process and beyond
VII-3	Risk mitigation strategies for IMCEN organizational and change management risks to be carried forward into the PWS process and beyond
VII-4	Risk mitigation strategies for IMCEN project resources and implementation risks to be carried forward into the PWS process and beyond
VII-5	Risk mitigation strategies for IMCEN management risks to be carried forward into the PWS process and beyond
VII-6	Roadmap showing which section is next

Risk Mitigation – Business Risks...

BUSINESS RISKS ARE BEST MITIGATED PRIOR TO THE RECEIPT OF PROPOSALS BY GOOD PLANNING AND THOUGHTFUL CRAFTING OF THE TERMS OF THE RFP...

BUSINESS RISKS	MITIGATION STRATEGY
Best contractors are not identified or do not respond to RFP	Issue an RFI prior to an RFP to assess industry interest, review company capabilities and collect / verify customer references
Circumstances where a contractor might have to be replaced because they underperformed / quit	In the RFP, include evaluation criteria like the financial stability of prospective providers and how IMCEN fits into their businesses and long-term strategies
IMCEN's vulnerability to failure under the proposed alternative	Ensure adequately experienced staff is available to support development of the RFP, review of the proposals received and to oversee the contract(s) when it (they) are in place
Contractor and IMCEN are weak in the same areas	Assess IMCEN's weaknesses, then 1) strategically hire government staff to compensate or 2) include a key personnel clause in the contract specifying the types of experience required
Work is not adequately specified in the RFP, causing disputes later with the contractor	Add a due diligence clause to the RFP that requires the prospective contractors to verify IMCEN's stated levels of effort prior to bidding
IMCEN underestimates the amount of work they do and the performance work statement (PWS) is not representative	Audit all activities to be covered under the RFP to ensure the correct volumes and types of activities are documented correctly
There is a customer perception that the new environment fails to deliver anything they need / want	Establish a customer outreach program as part of the RFP process; talk in business terms rather than technical terms about the benefits
Misalignment of proposed alternative to HQDA's business strategy	Ensure that the proposed alternative is aligned to HQDA's current business strategy

Risk Mitigation – Organizational and Change Management Risks...

GOOD TRANSITION PLANNING AND OPEN, FREQUENT COMMUNICATION WITH ALL THE STAKEHOLDERS CAN MITIGATE ORGANIZATIONAL AND CHANGE MANAGEMENT RISKS ...

ORGANIZATIONAL AND CHANGE MANAGEMENT RISKS	MITIGATION STRATEGY
Stakeholders not able to cope with amount of proposed changes	If drastic change is required, introduce it slowly and in a phased manner; communicate the benefits and solicit cooperation
No customer feedback mechanism in place to deal with complaints	Ensure the RFP includes a clause requiring prospective contractors to collect and respond to customer feedback; enforce the provision with a performance measure tied to customer satisfaction
Government employees unwilling / unable to perform new roles after the contract is in place	Offer re-training if appropriate or facilitate transfer to other duties
Lack of support from IMCEN staff for proposed changes	IMCEN's outreach program should include employees and current contractors; explain the benefits of the changes in business terms and explain likely outcomes (percentage of jobs that will remain, options for employment with the successful bidder, etc. as appropriate)
Existing staff resign, resulting in loss of corporate memory	Identify and document all processes and procedures

Risk Mitigation – Project Resources and Implementation Risks ...

THERE ARE IMPORTANT ROLES FOR IMCEN LEADERSHIP TO PLAY IN SUCCESSFULLY IMPLEMENTING WHATEVER ALTERNATIVE IS SELECTED...

PROJECT RESOURCES AND IMPLEMENTATION RISKS	MITIGATION STRATEGY
Staff unable to allocate enough time to implement the proposed changes	Turn over more operations to current contractors to free up necessary staff, hire additional staff or use consultants
Lack of well-defined roles leads to duplication of effort, omissions and conflicts among the project staff	Strong project leadership backed by senior management can efficiently organize the work to be done, establish the necessary boundaries between functions and induce the necessary cooperation
Introduction of a new contractor destroys all informal communications inside and outside of IMCEN	This can help to formalize and ingrain new, documented processes and procedures in the contractors' and customers' minds.

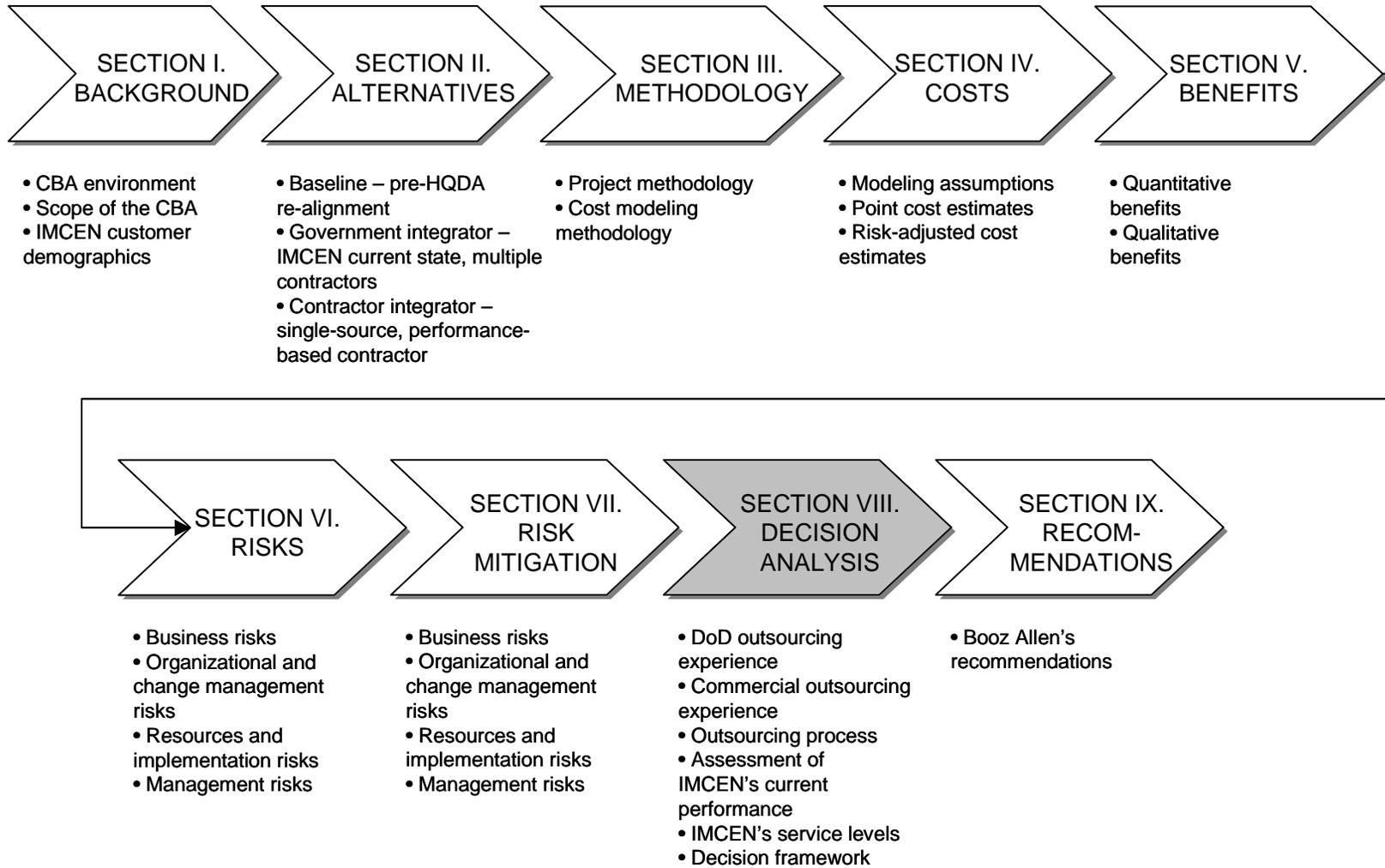
Risk Mitigation – Management Risks ...

PLAN FOR WHAT CAN GO WRONG AFTER THE CONTRACT IS LET ...

MANAGEMENT RISKS	MITIGATION STRATEGY
Contractor(s) experience start-up problems	Verify contractor references, ensure they have performed their due diligence, phase in implementation so problems can be spotted early and fixed with minimum impact on IMCEN's customers
Post-contract management infrastructure / processes not put in place	Decide before issuing the RFP who will be responsible for post-contract efforts and ensure those selected have adequate time available to perform well
Customers develop unrealistic expectations of contractor performance	The customer outreach program should emphasize the relationship between service levels and cost so customers know what to expect
IMCEN's relationship with the contractor deteriorates over time	In the case of a single-source contractor, make a contingent award to a second contractor so they are available without additional contracting effort and establish the criteria under which a change can be made. For multiple contractors, re-allocate work to another contractor
Transition to the new environment is poorly planned / handled	This type of risk results from inadequate IMCEN staff time being available before and after the contract is let; allocate sufficient IMCEN staff time for planning, transition activities and post-contract management
Planning and technology responsibilities are unclear between IMCEN and the contractor	Spell out in the RFP the respective roles of IMCEN and the successful bidder in using technology to drive change or efficiencies into the organization
Performance measures do not accurately assess contractor performance	Ensure performance measures accurately portray the customer's experience rather than technical measures, e.g., availability of e-mail service instead of e-mail server uptime
Failure to baseline existing services / costs causes problems later	The impact of this risk occurs if and when IMCEN is called upon to demonstrate the contracting changes made resulted in lower costs and/or improved performance. The risk is mitigated by baselining all key costs and activities prior to introducing a new contract/contractor

COMING UP...

COST-BENEFIT ANALYSIS (CBA) DETAILED DIAGNOSTIC ROADMAP



VIII. DECISION ANALYSIS

Decision Analysis – What’s Inside ...

THE DECISION ANALYSIS PROVIDES ADDITIONAL CONTEXT FOR IMCEN’S DECISION OF THE BEST ALTERNATIVE; ALL THE CONSIDERATIONS ENTERING INTO THE DECISION ARE SUMMARIZED AT THE END...

PAGE(S)	DESCRIPTION
VIII-2F, VIII-2	Describes an outsourcing study performed inside DoD. These pages describe the study methodology and provide an idea of the respondents’ and their organizations’ feelings about and experience with outsourcing
VIII-3	Shows the mixed track record of respondents’ outsourcing efforts. The key point here is that most of the respondents’ disengaged after the outsourcing contract was let and this contributed to the mixed results
VIII-4	Shows DoD Commanders’ attitudes towards outsourcing; most feel outsourcing has not worked to their benefit
VIII-5	Details how respondents consider mission effectiveness an important consideration, but overwhelmingly feel outsourcing has not improved or enhanced mission effectiveness
VIII-6F, VIII-6	Describes a commercial outsourcing study done by two leading academic researchers. Points out the fact that many respondents outsourced for financial reasons (converting fixed costs into variable costs or financing a technology refresh) that don’t apply to IMCEN
VIII-7F, VIII-7	Continues with the results of the commercial outsourcing study done by two leading academic researchers. Points out the fact that many respondents outsourced because of poor operational performance (e.g., they need to improve service and can’t do it in-house)—which does not apply to IMCEN. Pure outsourcing also conflicts with IMCEN’s stated goal of maintaining a robust career path for its employees
VIII-8F, VIII-8	Continues with the results of the commercial outsourcing study; lists strategic, cost and managerial issues respondents encountered while outsourcing. Both these pages and VIII-9F/VIII-9 lead up to VIII-10 which identifies where outsourcing contracts often go wrong—but also shows that most of these potential problem areas are under IMCEN’s control
VIII-9F, VIII-9	Continues with the results of the commercial outsourcing study; lists operational, contractual and technical issues respondents encountered while outsourcing. Both these pages and VIII-8F/VIII-8 lead up to VIII-10 which identifies where outsourcing contracts often go wrong—but also shows that most of these potential problem areas are under IMCEN’s control
VIII-10	Identifies where outsourcing contracts often go wrong—but also shows that most of these potential problem areas are under IMCEN’s control
VIII-11	Summary of proven practices in outsourcing
VIII-12	Shows Booz Allen’s strategic outsourcing framework. All of the areas shown need to be addressed in the PWS
VIII-13	Key elements of performance-based contracts. The time to resolve the issues shown is before the contract is in place
VIII-14F, VIII-14	Shows those support attributes most important to customers and IMCEN’s customer satisfaction survey results
VIII-15	IMCEN service levels and performance measures
VIII-16F, VIII-16	Decision framework combining all previous sections of the report with the decision analysis section; shows GI alternative is best
VIII-17	Roadmap showing which section is next

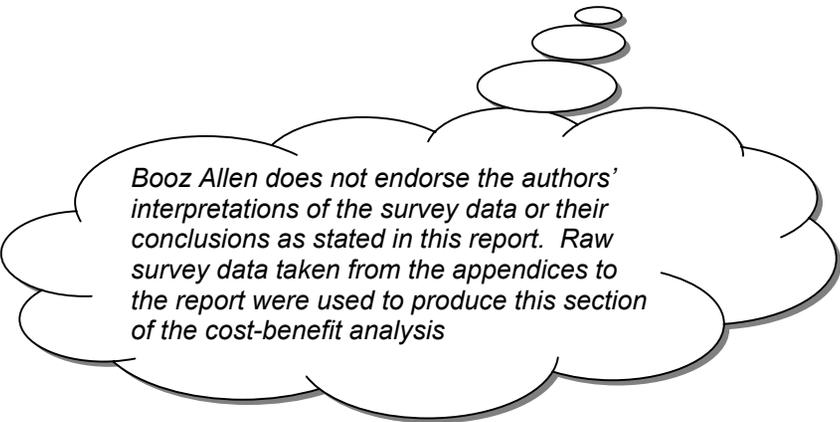
ABOUT THE SURVEY...

“The survey was sent to over 1,300 members in the Department of the Air Force, Department of the Army, Defense Logistics Agency (DLA), and Department of the Navy. We received over 230 responses, about an 18% response rate. For the Air Force and Army, the survey was sent to personnel that are or may be involved in outsourcing initiatives. In the Air Force, the survey was sent to the A-76 Commercial Activity program managers and to Air Force Base and group commanders. Likewise, all garrison and deputy garrison commanders in the Army were specifically targeted”.

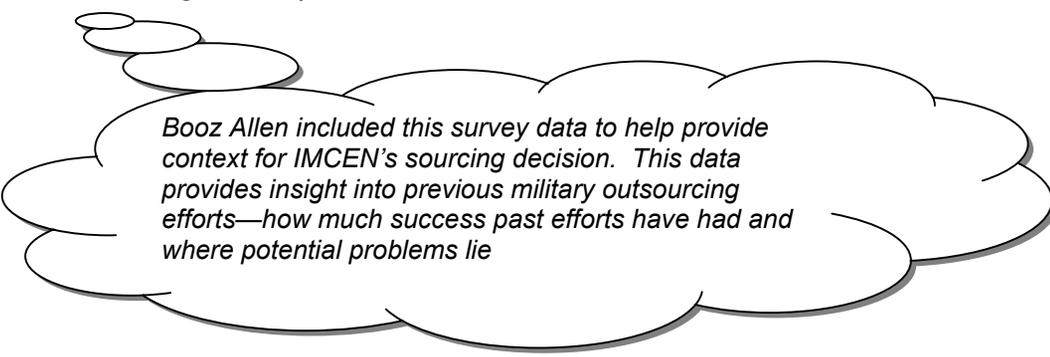
“On the other hand, a completely random sampling was taken from the DLA and Department of the Navy, using the DLA e-mail directory and Navy/Marine Corps White Pages, respectively. Although random, command billets were targeted in the Navy and Marine Corps”...

“Of the 232 who responded to this questionnaire... 111... identified themselves as being in a command position...”

Source: Lt Col Warren M. Anderson, USAF, LTC John J. McGuinness, USA and CDR John S. Spicer, USN, “From Chaos to Clarity: How Cost-Based Strategies are Undermining the Department of Defense”, Defense Acquisition University Press, September 2001.



Booz Allen does not endorse the authors' interpretations of the survey data or their conclusions as stated in this report. Raw survey data taken from the appendices to the report were used to produce this section of the cost-benefit analysis



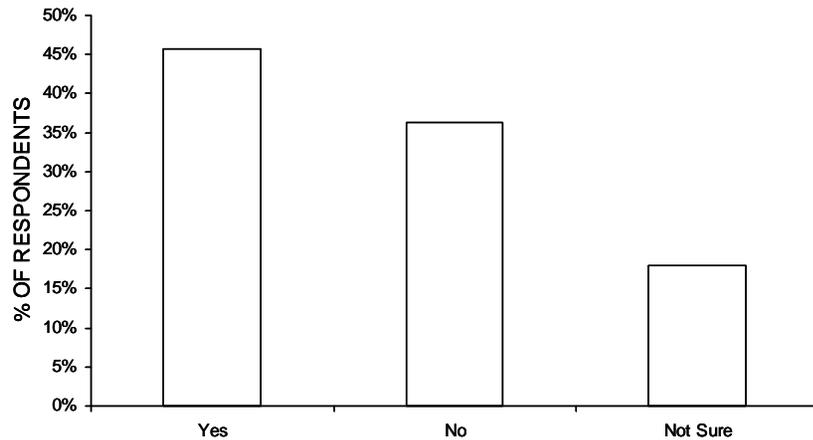
Booz Allen included this survey data to help provide context for IMCEN's sourcing decision. This data provides insight into previous military outsourcing efforts—how much success past efforts have had and where potential problems lie

Decision Analysis – Outsourcing – DoD Perspective ...

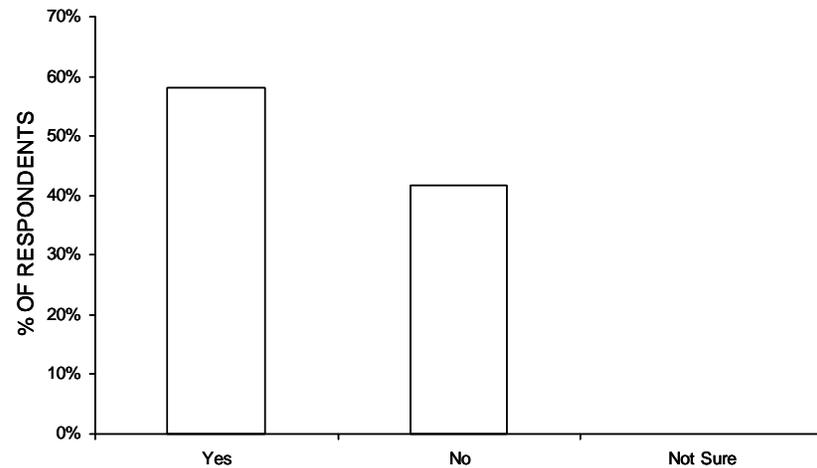
A SEPTEMBER, 2001 SURVEY OF MILITARY PERSONNEL SHOWED A MAJORITY OF RESPONDENTS HAD BEEN INVOLVED IN AN OUTSOURCING EFFORT, WITH A PLURALITY FEELING OUTSOURCING HAD A ROLE IN THEIR OPERATIONS...

These graphs provide some insight into who responded to the survey... more than half had been involved in an outsourcing effort

ARE THERE ACTIVITIES WITHIN YOUR COMMAND/ORGANIZATION THAT CAN BE BETTER PERFORMED BY THE PRIVATE SECTOR?



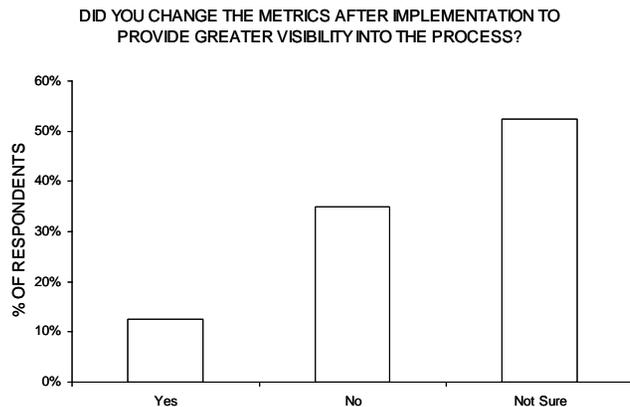
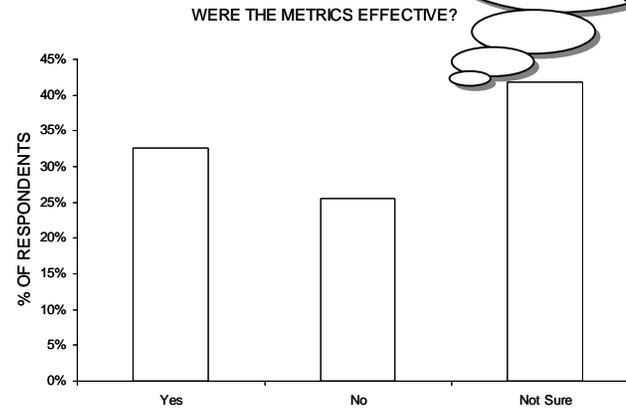
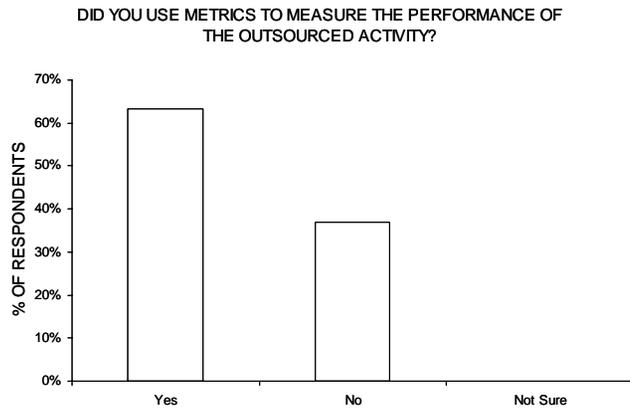
HAVE YOU BEEN INVOLVED IN AN OUTSOURCING EFFORT?



Source: Survey results reported in Lt Col Warren M. Anderson, USAF, LTC John J. McGuinness, USA and CDR John S. Spicer, USN, "From Chaos to Clarity: How Cost-Based Strategies are Undermining the Department of Defense", Defense Acquisition University Press, September 2001.

HOWEVER, THE TRACK RECORD OF OUTSOURCING CONTRACTS WAS MIXED...

Key IMCEN insight—IMCEN staff must stay engaged after the contract is let to be successful, and build flexibility into the PWS to allow changes after implementation

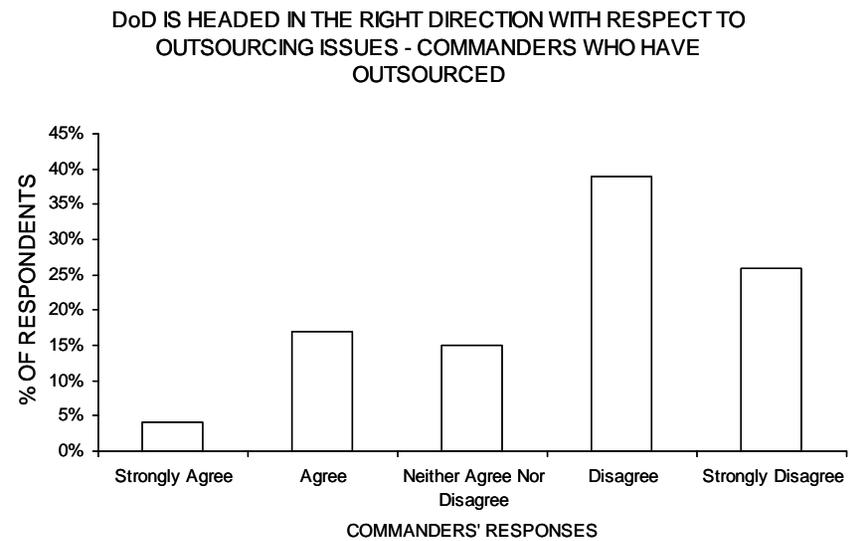
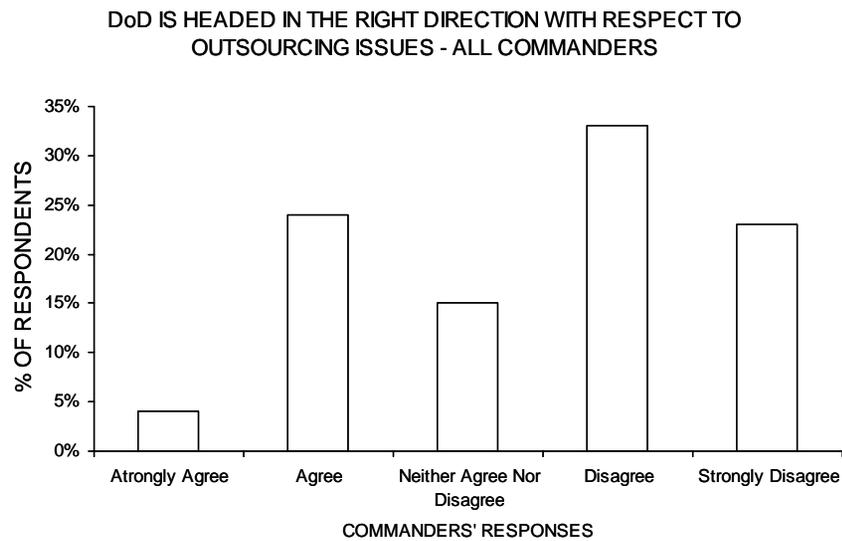


Of those respondents who used metrics, a majority either felt the metrics were not effective or weren't sure if they were effective. Likewise, a majority did not or did not know whether the metrics were changed after implementation in an attempt to improve their results

Source: Survey results reported in Lt Col Warren M. Anderson, USAF, LTC John J. McGuiness, USA and CDR John S. Spicer, USN, "From Chaos to Clarity: How Cost-Based Strategies are Undermining the Department of Defense", Defense Acquisition University Press, September 2001.

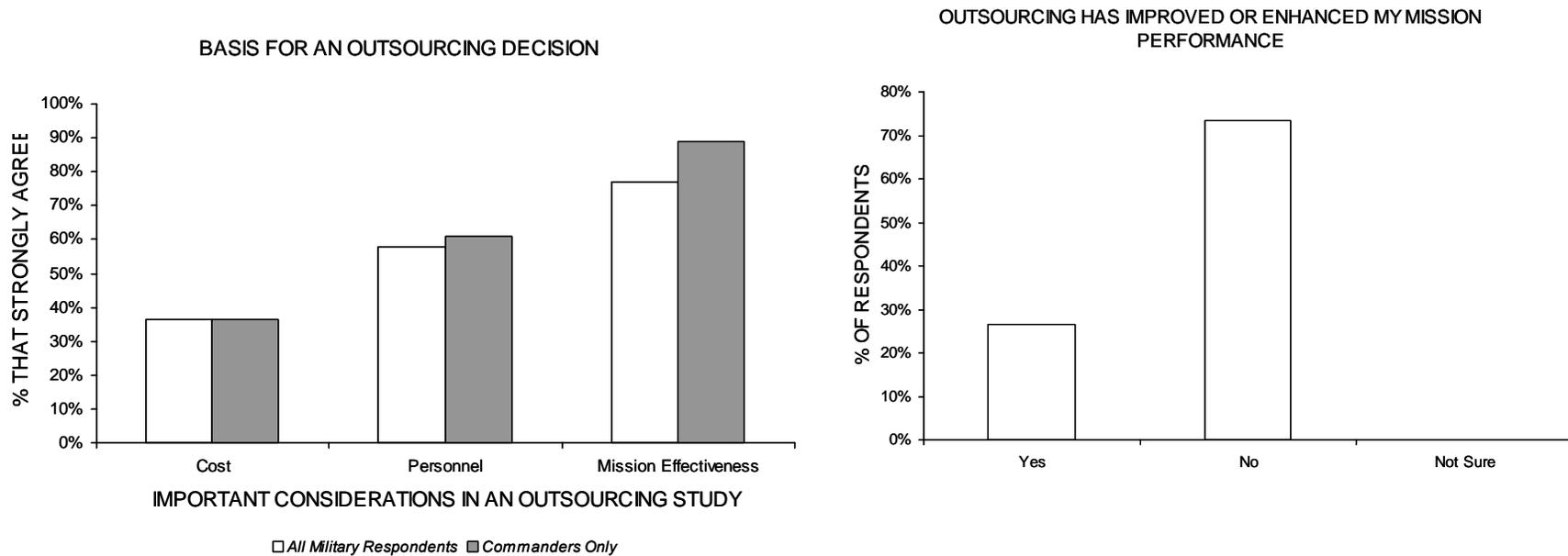
Decision Analysis – Outsourcing – DoD Perspective ...

AND COMMANDERS' ATTITUDES TOWARDS OUTSOURCING WERE PREPONDERANTLY NEGATIVE—ESPECIALLY THOSE WITH FIRST-HAND EXPERIENCE ...



Source: Survey results reported in Lt Col Warren M. Anderson, USAF, LTC John J. McGuiness, USA and CDR John S. Spicer, USN, "From Chaos to Clarity: How Cost-Based Strategies are Undermining the Department of Defense", Defense Acquisition University Press, September 2001.

IMPORTANTLY, MOST MILITARY PERSONNEL SURVEYED INDICATED THAT OUTSOURCING DID NOT IMPROVE MISSION EFFECTIVENESS—WHICH THEY CONSIDERED THE MOST IMPORTANT CONSIDERATION ...



Source: Survey results reported in Lt Col Warren M. Anderson, USAF, LTC John J. McGuiness, USA and CDR John S. Spicer, USN, "From Chaos to Clarity: How Cost-Based Strategies are Undermining the Department of Defense", Defense Acquisition University Press, September 2001.

Key IMCEN insight—the PWS must incorporate performance measures related to mission-effectiveness

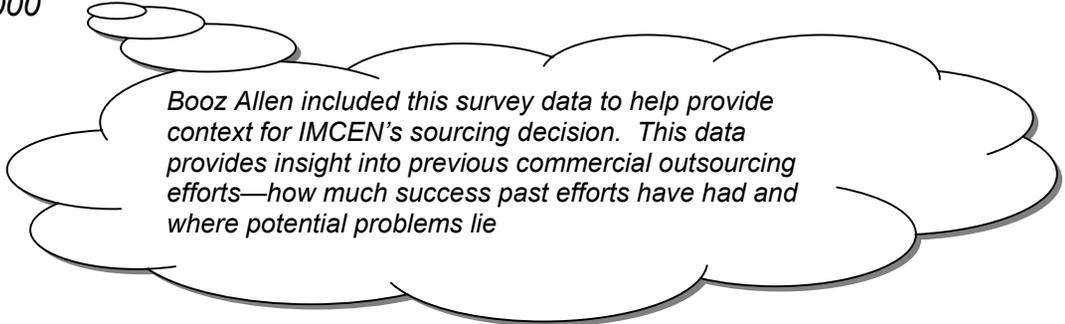
ABOUT THE SURVEY ...

“Inside IT Outsourcing: A State-of-the-Art Report was published in March 2000 by Templeton College, University of Oxford... The Report estimated that global revenues would exceed \$US120 billion by the year 2002, and possible \$US140 billion by 2004, reflecting a 16% growth rate in the 1997-2004 period. IT outsourcing has outlived the five-year period typical of a management fad. The Report reveals that outsourcing has been becoming part of the routine part of IT management, and estimates that on average 35% of most corporations’ IT budgets would be outsourced by 2003”.

“But is the rapid growth of the IT outsourcing market primarily attributable to the well-publicized and studied mega-deals? Are high-profile, large-scale contracts indicative of the sourcing practices of most organizations? Are customers satisfied with their IT outsourcing practices and outcomes? What more needs to be done to achieve effective contracts and practices?”

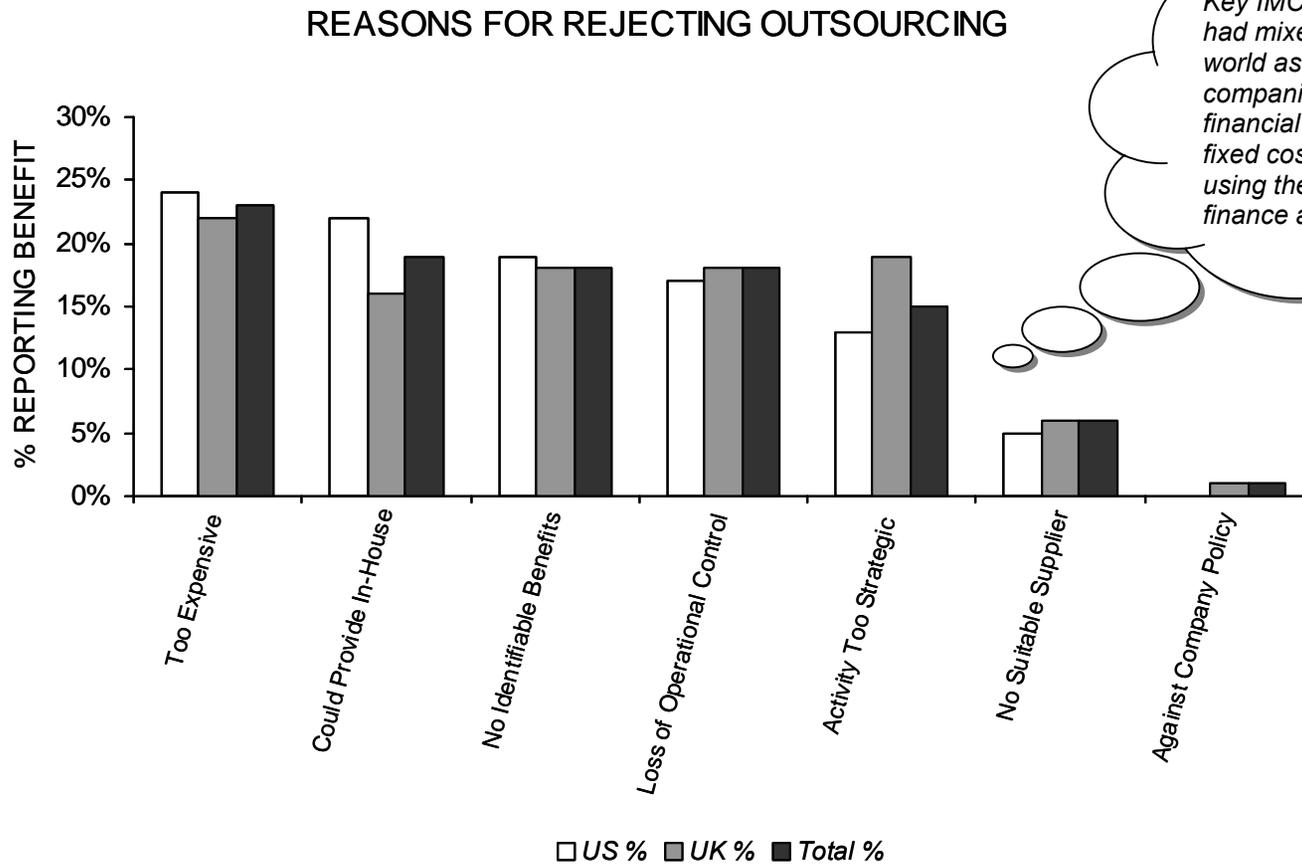
“These questions prompted a detailed review of the authors’ previous research, and a new in-depth 1999 survey into IT outsourcing experiences in the lead markets of the United States and the United Kingdom. The survey was distributed to 600 US and UK Chief Information Officers (CIOs) and senior IT managers. This Report presents the in-depth of this survey and compares findings with previous surveys and research. It also details major lessons for customers and suppliers, emerging from the study”.

Source: Introduction to Mary C. Lacity and Leslie P. Willcocks, “Inside IT Outsourcing: A State-of-the-Art Report”, Templeton College, University of Oxford, March 2000



Booz Allen included this survey data to help provide context for IMCEN’s sourcing decision. This data provides insight into previous commercial outsourcing efforts—how much success past efforts have had and where potential problems lie

A MAJORITY OF THE COMPANIES SURVEYED CONSIDERED SOME FORM OF IT OUTSOURCING BUT REJECTED IT FOR THE REASONS SHOWN ...

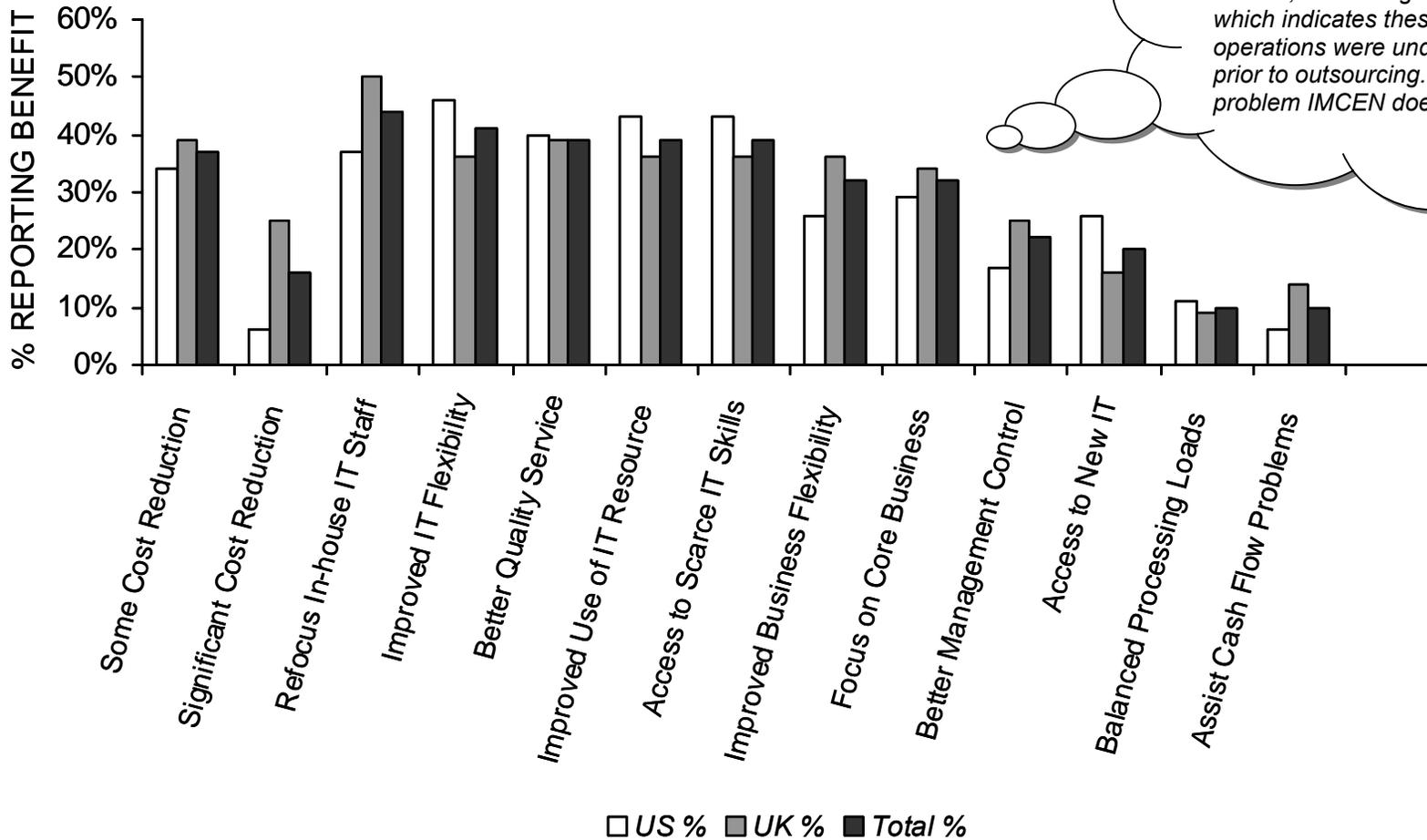


Key IMCEN insight—outsourcing has had mixed results in the commercial world as well as the military. Most companies who outsource do so for financial reasons, like converting fixed costs into variable costs or using the outsourcing vendor to finance a technology refresh...

Source: Mary C. Lacity and Leslie P. Willcocks, "Inside IT Outsourcing: A State-of-the-Art Report", Templeton College, University of Oxford, March 2000

ACTUAL BENEFITS FROM IT OUTSOURCING

Key IMCEN insight—note that most of the actual benefits from outsourcing are related to solving operational difficulties—improving service, increasing flexibility, etc.—which indicates these companies' IT operations were under-performing prior to outsourcing. This is a problem IMCEN does not have

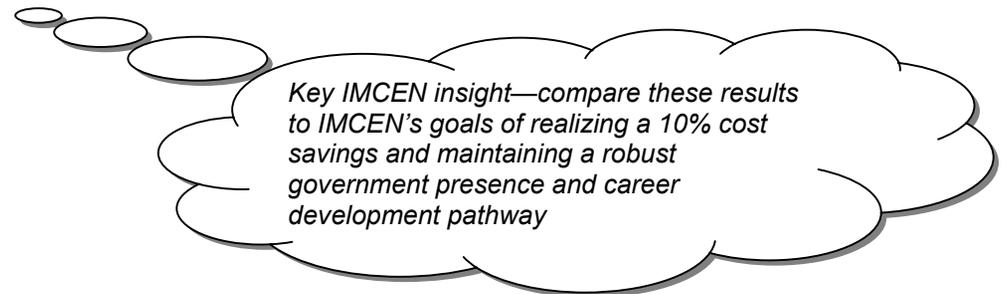


Source: Mary C. Lacity and Leslie P. Willcocks, "Inside IT Outsourcing: A State-of-the-Art Report", Templeton College, University of Oxford, March 2000

Decision Analysis – Outsourcing – Commercial Perspective ...

FOR THOSE WHO CHOSE TO OUTSOURCE, THE SURVEY RESULTS SHOWED THAT OUTSOURCING TYPICALLY FAILED TO LIVE UP TO ITS EXPECTATIONS ...

- 53% of survey respondents (average of US % and UK %) achieved mainly some, rather than significant, cost reductions
- The remainder, 47%, achieved no cost reductions—and in some cases costs actually increased
- However, there were some important benefits. According to the survey:
 - The second most frequently cited benefit was re-focusing of in-house IT staff (44%)
 - The third most frequently cited benefit was improved IT flexibility (41%)
 - Tied for fourth place were better quality service, improved use of IT resources and access to scarce IT skills (all 39%)



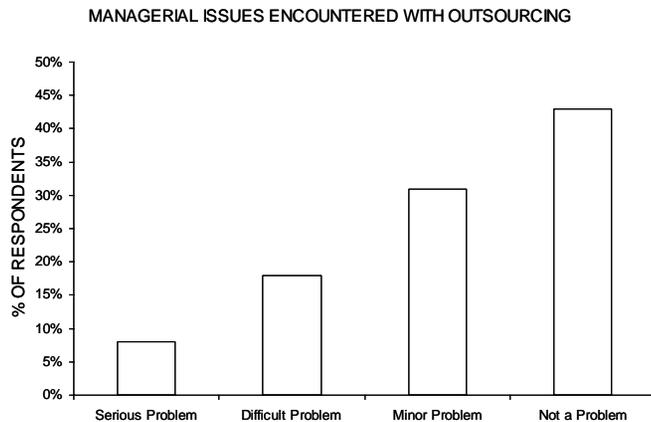
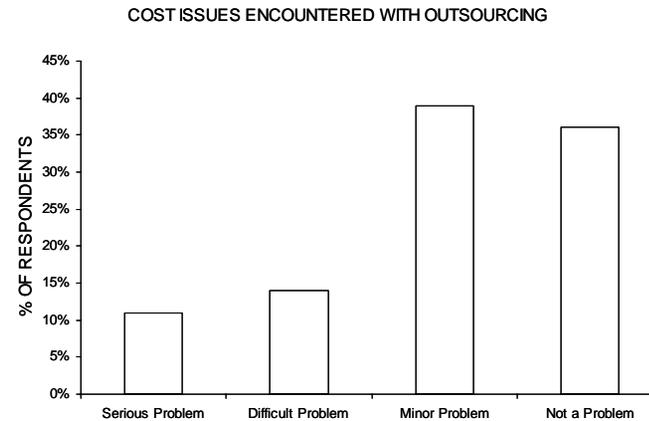
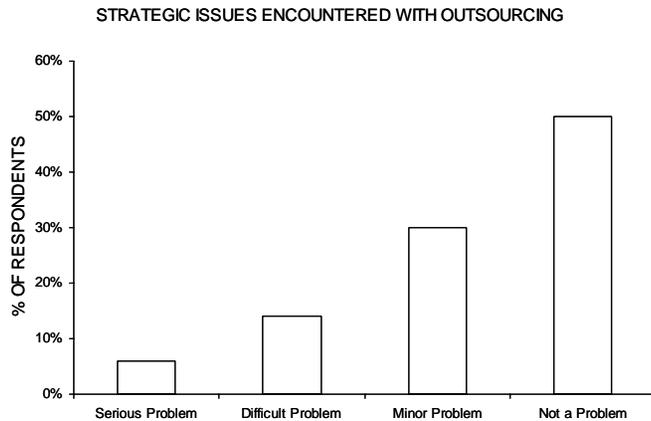
Source: Mary C. Lacity and Leslie P. Willcocks, "Inside IT Outsourcing: A State-of-the-Art Report", Templeton College, University of Oxford, March 2000

PROBLEM/ISSUE	SERIOUS PROBLEM	DIFFICULT PROBLEM	MINOR PROBLEM	NOT A PROBLEM	TOTAL
Strategic Issues					
Supplier's lack of understanding of your business	11 (15%)	14 (18%)	30 (39%)	21 (28%)	76 (100%)
Failure to align corporate strategy with IT strategy	7 (9%)	12 (16%)	18 (24%)	39 (51%)	76 (100%)
Poor strategic planning for IT	4 (5%)	15 (20%)	16 (21%)	41 (54%)	76 (100%)
Defining intellectual property rights	0 (0%)	8 (11%)	23 (30%)	45 (59%)	76 (100%)
Defining data protection procedures	2 (3%)	5 (7%)	27 (35%)	42 (55%)	76 (100%)
Cost Issues					
Cost escalation as a result of contract loopholes	10 (13%)	10 (13%)	31 (41%)	25 (33%)	76 (100%)
Difficulties in controlling/monitoring costs	8 (11%)	8 (11%)	34 (44%)	26 (34%)	76 (100%)
Costs for additional services beyond contract	8 (11%)	15 (20%)	23 (30%)	30 (39%)	76 (100%)
Managerial Issues					
Loss of control over IT operations	3 (4%)	8 (11%)	24 (31%)	41 (54%)	76 (100%)
In-house staff resistance to outsourcing	8 (11%)	13 (17%)	22 (29%)	33 (43%)	76 (100%)
Poor supplier staffing of contract	9 (12%)	23 (30%)	21 (28%)	23 (30%)	76 (100%)
Managerial skills shortage	5 (7%)	16 (21%)	29 (38%)	26 (34%)	76 (100%)
Lack of supplier training for staff	5 (7%)	10 (13%)	19 (25%)	42 (55%)	76 (100%)

Source: Mary C. Lacity and Leslie P. Willcocks, "Inside IT Outsourcing: A State-of-the-Art Report", Templeton College, University of Oxford, March 2000

Decision Analysis – Outsourcing – Commercial Perspective ...

OVERALL, SURVEY RESPONDENTS WHO OUTSOURCED REPORTED PREDOMINANTLY MINOR STRATEGIC, COST AND MANAGERIAL ISSUES ...



Details supporting these graphs, i.e., the specific data behind the graphs and the accompanying calculations, are provided on the facer

Source: Survey results reported in Source: Mary C. Lacity and Leslie P. Willcocks, "Inside IT Outsourcing: A State-of-the-Art Report", Templeton College, University of Oxford, March 2000

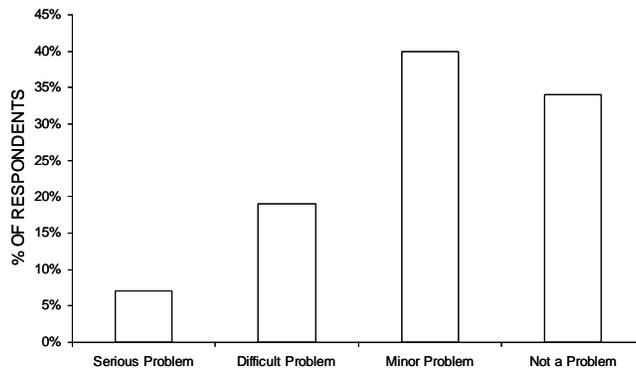
PROBLEM/ISSUE	SERIOUS PROBLEM	DIFFICULT PROBLEM	MINOR PROBLEM	NOT A PROBLEM	TOTAL
Operational Issues					
Getting different contract suppliers to work together	9 (12%)	14 (18%)	27 (36%)	26 (34%)	76 (100%)
Defining service levels	6 (8%)	23 (30%)	33 (44%)	14 (18%)	76 (100%)
Coordinating IT work with supplier	2 (3%)	14 (18%)	39 (51%)	21 (28%)	76 (100%)
Communication with supplier	2 (3%)	10 (13%)	33 (44%)	31 (40%)	76 (100%)
Lack of supplier responsiveness to client needs	8 (11%)	18 (23%)	23 (30%)	27 (36%)	76 (100%)
Deteriorating service	7 (9%)	6 (8%)	28 (37%)	35 (46%)	76 (100%)
Contractual Issue					
Defining the outsourcing contract	7 (9%)	12 (16%)	25 (33%)	32 (42%)	76 (100%)
Technical Issues					
Supplier failure to upgrade IT	3 (4%)	9 (12%)	20 (26%)	44 (58%)	76 (100%)
Duplication of systems	5 (7%)	13 (17%)	16 (21%)	42 (55%)	76 (100%)
Policy to recruit inexperienced IT staff	3 (4%)	10 (13%)	16 (21%)	47 (62%)	76 (100%)
IT skills shortage affecting supplier's service	6 (8%)	18 (24%)	20 (26%)	32 (42%)	76 (100%)

Source: Mary C. Lacity and Leslie P. Willcocks, "Inside IT Outsourcing: A State-of-the-Art Report", Templeton College, University of Oxford, March 2000

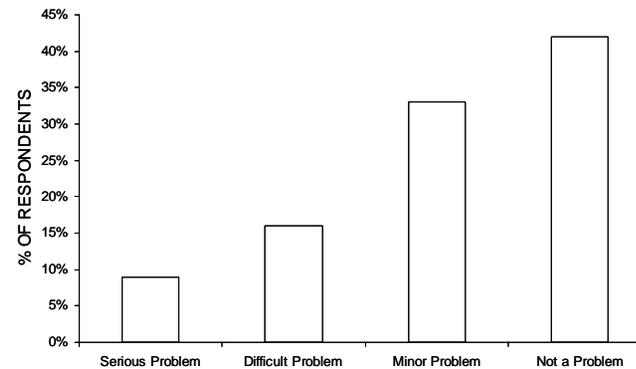
Decision Analysis – Outsourcing – Commercial Perspective ...

OVERALL, SURVEY RESPONDENTS WHO OUTSOURCED REPORTED PREDOMINANTLY MINOR OPERATIONAL, CONTRACTUAL AND TECHNICAL ISSUES ...

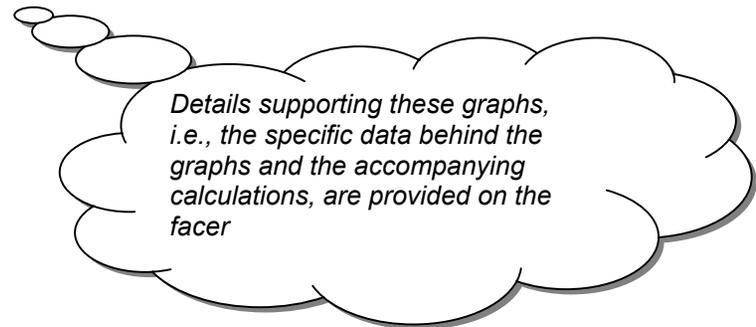
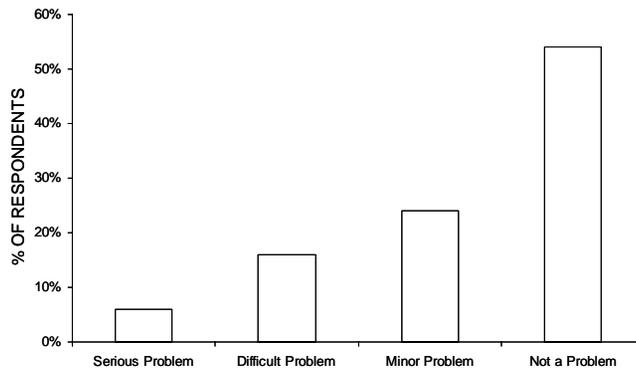
OPERATIONAL ISSUES ENCOUNTERED WITH OUTSOURCING



CONTRACTUAL ISSUE ENCOUNTERED WITH OUTSOURCING



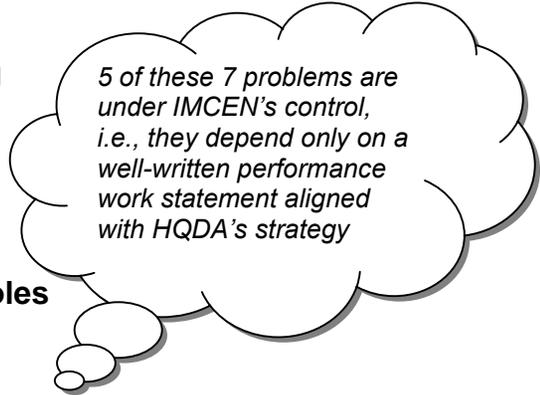
TECHNICAL ISSUES ENCOUNTERED WITH OUTSOURCING



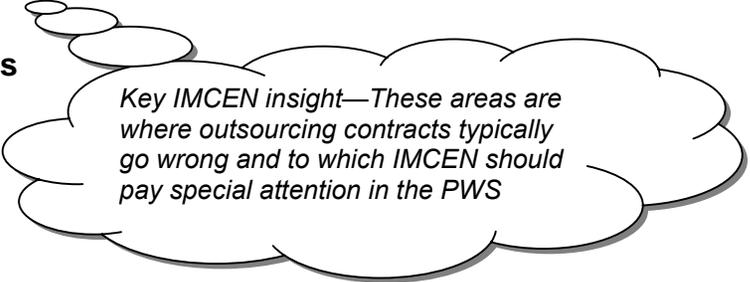
Source: Survey results reported in Source: Mary C. Lacity and Leslie P. Willcocks, "Inside IT Outsourcing: A State-of-the-Art Report", Templeton College, University of Oxford, March 2000

HOWEVER, THE OVERALL FIGURES HIDE SOME SERIOUS PROBLEM AREAS FOR A SIGNIFICANT MINORITY OF RESPONDENTS ...

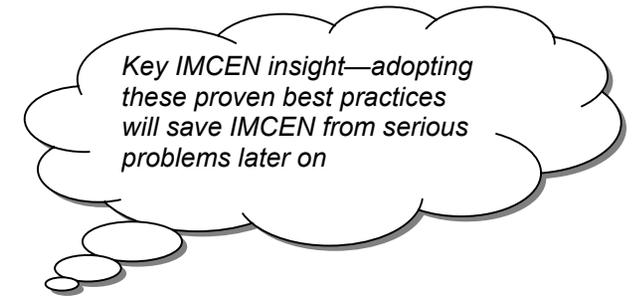
- 21% of respondents experienced serious or difficult **strategic** problems with outsourcing
- 31% reported serious or difficult problems with **services beyond the contract**
- 26% reported serious or difficult problems with **cost escalation due to contract loopholes**
- 22% reported serious or difficult problems with **monitoring and controlling costs**
- 42% of respondents complained of serious or difficult problems as a result of the **supplier not properly staffing the contract**
- 38% experienced serious or difficult problems because of **inadequate service-level definitions**
- 31% faced serious or difficult problems due to a **shortage of IT skills**



5 of these 7 problems are under IMCEN's control, i.e., they depend only on a well-written performance work statement aligned with HQDA's strategy



Key IMCEN insight—These areas are where outsourcing contracts typically go wrong and to which IMCEN should pay special attention in the PWS



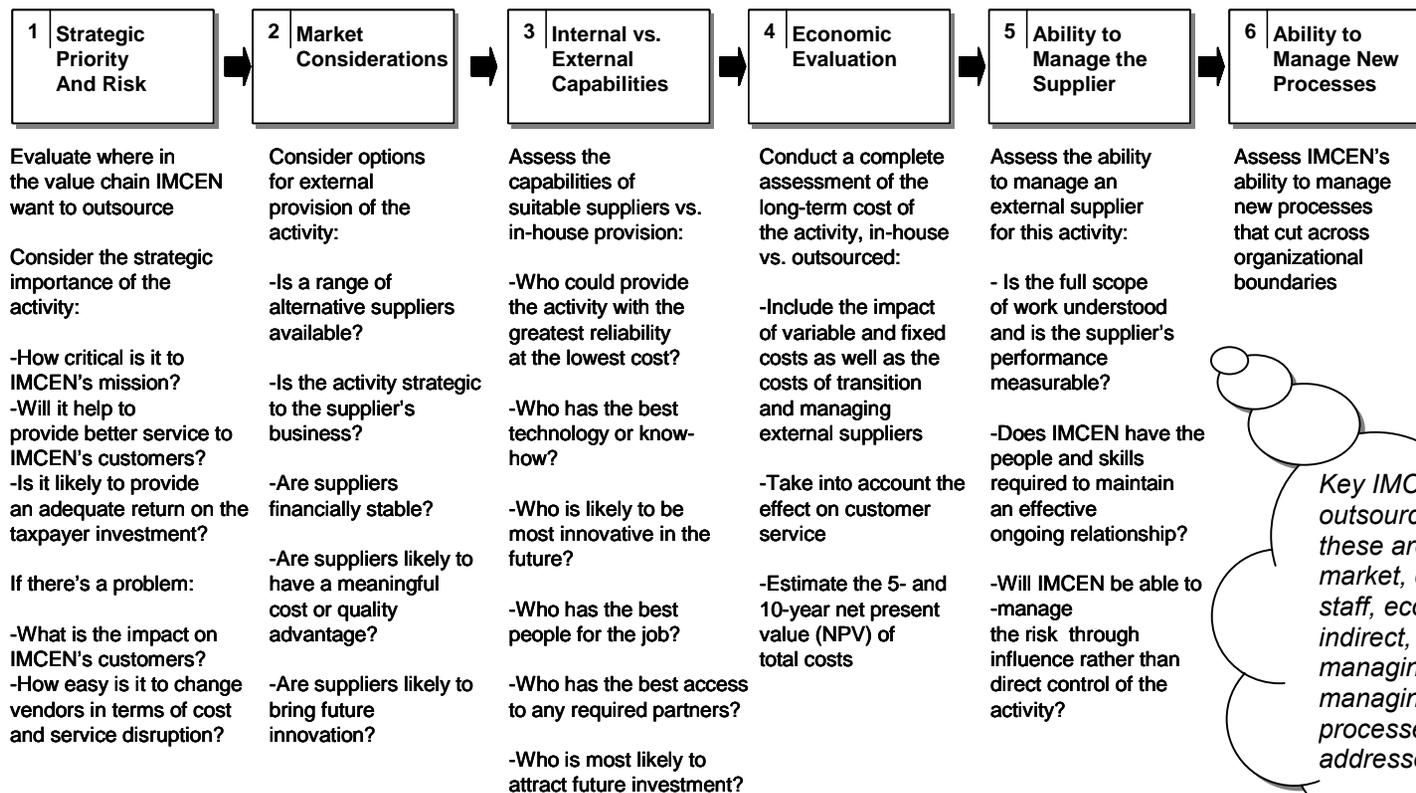
THE REPORT CONFIRMS SOME PROVEN PRACTICES IN IT OUTSOURCING ...

- Smart sourcing (a combination of in-house and contractor staff—the government integrator alternative) is the lower risk option (82% of organizations in the U.S., 75% in the U.K. chose smart sourcing¹)
- Multiple contractors work best (79% of organizations surveyed used “best of breed” providers; advantages: risk mitigation and vendor motivation through competition; disadvantages: higher transaction costs, hidden post-contract management overhead in terms of time, effort and expense)
- 3- to 5-year detailed contracts are best
- A mature, active in-house capability to direct and work alongside the contractor
- Careful selection of suppliers for tasks to which they are best suited
- Creative contracting to motivate suppliers while keeping the arrangements flexible over realistic time-scales

¹ Leslie Willcocks and Mary Lacity, “Information Technology Outsourcing—Practices, Lessons and Prospects”, 2000, Templeton College, University of Oxford

THE OUTSOURCING PROCESS REQUIRES A HIGH LEVEL OF COMMITMENT FROM IMCEN STAFF ...

BOOZ ALLEN STRATEGIC OUTSOURCING FRAMEWORK

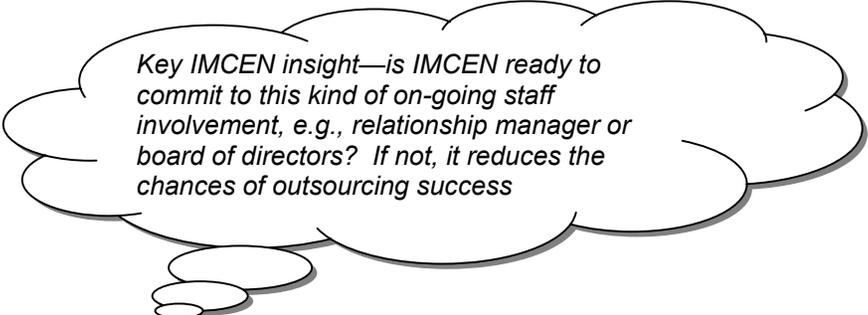


Key IMCEN insight—Successful outsourcing entails looking at all these areas—strategy, risk, the market, capabilities of in-house staff, economics (impact on direct, indirect, fixed and variable costs), managing the supplier, and managing the outsourced processes; this should all be addressed in the PWS

Source: Booz Allen Hamilton

Decision Analysis – Outsourcing – Process ...

... **BOTH BEFORE AND AFTER THE AGREEMENT IS IN PLACE ...**



FOUR KEY ELEMENTS TO SUCCESSFUL PERFORMANCE-BASED CONTRACTING	
1. Build consensus	<ul style="list-style-type: none"> • Common goals for both end-users and supplier(s) establish customer satisfaction • IMCEN “relationship manager” plans and handles communication between end-users and supplier(s); relationship manager gains confidence and trust of the end-user community, their managers and executives
2. Contract for both parties	<ul style="list-style-type: none"> • Contractual agreements should align the long-term interests of the service provider and the service recipient • Contractual agreements should reward collaboration rather than conflict
3. Establish the right type of contract	<ul style="list-style-type: none"> • <i>Utility</i>—focuses on cost containment or cost reduction, maintains consistent delivery of services; service levels and price are the dominant measures of success • <i>Enhancement</i>—focuses on effectiveness, seeks to deliver productivity gains; a successful relationship and contract flexibility are the dominant measures of success • <i>Transformational</i>—focuses on innovation or new business models; alignment and vision are the dominant measures of success
4. Build a flexible arrangement	<ul style="list-style-type: none"> • A common understanding of responsibilities and targets is the baseline • Incentives and penalties are superimposed on the baseline (service provider usually receives financial benefits, service recipient could receive reduced costs, continuous improvement or additional services) • Risks should be equally shared between provider and recipient • Build mechanisms for managing collaboration into the contract, typically a program board or steering committee

Source: Gartner Research

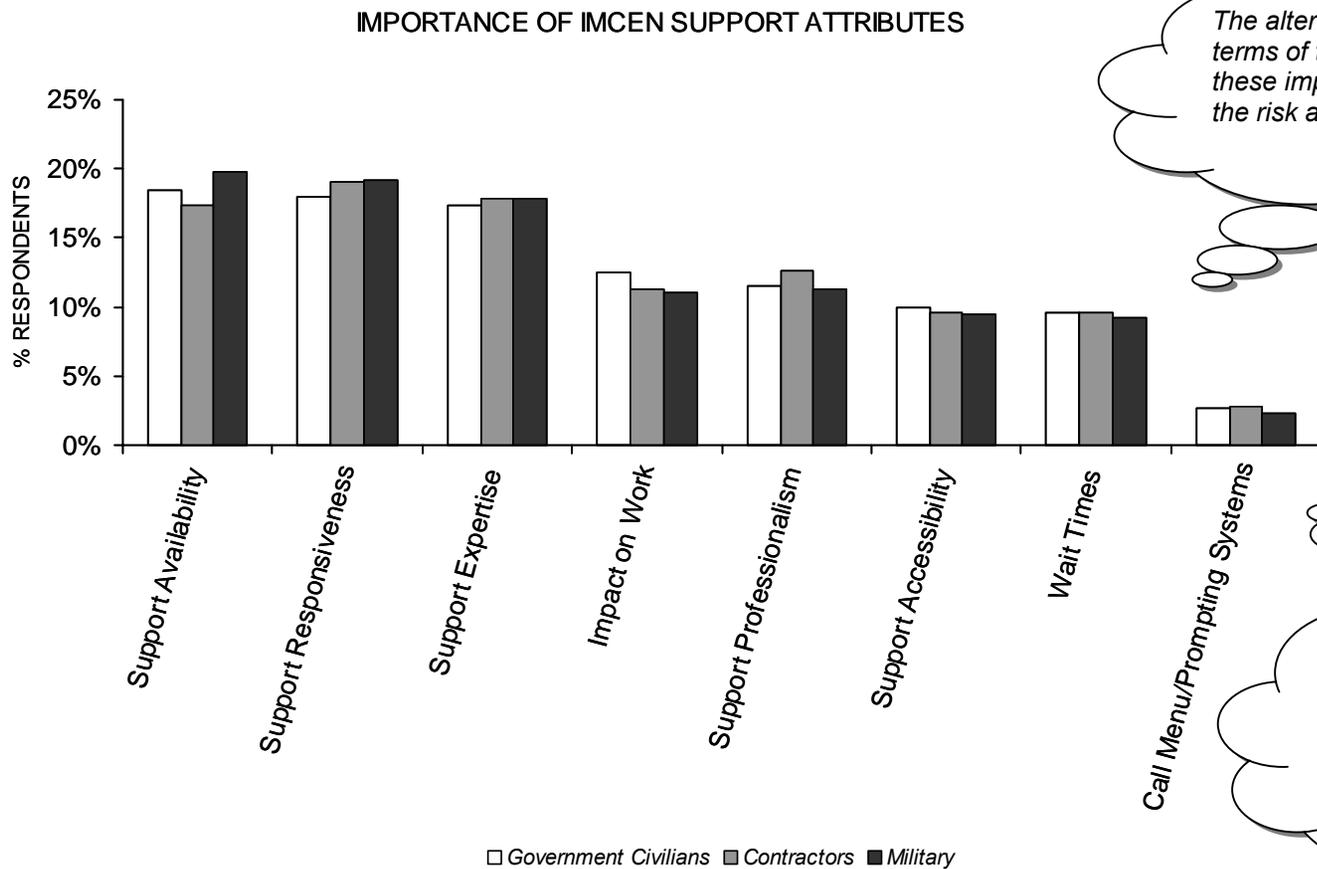


IMCEN CUSTOMER SATISFACTION SURVEY RESULTS	
Purpose	Conducted to baseline customer satisfaction with existing desktop service support
Tool Used	GartnerMeasurement's Information Technology Customer Satisfaction Survey
Survey Open	15-28 February 2002
# of Respondents	1, 573
Maximum Score	5.0
IMCEN Results	4.25—best-in-class for all organizations surveyed by Gartner in 2001; 4.29 (June 2000)
Average Score— Military Organizations	3.72
Average Score— Industry	3.73

Source: HQDA DOIM Status Briefing for Army CIO/G6 (dated 2 May 2002)

Key IMCEN insight—IMCEN's operational performance (as measured by customer satisfaction surveys conducted independently and at different times both by GartnerGroup and Booz Allen [see Appendix B]) is excellent, negating one of the primary benefits of outsourcing

AVAILABILITY, RESPONSIVENESS AND EXPERTISE OF THE IMCEN SUPPORT STAFF ARE THE MOST IMPORTANT ATTRIBUTES TO IMCEN’S CUSTOMER BASE...



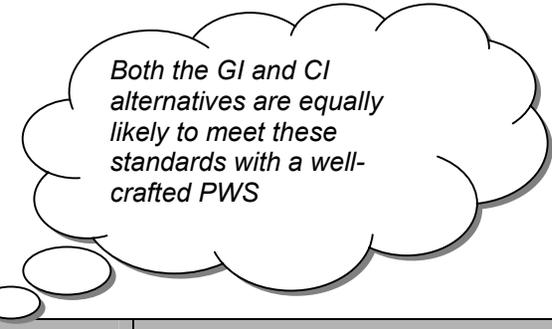
The alternatives were evaluated in terms of their abilities to provide these important services as part of the risk assessment (see section VI)

Key IMCEN insight—this valuable customer feedback provides a guide to the specific types of performance measures to include in the PWS to keep customer satisfaction high

Source: US Army (IMCEN and HQDA) GartnerMeasurement’s Information Technology Customer Satisfaction Survey Results (Appendix)

Decision Analysis – Service Level Definitions ...

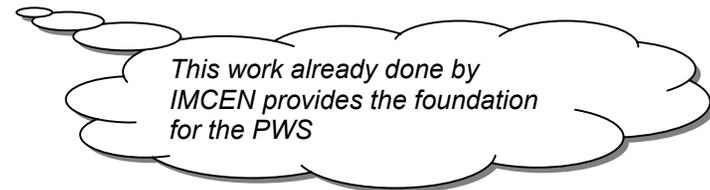
IMCEN HAS ESTABLISHED THREE SERVICE LEVELS FOR ITS CUSTOMERS...



Note: All times shown are maximum allowable times

PERFORMANCE MEASURE	VIP SERVICE		PREMIUM SERVICE		STANDARD SERVICE	
	RESPONSE TIME	RETURN TO SERVICE	RESPONSE TIME	RETURN TO SERVICE	RESPONSE TIME	RETURN TO SERVICE
Help Desk: Time to answer call	4 rings	N/A	4 rings	N/A	4 rings	N/A
Help Desk: Troubleshoot/repair	30 minutes	4 hours	4 hours	8 hours	8 hours	12 hours
Enterprise Services: E-mail outage	2 hours	24 hours	2 hours	24 hours	2 hours	24 hours
Enterprise Services: DNS outage	2 hours	24 hours	2 hours	24 hours	2 hours	24 hours
Enterprise Services: Dial-in / remote access outage	2 hours	24 hours	2 hours	24 hours	2 hours	24 hours
Enterprise Services: Establish dial-in / remote access account	6 hours	N/A	12 hours	N/A	24 hours	N/A
Enterprise Services: Server outage	2 hours	24 hours	2 hours	24 hours	2 hours	24 hours
Asset Management: Checkout of loaner equipment	8 hours	N/A	24 hours	N/A	48 hours	N/A
IM/IT Support Services: Move up to 2 workstations	4 hours	N/A	8 hours	N/A	24 hours	N/A
IM/IT Support Services: Provide PKI/CAC capability	4 hours	N/A	8 hours	N/A	24 hours	N/A

Source: (Draft) Interim Support Agreement Between Army CIO/G6 and Director, Information Management Support Center, Appendix F, Service Level Definitions



DECISION ELEMENT	FAVORS...	
	GOVERNMENT INTEGRATOR	CONTRACTOR INTEGRATOR
Cost—see section IV of detailed diagnostic for details <ul style="list-style-type: none"> Costs for both the CI and GI alternatives are about equal—effectively eliminating cost as a discriminator between the two alternatives 	✓	✓
DoD experience (based on survey data)—see section VIII of detailed diagnostic for details <ul style="list-style-type: none"> The track record of DoD outsourcing contracts is mixed Commanders' attitudes toward outsourcing (especially among those who outsourced) were preponderantly negative Outsourcing did not improve or enhance respondents' most important reported consideration—mission effectiveness 	✓	
Commercial experience (based on survey data) —see section VIII of detailed diagnostic for details <ul style="list-style-type: none"> A majority of companies considering outsourcing rejected it For those who outsourced, outsourcing typically failed to live up to their expectations A significant minority of respondents reported serious problems with outsourcing 	✓	
Commercial outsourcing best practices—see section VIII of detailed diagnostic for details <ul style="list-style-type: none"> Smart sourcing (GI alternative) was chosen by 82% of U.S. respondents 79% used multiple contractors (best-of-breed providers) Best practice: 3-5 year detailed contracts are best Best practice: A mature in-house capability to direct and work alongside the contractor Best practice: Careful selection of suppliers for tasks to which they are best suited 	✓	

Table continues below...

Decision Analysis – Decision Framework ...

THE GOVERNMENT INTEGRATOR ALTERNATIVE OFFERS THE MOST BENEFITS TO IMCEN...

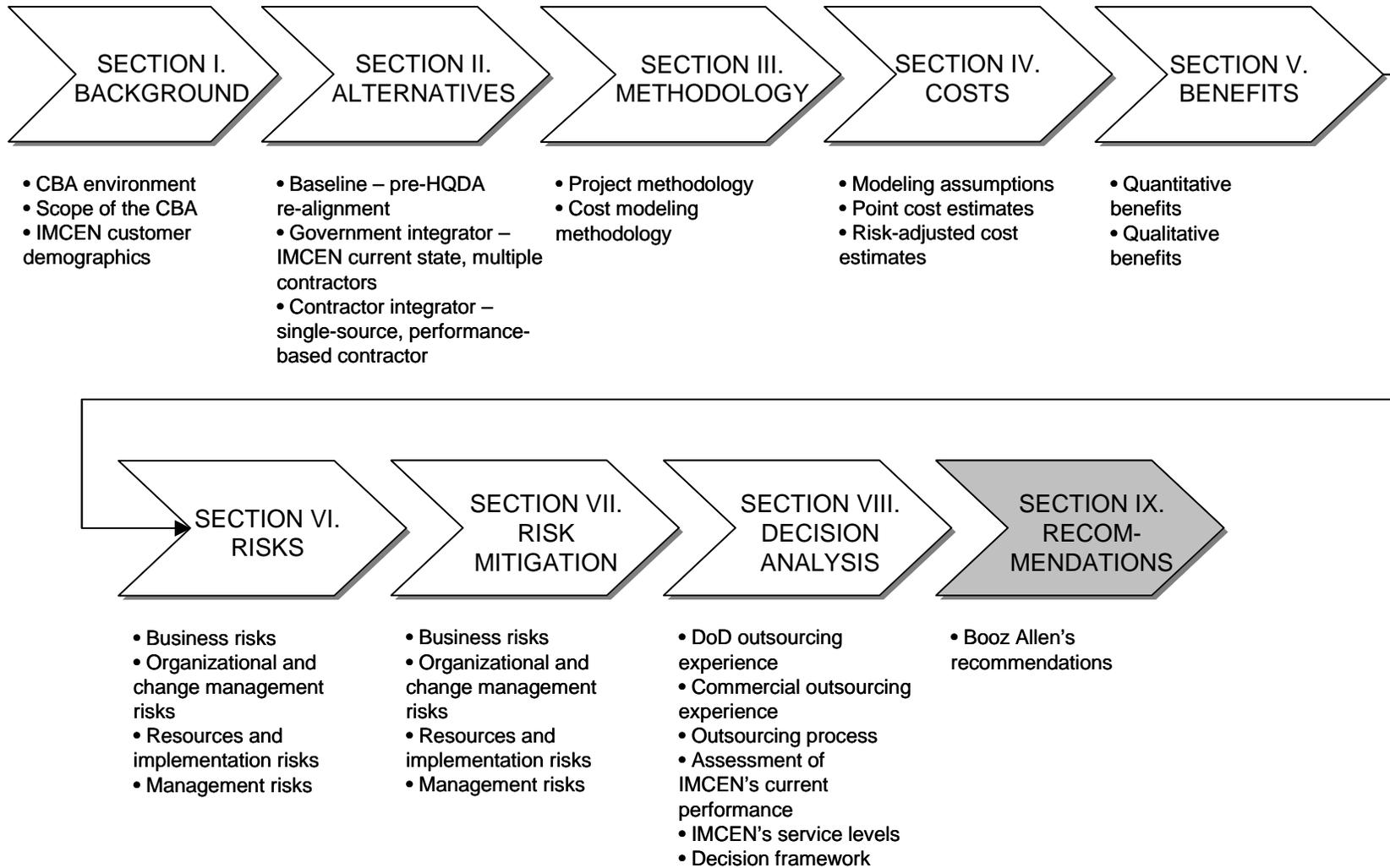
Table continues from above...

DECISION ELEMENT	FAVORS...	
	GOVERNMENT INTEGRATOR	CONTRACTOR INTEGRATOR
IMCEN qualitative benefits assessment—see section V of detailed diagnostic for details <ul style="list-style-type: none"> CI alternative scored slightly better on benefits (51.9% to 48.1%) than GI 		✓
IMCEN qualitative risks assessment—see section VI of detailed diagnostic for details <ul style="list-style-type: none"> The CI alternative was considered more risky in every category: business risks involve disruptions in service and possible poor performance (60.4% v. 39.6% for GI); organizational and change management risks are those that negatively impact customer organizations (63.4% v. 36.6% for GI), resource and implementation risks involve managing the contractor(s) successfully (60.8% v. 39.2% for GI) and management risks include ensuring a smooth transition and managing customer expectations (61.7% v. 38.3% for GI) 	✓	
IMCEN risk mitigation approach—see section VII of detailed diagnostic for details <ul style="list-style-type: none"> Based on best practices supported by GI—see facer 	✓	
IMCEN current customer satisfaction levels—see section VIII of detailed diagnostic for details <ul style="list-style-type: none"> IMCEN’s customer satisfaction rating (survey by GartnerGroup in 2001) was 4.25/5.00; confirmed by independent Booz Allen survey ending in November, 2002—indicating no operational problems that require outsourcing to solve 	✓	
IMCEN existing staff availability/skill types—see section II of detailed diagnostic and Appendix A of supporting data for details <ul style="list-style-type: none"> IMCEN is staffed according to the GI model; a change to the CI model would require retraining or potentially relocating existing staff 	✓	

Source: Booz Allen analysis

COMING UP...

COST-BENEFIT ANALYSIS (CBA) DETAILED DIAGNOSTIC ROADMAP



IX. RECOMMENDATIONS

Recommendations – What’s Inside ...

THE RECOMMENDATIONS SECTION PRESENTS BOOZ ALLEN’S RECOMMENDED ALTERNATIVE AND INCLUDES SOME CAVEATS FOR IMCEN TO CONSIDER MOVING FORWARD WITH THE PWS...

ALL THE CONSIDERATIONS ENTERING INTO THE DECISION ARE SUMMARIZED AT THE END...

PAGE(S)	DESCRIPTION
IX-2	Repetition of table from page VIII-16 but with explicit recommendation for the GI alternative
IX-3F, IX-3	Identifies that IT is made up of dissimilar activities and recommends that IT activities should be thought of as portfolio of services, supported by a portfolio of contract types depending on what is to be accomplished
IX-4F, IX-4	Recommends a performance-based contracting approach, phased in over time. Key points include that multiple contractors (or subcontractors) should be used, and IMCEN should always maintain a robust in-house capability
IX-5	Booz Allen’s explicit recommendation and rationale consolidated onto a single page

Recommendations...

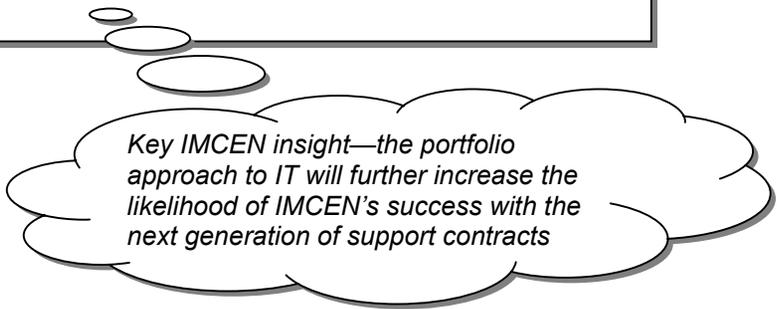
BOOZ ALLEN RECOMMENDS IMCEN SELECT THE GOVERNMENT INTEGRATOR ALTERNATIVE AS THE MODEL FOR ITS NEXT-GENERATION SUPPORT CONTRACTS...

DECISION ELEMENT	FAVORS...	
	GOVERNMENT INTEGRATOR	CONTRACTOR INTEGRATOR
Cost	✓	✓
DoD experience (based on survey data)	✓	
Commercial experience (based on survey data)	✓	
Commercial outsourcing best practices	✓	
IMCEN qualitative benefits assessment		✓
IMCEN qualitative risks assessment	✓	
IMCEN risk mitigation approach	✓	
IMCEN current customer satisfaction levels	✓	
IMCEN existing staff availability/skill types	✓	

Key IMCEN insight—the GI alternative has a much higher likelihood of success than the CI alternative, with less risk, at no greater cost and with proven success in terms of customer satisfaction

INFORMATION TECHNOLOGY SHOULD NOT BE THOUGHT OF AS A UNIFORM SET OF ACTIVITIES ...

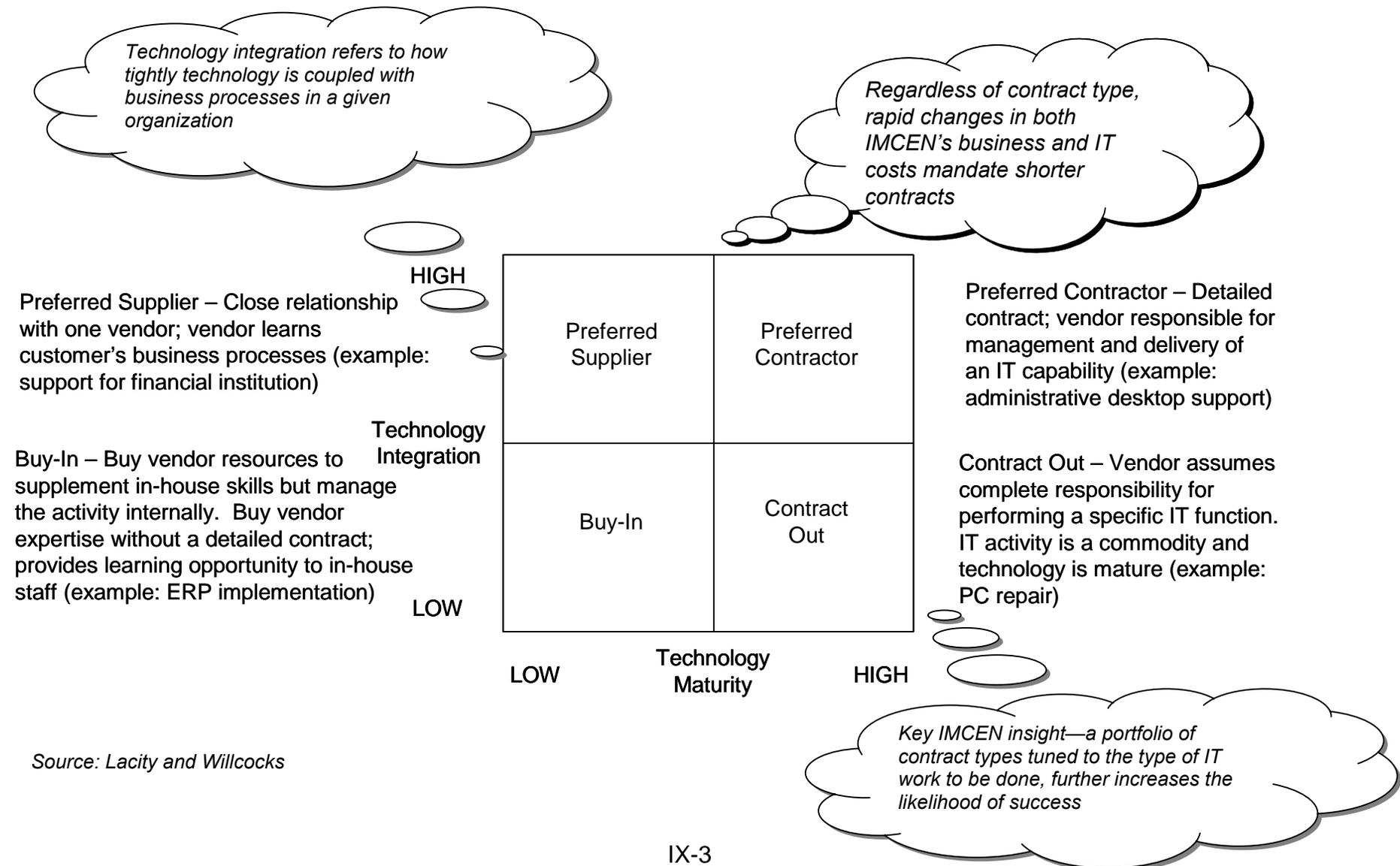
- Examine each IT activity from the perspective of its:
 - Business contribution
 - How the activity fits with the customer's organizational culture and processes
 - Level of technical sophistication required
- Different activities require a customized approach
 - Utility: focus on cost containment/reduction; success defined by service levels and price
 - Enhancement: focus on productivity gains; success defined by good relationship and contract flexibility
 - Transformational: focus on innovation; success defined by business alignment and vision



Key IMCEN insight—the portfolio approach to IT will further increase the likelihood of IMCEN's success with the next generation of support contracts

Recommendations ...

BOOZ ALLEN RECOMMENDS IMCEN TREAT INFORMATION TECHNOLOGY ACTIVITIES AS A PORTFOLIO OF SERVICES—USING A PORTFOLIO OF CONTRACT TYPES...

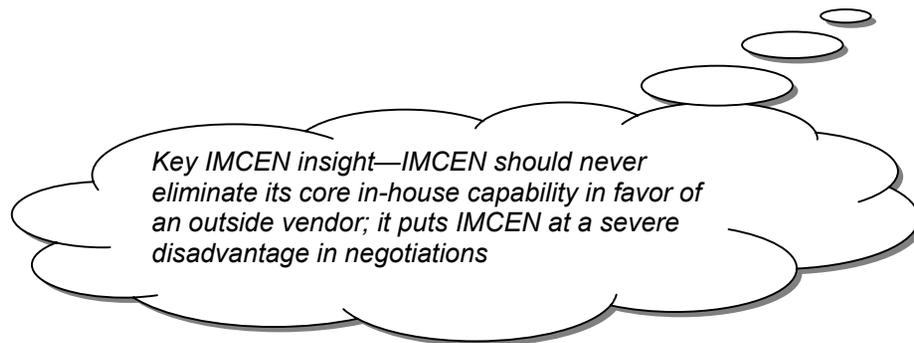


Source: Lacity and Willcocks

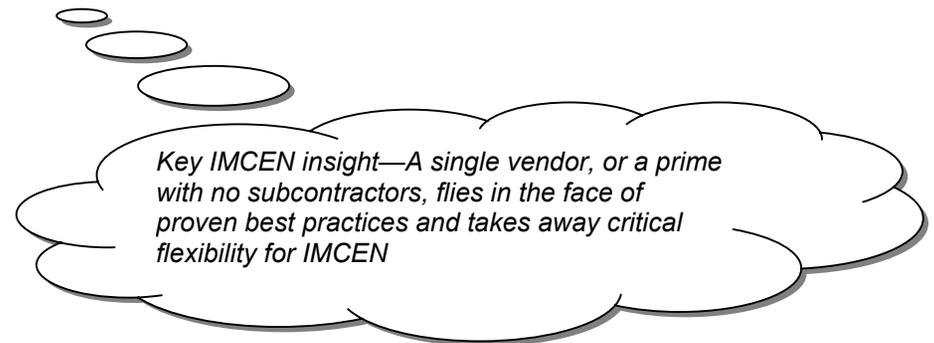
Recommendations ...

BOOZ ALLEN RECOMMENDS A PERFORMANCE-BASED CONTRACTING APPROACH—PROVIDED MULTIPLE VENDORS ARE USED, WORK IS PHASED IN OVER TIME AND IMCEN RETAINS AN IN-HOUSE CAPABILITY...

- Look at performance-based contracting strategically to create a balance between in-house complacency and vendor exploitation
 - Keep comparing prices and performance internally and externally to keep everyone honest and on their toes
 - .. Don't assume anything is included in vendor pricing—compare with the in-house price
 - Pay attention to market pricing and its relationship to the vendor's fixed costs, especially in longer-term contracts
 - Watch for deteriorating service levels and subsequent discretionary spending outside IMCEN's contracts



Key IMCEN insight—IMCEN should never eliminate its core in-house capability in favor of an outside vendor; it puts IMCEN at a severe disadvantage in negotiations



Key IMCEN insight—A single vendor, or a prime with no subcontractors, flies in the face of proven best practices and takes away critical flexibility for IMCEN

BOOZ ALLEN HAMILTON RECOMMENDATION

BOOZ ALLEN RECOMMENDS THE GOVERNMENT INTEGRATOR (GI) ALTERNATIVE USING MULTIPLE VENDORS AND MULTIPLE CONTRACT TYPES FOR HQDA DESKTOP SERVICES

- Costs are about equal, but the CI cost estimate carries more risk
- Qualitative risks are much higher for the CI alternative across the board including business risks (disruptions in service and possible poor performance), organizational and change management risks (negative impacts to customer organizations), resource and implementation risks (managing the contractor(s) successfully) and management risks (ensuring a smooth transition and managing customer expectations)
- According to a published DoD outsourcing survey, the track record of DoD outsourcing (the CI alternative) is mixed
- According to a published DoD outsourcing survey, Commanders' attitudes toward outsourcing (the CI alternative)—especially those Commanders with first-hand experience—were overwhelmingly negative
- According to a published DoD outsourcing survey, outsourcing (the CI alternative) did not improve or enhance military respondents' most important reported consideration—mission effectiveness
- According to several published commercial outsourcing surveys, a majority of commercial companies considering outsourcing (the CI alternative) rejected it
- According to several published commercial outsourcing surveys, commercial companies that outsourced (the CI alternative) typically felt outsourcing did not live up to their expectations
- According to several published commercial outsourcing surveys, serious problems with the outsourcing arrangements (the CI alternative) occurred with a significant minority of commercial companies
- IMCEN's customer satisfaction is high (measured at different times by different companies)—negating a potential benefit of the CI alternative
- Risk mitigation strategies are most effective with the GI alternative
- IMCEN is staffed according to the GI model; a change to the CI model would require staff retraining or potential staff relocation
- The GI alternative allows for small business prime contractors
- Competition among contractors in the GI alternative ensures IMCEN the best performance at the best price
- The GI alternative satisfies IMCEN's goal of maintaining a robust government presence and career development pathway

SUPPORTING DATA

APPENDIX A. COST DETAIL

Description	Min	ML	Max	Value Used
Inflation	n/a	n/a	n/a	1.94%
Discount Rate	n/a	n/a	n/a	3.10%
Labor Step for Government employees	n/a	n/a	n/a	9
GS Increase for Metropolitan Area	n/a	n/a	n/a	11.48%
Work Hours in Year	n/a	n/a	n/a	1,860
Fringe Benefits (ret, health, & medicare from A75)	n/a	n/a	n/a	32.85%
Fringe	n/a	n/a	n/a	0.0%
Overhead (from Cost Estimating Reference FY98)	n/a	n/a	n/a	12.0%
Min	n/a	n/a	n/a	75%
Max	n/a	n/a	n/a	150%
Existing Number of Contracts	n/a	n/a	n/a	7
Total initial servers that IMCEN looks after	n/a	n/a	n/a	181
Total initial end-users that IMCEN looks after	n/a	n/a	n/a	6,474
Increase, each year, of end-users and servers	n/a	n/a	n/a	5%
CI Staffing Ratios - Customer Assistance (1 employee to X people)	120	140	160	120
CI Staffing Ratios - Technical Support Level 2	90	110	130	130
CI Staffing Ratios - Technical Support Level 3	400	550	700	700
CI Staffing Ratios - Mail Server Operator (1 employee to X servers)	8	8	10	8
CI Staffing Ratios - Web Server Operator (1 employee to X servers)	3	3	6	3
CI Staffing Ratios - File/Print Server Operator (1 employee to X servers)	15	15	20	15
CI Staffing Ratios - SMS Server Operator (1 employee to X servers)	8	8	10	8
CI Staffing Ratios - SQL Server Operator (1 employee to X servers)	3	4	5	4
CI Staffing Ratios - HQDATS Server Operator (1 employee to X servers)	2	3	4	3

Table continued below...

Appendix A – Cost Detail ...

THE COST MODEL USES A NUMBER OF VARIABLE INPUTS TO ARRIVE AT THE EVENTUAL COST ESTIMATE...

Variables with values in the minimum, most likely, and maximum columns are used by Crystal Ball® to determine the ranges of the cost estimate after taking into account uncertainty. The column “Value Used” displays the value used in determining the point estimate. Note that the values used may not equal the “most likely” value; the values may fall closer to the maximum or the minimum depending on the engineer’s specific knowledge and understanding of IMCEN’s situation.

Table continued from above...

Description	Min	ML	Max	Value Used
CI Staffing Ratios - Blackbry Server Operator (1 employee to X servers)	8	10	10	10
CI Staffing Ratios - Antivirus Server Operator (1 employee to X servers)	8	10	10	10
CI Staffing Ratios - Mgmt Server Operator (1 employee to X servers)	8	10	10	10
CI Staffing Ratios - Terminal Server Operator (1 employee to X servers)	15	15	20	15
CI Staffing Ratios - Backup Server Operator (1 employee to X servers)	15	15	20	15
CI Staffing Ratios - Monitor Server Operator (1 employee to X servers)	8	10	10	10
CI Staffing Ratios - OWA Server Operator (1 employee to X servers)	2	3	4	3
CI Staffing Ratios - RAS Server Operator (1 employee to X servers)	4	5	6	5
CI Staffing Ratios - Domain Server Operator (1 employee to X servers)	15	20	20	20
CI Supervisors for Customer Assistance and Server Ops	1	1	5	1
Subcontractor Goal (as percent of Contractor)	30%	47%	50%	47%
Subcontractor Existing (as percent of Contractor)	5%	8%	10%	8%
Subcontractor pass through (as percent of Contract)	5%	6%	9%	6%
Initial percentage in FY04 of single-source contract	n/a	n/a	n/a	0%
Jump in percentage (until 100% is reached) of single-source contract	n/a	n/a	n/a	9%
Period (months) between jump in percentage of single-source contract	n/a	n/a	n/a	1
Gov personnel expected to leave/quit in CI	5%	8%	10%	5%
Gov personnel to be hired in CI by single-source contractor	5%	8%	10%	5%
Existing contractors to be hired in CI by single-source contractor	45%	60%	75%	60%
Initial Cost of employee turnover (percent of salary)	85%	98%	110%	98%
Duration of loss of productivity for new employees (years)	0.25	0.38	0.5	0.38
Percent of loss of productivity for new employees	38%	50%	75%	50%

Appendix A – Cost Detail Cont ...

THE FOLLOWING CONTRACTOR SALARY RANGES ARE USED AS ADDITIONAL VARIABLE INPUTS IN THE COST MODEL...

Contractor Labor Costs (Unburdened Yearly Salary)			
(data source is BAH's external salary database for the metro area)			
FY02\$	Percentiles		
	25	50	75
Labor Category	Min	ML	Max
COMPUTER SPECIALIST	\$65,754	\$80,571	\$92,455
COMPUTER SYS ANALYST	\$68,845	\$75,365	\$83,257
DOCUMENTATION SPEC.	\$60,726	\$69,607	\$77,840
INFO ASSUR. SPEC	\$79,127	\$92,152	\$100,935
INFO MGMT SPEC	\$77,594	\$91,827	\$109,595
IT ENGINEERS	\$78,614	\$85,766	\$92,889
NETWORK ENGINEER	\$57,119	\$63,494	\$71,115
ON-SITE PROJECT MGR	\$89,313	\$98,731	\$108,948
PROJECT MANAGER	\$89,313	\$98,731	\$108,948
SEN. NETWORK ENGINEER	\$70,904	\$78,310	\$86,130
SEN. SYS. PROGRAMMERS	\$77,730	\$85,371	\$97,337
SEN. SYSTEMS ENGINEER	\$83,198	\$90,155	\$100,352
SOFTWARE DEVELOPERS	\$86,894	\$92,426	\$98,100
SYSTEM PROG ANALYST	\$74,302	\$79,924	\$85,954
SYSTEMS ADMINISTRATOR	\$63,212	\$68,568	\$76,510
SYSTEMS ENGINEER	\$64,993	\$70,797	\$77,844
SYSTEMS PROGRAMMERS	\$68,458	\$76,398	\$85,011
TECHNICAL WRITER	\$58,490	\$62,871	\$69,395

Contractor Labor Costs (Unburdened Yearly Salary)			
(data source is BAH's external salary database for the metro area)			
FY02\$	Percentiles		
	25	50	75
Labor Category	Min	ML	Max
TRAINING SPECIALIST	\$61,695	\$68,498	\$80,264
ADMINISTRATIVE ASSIST	\$30,829	\$34,173	\$38,249
IMAGE TECH	\$44,836	\$50,505	\$57,113
NET MODELING ENGR	\$64,009	\$74,302	\$81,827
PHYSICAL SECURITY	\$21,632	\$24,872	\$26,962
SECURITY ENGINEER	\$65,775	\$74,621	\$82,996
HELP DESK	\$45,123	\$52,914	\$61,907
LEVEL 2 SUPPORT	\$65,754	\$80,571	\$92,455
LEVEL 3 SUPPORT	\$65,754	\$80,571	\$92,455
SERVER OPERATOR	\$74,608	\$83,166	\$91,614
CHIEF TECH SPT	\$75,887	\$87,906	\$97,198
DISTR FAC SPEC	\$40,217	\$50,529	\$72,752
CHIEF BUS APPS MGT	\$89,313	\$98,731	\$108,948
CHIEF COMPUTER SPECIALIST	\$89,313	\$98,731	\$108,948
PROGRAM ANALYST	\$52,736	\$62,204	\$69,341
CHIEF OPNS SUPT	\$89,313	\$98,731	\$108,948
CHIEF ARC & ENGR	\$89,313	\$98,731	\$108,948

THE FOLLOWING GOVERNMENT AND MILITARY SALARY RANGES ARE USED AS ADDITIONAL INPUTS IN THE COST MODEL...

2002 GENERAL SCHEDULE Labor Rates INCORPORATING A0.027GENERAL INCREASE Effective January 2002 Within- Annual Rates by Grade and Step Grade										
	1	2	3	4	5	6	7	8	9	10
1	\$14,757	\$15,249	\$15,740	\$16,228	\$16,720	\$17,009	\$17,492	\$17,981	\$18,001	\$18,456
2	\$16,592	\$16,985	\$17,535	\$18,001	\$18,201	\$18,736	\$19,271	\$19,806	\$20,341	\$20,876
3	\$18,103	\$18,706	\$19,309	\$19,912	\$20,515	\$21,118	\$21,721	\$22,324	\$22,927	\$23,530
4	\$20,322	\$20,999	\$21,676	\$22,353	\$23,030	\$23,707	\$24,384	\$25,061	\$25,738	\$26,415
5	\$22,737	\$23,495	\$24,253	\$25,011	\$25,769	\$26,527	\$27,285	\$28,043	\$28,801	\$29,559
6	\$25,344	\$26,189	\$27,034	\$27,879	\$28,724	\$29,569	\$30,414	\$31,259	\$32,104	\$32,949
7	\$28,164	\$29,103	\$30,042	\$30,981	\$31,920	\$32,859	\$33,798	\$34,737	\$35,676	\$36,615
8	\$31,191	\$32,231	\$33,271	\$34,311	\$35,351	\$36,391	\$37,431	\$38,471	\$39,511	\$40,551
9	\$34,451	\$35,599	\$36,747	\$37,895	\$39,043	\$40,191	\$41,339	\$42,487	\$43,635	\$44,783
10	\$37,939	\$39,204	\$40,469	\$41,734	\$42,999	\$44,264	\$45,529	\$46,794	\$48,059	\$49,324
11	\$41,684	\$43,073	\$44,462	\$45,851	\$47,240	\$48,629	\$50,018	\$51,407	\$52,796	\$54,185
12	\$49,959	\$51,624	\$53,289	\$54,954	\$56,619	\$58,284	\$59,949	\$61,614	\$63,279	\$64,944
13	\$59,409	\$61,389	\$63,369	\$65,349	\$67,329	\$69,309	\$71,289	\$73,269	\$75,249	\$77,229
14	\$70,205	\$72,545	\$74,885	\$77,225	\$79,565	\$81,905	\$84,245	\$86,585	\$88,925	\$91,265
15	\$82,580	\$85,333	\$88,086	\$90,839	\$93,592	\$96,345	\$99,098	\$101,851	\$104,604	\$107,357

Military Labor Costs (Burdened Yearly Salary) - FY2004\$	
http://usmilitary.about.com/library/milinfo/2001pay/blelistedcompensation-2.htm (based on 16 years of experience)	
Labor Category	ML
O4	\$87,109
O5	\$96,823
E6	\$46,287
E5	\$40,851
E4	\$33,654
E3	\$29,649
E2	\$26,910

THE FOLLOWING TABLES, CONTAINING INFORMATION PROVIDED BY IMCEN, DISPLAY THE BREAKDOWN OF THE CUSTOMER BASE AND IMCEN SERVERS...

OPCON Customer Population				
Business Units	Mil	Govt Civ	Contractor	Total
Initial Category 1*				2,462
G8/DCSPRO/PAED	207	163	47	417
G6	75	163	112	350
GOMO	13	0	2	15
MPSC	55	3	4	62
DTS-W	0	83	14	97
ASA I&E	5	53	15	73
USAPA	0	115	21	136
G1/ASA M&RA	240	320	22	582
Admin Services	7	103	1	111
ACSIM	38	151	17	206
CMH	15	105	26	146
G3	352	183	122	657
G4	136	120	44	300
ASA(ALT)	156	227	165	548
G8/ASAFM	38	249	25	312
Total	1,337	2,038	637	6,474

IMCEN Servers	
Server Type	Number
Mail Servers	41
Web Servers	18
File/Print Servers	34
SMS Servers	4
SQL Servers	6
HQDATS Servers	3
Blackberry Servers	5
Antivirus Servers	4
Management Servers	17
Terminal Servers	8
Backup Servers	6
Monitoring Servers	13
OWA Servers	2
RAS Servers	2
Domain Ctrl Servers	18
Total	181

<i>(In Thousands of Inflated dollars)</i>	FY04	FY05	FY06	FY07	FY08	FY09-13	FY04-13
Government Integrator - Point Estimate	\$ 43,336	\$ 48,866	\$ 52,305	\$ 55,986	\$ 59,926	\$ 319,732	\$ 580,151
1.0 Direct Labor Costs	\$ 43,336	\$ 46,386	\$ 49,650	\$ 53,144	\$ 56,884	\$ 316,476	\$ 565,875
1.1 Customer Support Total	\$ 12,391	\$ 13,263	\$ 14,196	\$ 15,195	\$ 16,264	\$ 90,487	\$ 161,796
1.1.1 CUSTOMER SUPPORT	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
1.1.2 CUSTOMER ASSISTANCE	\$ 10,379	\$ 11,109	\$ 11,891	\$ 12,728	\$ 13,623	\$ 75,794	\$ 135,524
1.1.3 TECHNICAL SUPPORT	\$ 2,012	\$ 2,154	\$ 2,305	\$ 2,467	\$ 2,641	\$ 14,693	\$ 26,273
1.2 System Support Services Total	\$ 4,196	\$ 4,491	\$ 4,807	\$ 5,146	\$ 5,508	\$ 30,643	\$ 54,790
1.2.1 SYS SPT SVC	\$ 174	\$ 186	\$ 199	\$ 213	\$ 228	\$ 1,268	\$ 2,267
1.2.2 TECHNOLOGY ASSESS	\$ 1,411	\$ 1,510	\$ 1,617	\$ 1,731	\$ 1,852	\$ 10,305	\$ 18,426
1.2.3 PERFORMANCE ASSESS	\$ 1,780	\$ 1,905	\$ 2,039	\$ 2,183	\$ 2,336	\$ 12,998	\$ 23,241
1.2.4 PLANS & POLICY	\$ 831	\$ 890	\$ 953	\$ 1,020	\$ 1,091	\$ 6,072	\$ 10,857
1.3 Reqmts, Analysis, & Design Total	\$ 5,995	\$ 6,417	\$ 6,869	\$ 7,352	\$ 7,869	\$ 43,781	\$ 78,283
1.3.1 RQMTS ANAL & DESIGN	\$ 148	\$ 158	\$ 169	\$ 181	\$ 194	\$ 1,078	\$ 1,927
1.3.2 CUSTOMER LIAISON	\$ 5,256	\$ 5,626	\$ 6,022	\$ 6,446	\$ 6,899	\$ 38,385	\$ 68,634
1.3.3 CONFIGURATION MGMT	\$ 591	\$ 633	\$ 677	\$ 725	\$ 776	\$ 4,318	\$ 7,721
1.4 Enterprise Services Total	\$ 7,935	\$ 8,493	\$ 9,091	\$ 9,730	\$ 10,415	\$ 57,945	\$ 103,608
1.4.1 ENTERPRISE SERVICES	\$ 125	\$ 134	\$ 143	\$ 153	\$ 164	\$ 912	\$ 1,630
1.4.2 ARCHITECTURE & ENGR	\$ 375	\$ 401	\$ 429	\$ 459	\$ 492	\$ 2,736	\$ 4,891
1.4.3 SERVER OPERATIONS	\$ 7,205	\$ 7,712	\$ 8,255	\$ 8,836	\$ 9,458	\$ 52,619	\$ 94,085
1.4.4 OPERATIONS SUPPORT	\$ 230	\$ 246	\$ 263	\$ 282	\$ 302	\$ 1,679	\$ 3,002
1.5 Business Applications Total	\$ 7,659	\$ 8,198	\$ 8,775	\$ 9,392	\$ 10,053	\$ 55,933	\$ 100,010
1.5.1 BUSINESS APPLICATIONS	\$ 148	\$ 158	\$ 169	\$ 181	\$ 194	\$ 1,078	\$ 1,927
1.5.2 BUSINESS APPS MGT	\$ 2,679	\$ 2,868	\$ 3,070	\$ 3,286	\$ 3,517	\$ 19,567	\$ 34,988
1.5.3 BUSINESS APPS DEV	\$ 4,225	\$ 4,522	\$ 4,840	\$ 5,181	\$ 5,545	\$ 30,853	\$ 55,166
1.5.4 KNOWLEDGE MGT	\$ 607	\$ 650	\$ 696	\$ 745	\$ 797	\$ 4,435	\$ 7,930
1.6 Installation Services Total	\$ 2,536	\$ 2,714	\$ 2,905	\$ 3,110	\$ 3,329	\$ 18,519	\$ 33,113
1.6.1 INSTALLATION SVCS	\$ 125	\$ 134	\$ 143	\$ 153	\$ 164	\$ 912	\$ 1,630
1.6.2 VTC & SPECIAL INSTALLS	\$ 772	\$ 826	\$ 884	\$ 946	\$ 1,013	\$ 5,635	\$ 10,076
1.6.3 TELEPHONE SERVICES	\$ 460	\$ 492	\$ 527	\$ 564	\$ 603	\$ 3,357	\$ 6,003
1.6.4 IMPLEMENTATIONS	\$ 1,180	\$ 1,263	\$ 1,351	\$ 1,447	\$ 1,548	\$ 8,615	\$ 15,403
1.7 IMCEN Directorate Total	\$ 1,904	\$ 2,037	\$ 2,181	\$ 2,334	\$ 2,499	\$ 13,901	\$ 24,856
1.7.1 DIR OF INFO MGT	\$ 625	\$ 669	\$ 717	\$ 767	\$ 821	\$ 4,567	\$ 8,166
1.7.2 HQDA IT GOVERNANCE	\$ 523	\$ 559	\$ 599	\$ 641	\$ 686	\$ 3,816	\$ 6,823
1.7.3 RESOURCE MGMT	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
1.7.4 INFO ASSURANCE	\$ 756	\$ 809	\$ 866	\$ 927	\$ 992	\$ 5,518	\$ 9,866
1.8 Additional Costs	\$ 721	\$ 772	\$ 826	\$ 885	\$ 947	\$ 5,267	\$ 9,418
1.8.1 SUBCONTRACT PASS-THROUGH	\$ 721	\$ 772	\$ 826	\$ 885	\$ 947	\$ 5,267	\$ 9,418

Table continued below...

Appendix A – Cost Detail Cont ...

USING THE AFOREMENTIONED INPUTS AND THE ORGANIZATIONAL DATA PROVIDED BY IMCEN, THE MODEL CALCULATES THE FOLLOWING DETAILED POINT ESTIMATE FOR THE GOVERNMENT INTEGRATOR ALTERNATIVE...

Table continued from above...

<i>(In Thousands of Inflated dollars)</i>	FY04	FY05	FY06	FY07	FY08	FY09-13	FY04-13
Government Integrator - Point Estimate	\$ 43,336	\$ 48,866	\$ 52,305	\$ 55,986	\$ 59,926	\$ 319,732	\$ 580,151
1.0 Direct Labor Costs	\$ 43,336	\$ 46,386	\$ 49,650	\$ 53,144	\$ 56,884	\$ 316,476	\$ 565,875
2.0 Indirect Costs	\$ 0	\$ 2,481	\$ 2,655	\$ 2,842	\$ 3,042	\$ 3,256	\$ 14,276
2.1 New Contractor Turnover Costs	\$ 0	\$ 1,799	\$ 1,925	\$ 2,061	\$ 2,206	\$ 2,361	\$ 10,351
2.1.1 TRANSITION COSTS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
2.1.2 NATURAL GROWTH COSTS	\$ 0	\$ 1,799	\$ 1,925	\$ 2,061	\$ 2,206	\$ 2,361	\$ 10,351
2.2 New Government Turnover Costs	\$ 0	\$ 682	\$ 730	\$ 781	\$ 836	\$ 895	\$ 3,925
2.2.1 TRANSITION COSTS	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
2.2.2 NATURAL GROWTH COSTS	\$ 0	\$ 682	\$ 730	\$ 781	\$ 836	\$ 895	\$ 3,925
Total Government Integrator (Inflated)	\$ 43,336	\$ 48,866	\$ 52,305	\$ 55,986	\$ 59,926	\$ 319,732	\$ 580,151
Total Government Integrator (Constant FY04)	\$ 43,336	\$ 47,936	\$ 50,333	\$ 52,850	\$ 55,492	\$ 279,504	\$ 529,452
Total Government Integrator (Discounted)	\$ 43,336	\$ 46,495	\$ 47,352	\$ 48,225	\$ 49,113	\$ 226,082	\$ 460,604

<i>(In Thousands of Inflated dollars)</i>	FY04	FY05	FY06	FY07	FY08	FY09-13	FY04-13
Contractor Integrator - Point Estimate	\$ 47,665	\$ 52,062	\$ 50,814	\$ 54,390	\$ 58,217	\$ 310,664	\$ 573,811
1.0 Direct Labor Costs	\$ 42,729	\$ 45,072	\$ 48,244	\$ 51,639	\$ 55,272	\$ 307,512	\$ 550,467
1.1 Customer Support Total	\$ 12,971	\$ 14,517	\$ 15,538	\$ 16,632	\$ 17,802	\$ 99,044	\$ 176,505
1.1.1 CUSTOMER SUPPORT	\$ 974	\$ 2,105	\$ 2,253	\$ 2,412	\$ 2,582	\$ 14,363	\$ 24,688
1.1.2 CUSTOMER ASSISTANCE	\$ 7,419	\$ 4,710	\$ 5,041	\$ 5,396	\$ 5,776	\$ 32,133	\$ 60,474
1.1.3 TECHNICAL SUPPORT	\$ 4,578	\$ 7,702	\$ 8,244	\$ 8,824	\$ 9,445	\$ 52,549	\$ 91,342
1.2 System Support Services Total	\$ 4,124	\$ 4,335	\$ 4,641	\$ 4,967	\$ 5,317	\$ 29,579	\$ 52,963
1.2.1 SYS SPT SVC	\$ 174	\$ 186	\$ 199	\$ 213	\$ 228	\$ 1,268	\$ 2,267
1.2.2 TECHNOLOGY ASSESS	\$ 1,437	\$ 1,567	\$ 1,677	\$ 1,795	\$ 1,921	\$ 10,689	\$ 19,085
1.2.3 PERFORMANCE ASSESS	\$ 1,736	\$ 1,810	\$ 1,937	\$ 2,074	\$ 2,220	\$ 12,349	\$ 22,125
1.2.4 PLANS & POLICY	\$ 777	\$ 773	\$ 828	\$ 886	\$ 948	\$ 5,275	\$ 9,486
1.3 Reqmts, Analysis, & Design Total	\$ 5,731	\$ 5,845	\$ 6,256	\$ 6,696	\$ 7,168	\$ 39,878	\$ 71,574
1.3.1 RQMTS ANAL & DESIGN	\$ 148	\$ 158	\$ 169	\$ 181	\$ 194	\$ 1,078	\$ 1,927
1.3.2 CUSTOMER LIAISON	\$ 5,028	\$ 5,132	\$ 5,494	\$ 5,880	\$ 6,294	\$ 35,017	\$ 62,845
1.3.3 CONFIGURATION MGMT	\$ 555	\$ 555	\$ 594	\$ 635	\$ 680	\$ 3,784	\$ 6,802
1.4 Enterprise Services Total	\$ 6,474	\$ 5,335	\$ 5,711	\$ 6,113	\$ 6,543	\$ 36,401	\$ 66,577
1.4.1 ENTERPRISE SERVICES	\$ 663	\$ 1,298	\$ 1,390	\$ 1,487	\$ 1,592	\$ 8,858	\$ 15,288
1.4.2 ARCHITECTURE & ENGR	\$ 381	\$ 414	\$ 443	\$ 474	\$ 508	\$ 2,825	\$ 5,045
1.4.3 SERVER OPERATIONS	\$ 5,182	\$ 3,337	\$ 3,572	\$ 3,824	\$ 4,093	\$ 22,770	\$ 42,777
1.4.4 OPERATIONS SUPPORT	\$ 248	\$ 286	\$ 306	\$ 327	\$ 350	\$ 1,949	\$ 3,466
1.5 Business Applications Total	\$ 8,021	\$ 8,980	\$ 9,612	\$ 10,289	\$ 11,013	\$ 61,271	\$ 109,187
1.5.1 BUSINESS APPLICATIONS	\$ 567	\$ 1,066	\$ 1,141	\$ 1,221	\$ 1,307	\$ 7,270	\$ 12,571
1.5.2 BUSINESS APPS MGT	\$ 2,726	\$ 2,968	\$ 3,177	\$ 3,400	\$ 3,640	\$ 20,250	\$ 36,160
1.5.3 BUSINESS APPS DEV	\$ 4,121	\$ 4,297	\$ 4,599	\$ 4,923	\$ 5,269	\$ 29,317	\$ 52,526
1.5.4 KNOWLEDGE MGT	\$ 607	\$ 650	\$ 696	\$ 745	\$ 797	\$ 4,435	\$ 7,930
1.6 Installation Services Total	\$ 2,828	\$ 3,347	\$ 3,582	\$ 3,834	\$ 4,104	\$ 22,833	\$ 40,529
1.6.1 INSTALLATION SVCS	\$ 394	\$ 716	\$ 766	\$ 820	\$ 878	\$ 4,886	\$ 8,461
1.6.2 VTC & SPECIAL INSTALLS	\$ 794	\$ 875	\$ 937	\$ 1,003	\$ 1,073	\$ 5,971	\$ 10,653
1.6.3 TELEPHONE SERVICES	\$ 460	\$ 492	\$ 527	\$ 564	\$ 603	\$ 3,357	\$ 6,003
1.6.4 IMPLEMENTATIONS	\$ 1,180	\$ 1,263	\$ 1,352	\$ 1,447	\$ 1,549	\$ 8,620	\$ 15,412
1.7 IMCEN Directorate Total	\$ 1,803	\$ 1,821	\$ 1,949	\$ 2,086	\$ 2,233	\$ 12,422	\$ 22,313
1.7.1 DIR OF INFO MGT	\$ 625	\$ 669	\$ 717	\$ 767	\$ 821	\$ 4,567	\$ 8,166
1.7.2 HQDA IT GOVERNANCE	\$ 496	\$ 503	\$ 538	\$ 576	\$ 617	\$ 3,431	\$ 6,161
1.7.3 RESOURCE MGMT	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
1.7.4 INFO ASSURANCE	\$ 681	\$ 648	\$ 694	\$ 743	\$ 795	\$ 4,423	\$ 7,985
1.8 Additional Costs	\$ 777	\$ 892	\$ 954	\$ 1,021	\$ 1,093	\$ 6,083	\$ 10,820
1.8.1 SUBCONTRACT PASS-THROUGH	\$ 777	\$ 892	\$ 954	\$ 1,021	\$ 1,093	\$ 6,083	\$ 10,820

Table continued below...

Appendix A – Cost Detail Cont ...

USING THE AFOREMENTIONED INPUTS AND THE ORGANIZATIONAL DATA PROVIDED BY IMCEN, THE MODEL CALCULATES THE FOLLOWING DETAILED POINT ESTIMATE FOR THE CONTRACTOR INTEGRATOR ALTERNATIVE...

Table continued from above...

<i>(In Thousands of Inflated dollars)</i>	FY04	FY05	FY06	FY07	FY08	FY09-13	FY04-13
Contractor Integrator - Point Estimate	\$ 47,665	\$ 52,062	\$ 50,814	\$ 54,390	\$ 58,217	\$ 310,664	\$ 573,811
1.0 Direct Labor Costs	\$ 42,729	\$ 45,072	\$ 48,244	\$ 51,639	\$ 55,272	\$ 307,512	\$ 550,467
2.0 Indirect Costs	\$ 4,936	\$ 6,990	\$ 2,570	\$ 2,751	\$ 2,945	\$ 3,152	\$ 23,345
2.1 New Contractor Turnover Costs	\$ 2,564	\$ 4,019	\$ 1,869	\$ 2,001	\$ 2,142	\$ 2,292	\$ 14,888
2.1.1 TRANSITION COSTS	\$ 2,564	\$ 2,800	\$ 0	\$ 0	\$ 0	\$ 0	\$ 5,364
2.1.2 NATURAL GROWTH COSTS	\$ 0	\$ 1,219	\$ 1,869	\$ 2,001	\$ 2,142	\$ 2,292	\$ 9,524
2.2 New Government Turnover Costs	\$ 2,372	\$ 2,971	\$ 701	\$ 750	\$ 803	\$ 860	\$ 8,457
2.2.1 TRANSITION COSTS	\$ 2,372	\$ 2,590	\$ 0	\$ 0	\$ 0	\$ 0	\$ 4,962
2.2.2 NATURAL GROWTH COSTS	\$ 0	\$ 381	\$ 701	\$ 750	\$ 803	\$ 860	\$ 3,495
Total Contractor Integrator (Inflated)	\$ 47,665	\$ 52,062	\$ 50,814	\$ 54,390	\$ 58,217	\$ 310,664	\$ 573,811
Total Contractor Integrator (Constant FY04)	\$ 47,665	\$ 51,071	\$ 48,898	\$ 51,343	\$ 53,910	\$ 271,576	\$ 524,464
Total Contractor Integrator (Discounted)	\$ 47,665	\$ 49,536	\$ 46,002	\$ 46,850	\$ 47,713	\$ 219,670	\$ 457,435

Appendix A – Cost Detail Cont ...

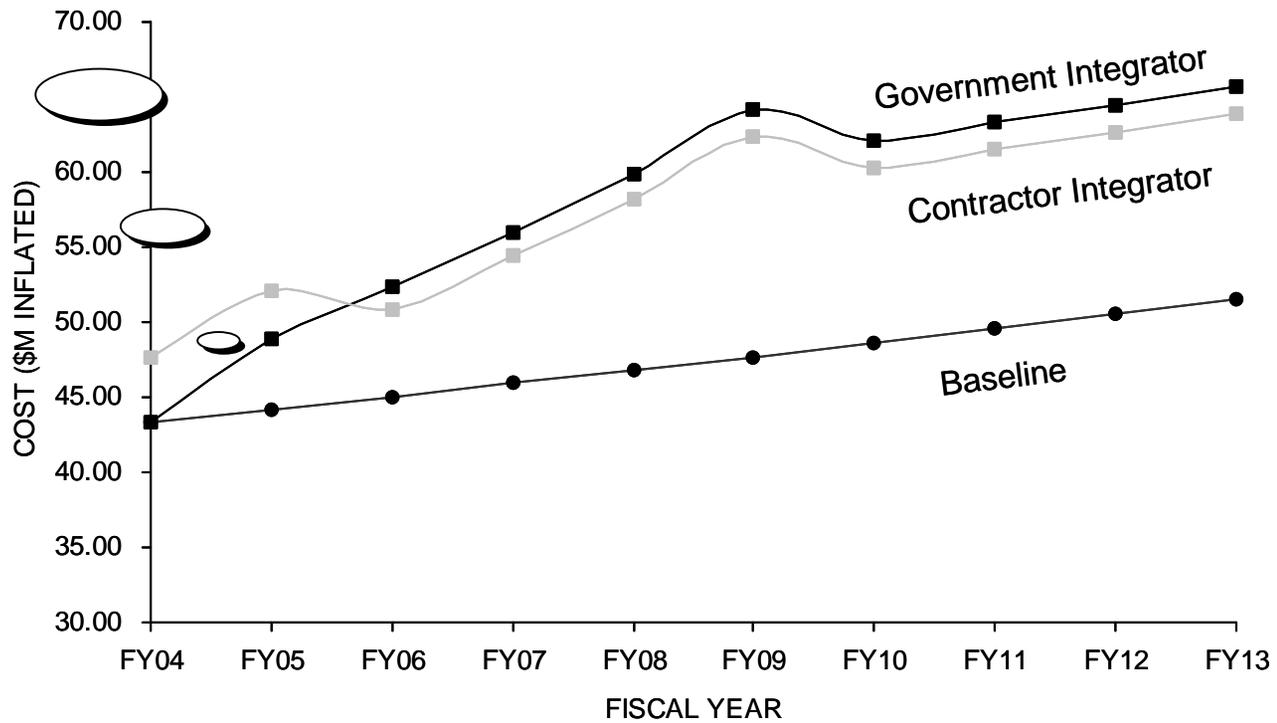
A DETAILED BREAKOUT OF THE QUANTITATIVE BENEFITS FOR THE CONTRACTOR INTEGRATOR ALTERNATIVE...

<i>(In Thousands of Inflated dollars)</i>	FY04	FY05	FY06	FY07	FY08	FY09-13	FY04-13
CI Direct Savings - Point Estimate	\$ 608	\$ 1,314	\$ 1,406	\$ 1,505	\$ 1,611	\$ 8,964	\$ 15,408
3.0 Direct Labor Savings	\$ 608	\$ 1,314	\$ 1,406	\$ 1,505	\$ 1,611	\$ 8,964	\$ 15,408
3.1 Program Management Savings	\$ 811	\$ 1,753	\$ 1,876	\$ 2,008	\$ 2,149	\$ 11,959	\$ 20,556
3.2 Industry Standards Implementation	\$ 1,052	\$ 2,275	\$ 2,435	\$ 2,606	\$ 2,789	\$ 15,518	\$ 26,675
3.2.1 CUSTOMER ASSISTANCE	\$ 2,191	\$ 4,737	\$ 5,070	\$ 5,427	\$ 5,809	\$ 32,319	\$ 55,553
3.2.2 TECHNICAL SUPPORT	\$ (2,863)	\$ (6,190)	\$ (6,626)	\$ (7,092)	\$ (7,591)	\$ (42,236)	\$ (72,599)
3.2.3 SERVER OPERATIONS	\$ 1,724	\$ 3,728	\$ 3,990	\$ 4,271	\$ 4,572	\$ 25,435	\$ 43,720
3.3 Other Labor Savings	\$ (1,255)	\$ (2,713)	\$ (2,904)	\$ (3,109)	\$ (3,328)	\$ (18,513)	\$ (31,822)
Total Contractor Integrator (Inflated)	\$ 608	\$ 1,314	\$ 1,406	\$ 1,505	\$ 1,611	\$ 8,964	\$ 15,408
Total Contractor Integrator (Constant FY04)	\$ 608	\$ 1,289	\$ 1,353	\$ 1,421	\$ 1,492	\$ 7,833	\$ 13,996
Total Contractor Integrator (Discounted)	\$ 608	\$ 1,250	\$ 1,273	\$ 1,297	\$ 1,320	\$ 6,332	\$ 12,079

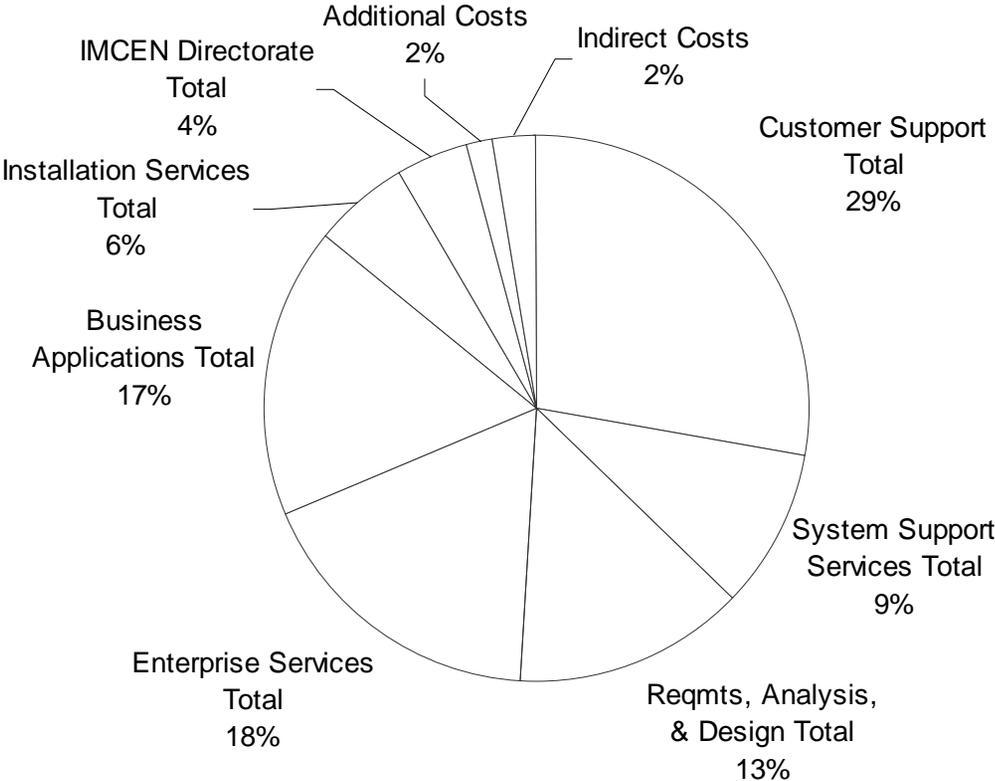
IF IMCEN TRANSITIONS TO THE CI ALTERNATIVE IN FY2004 AND FY2005, THEY WILL INCUR SUBSTANTIAL LEARNING CURVE COSTS FOR THEIR NEW EMPLOYEES...

The CI Alternative is only more expensive than the GI Alternative in FY04 and FY05 when new contractors result in losses of productivity...

POINT ESTIMATE OF COSTS BY ALTERNATIVE

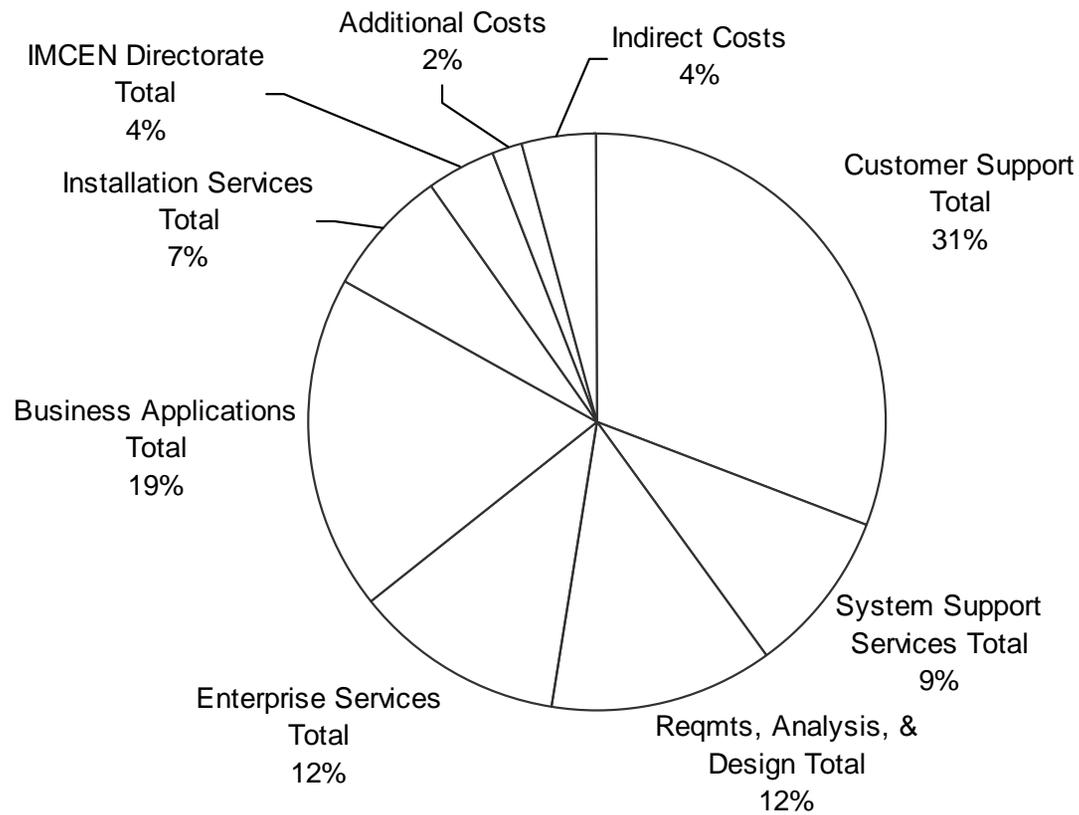


TOTAL COST BREAKDOWN OF THE GOVERNMENT INTEGRATOR



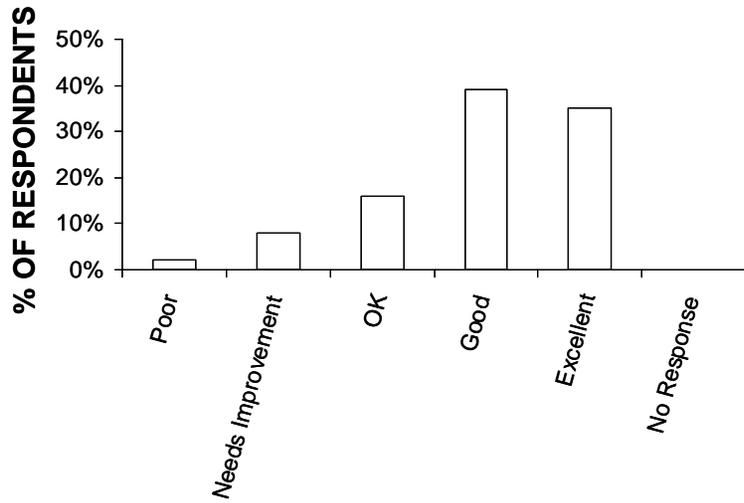
IN BOTH THE GI AND CI ALTERNATIVES, THE PROPORTIONS OF THE DIFFERENT ORGANIZATIONAL UNITS STAY ABOUT THE SAME...

TOTAL COST BREAKDOWN OF THE CONTRACTOR INTEGRATOR

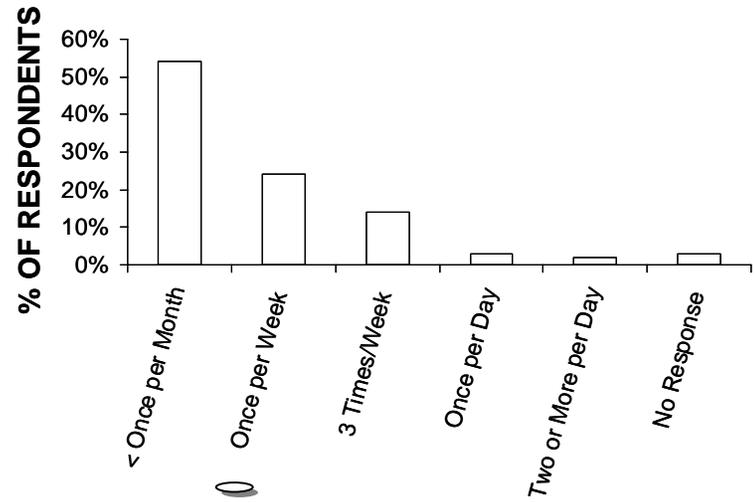


APPENDIX B. END-USER SURVEY RESULTS

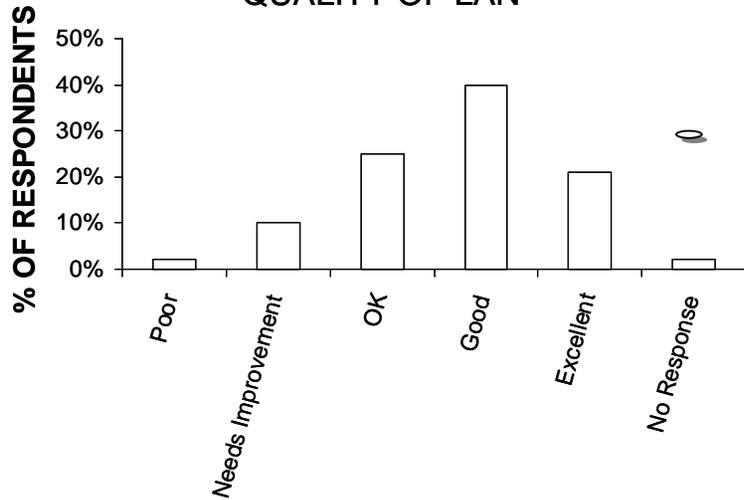
QUALITY OF PCs OR WORKSTATIONS



FREQUENCY OF REBOOT/RESTART



QUALITY OF LAN



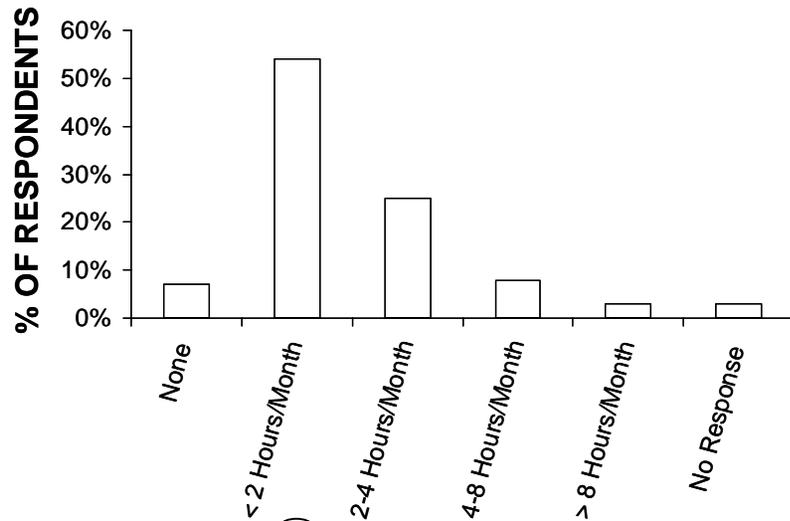
Number of times necessary to reboot or restart the computer due to system crashes or freezes

In terms of speed, stability and reliability

OVERALL, END-USERS APPEAR SATISFIED WITH THEIR WORKSTATIONS AND THE IMCEN INFRASTRUCTURE; THE MINIMUM DOWNTIME THAT DOES OCCUR IS USED CONSTRUCTIVELY...

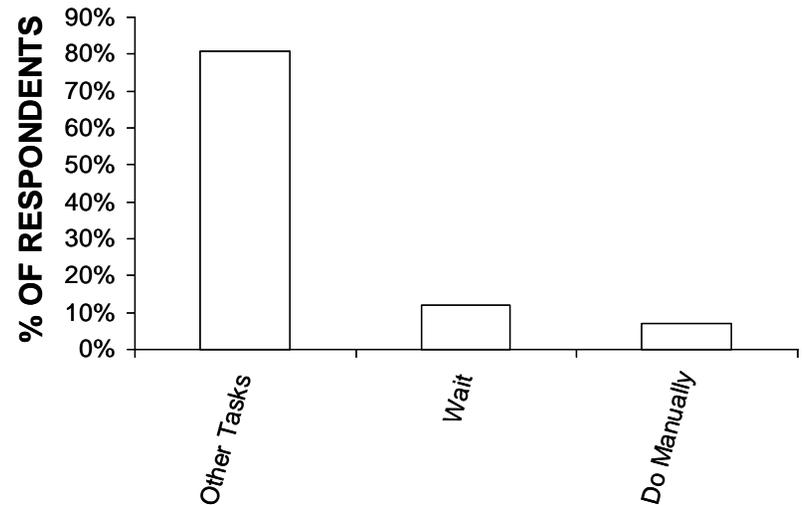
Includes service/service desk calls and wait time. Specific causes of downtime were not captured by this survey. Downtime could be the result of local (LAN, PC, etc.) or remote (base-managed e-mail, WAN connectivity, etc.) problems

HOURS PER MONTH OF DOWNTIME



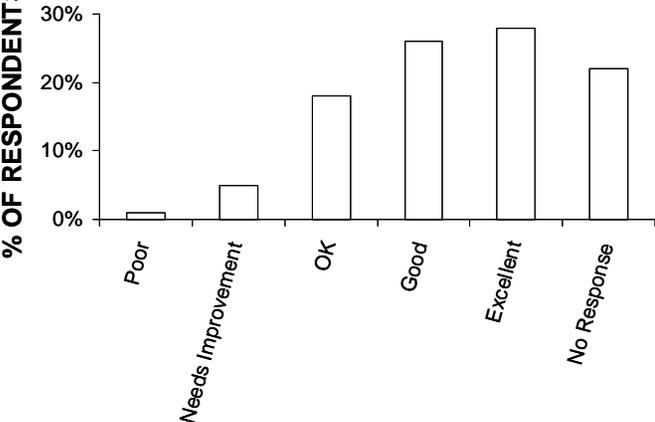
2 hours downtime per month (assuming 160 core hours per month) = >98.75% availability

MOST COMMON ACTIVITY WHEN COMPUTER IS DOWN

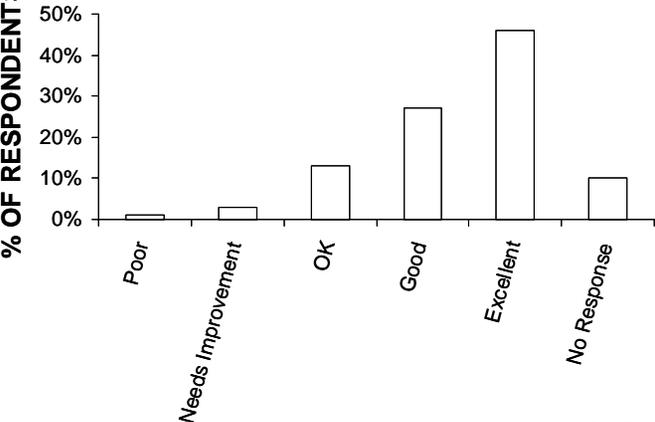


IMCEN USERS APPEAR TO BE VERY SATISFIED WITH THEIR TECHNICAL SUPPORT ...

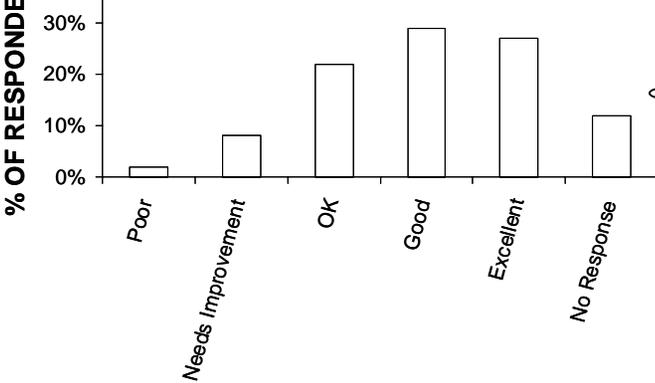
QUALITY OF HELP DESK PHONE SUPPORT



QUALITY OF OFFICIAL DESKTOP SUPPORT



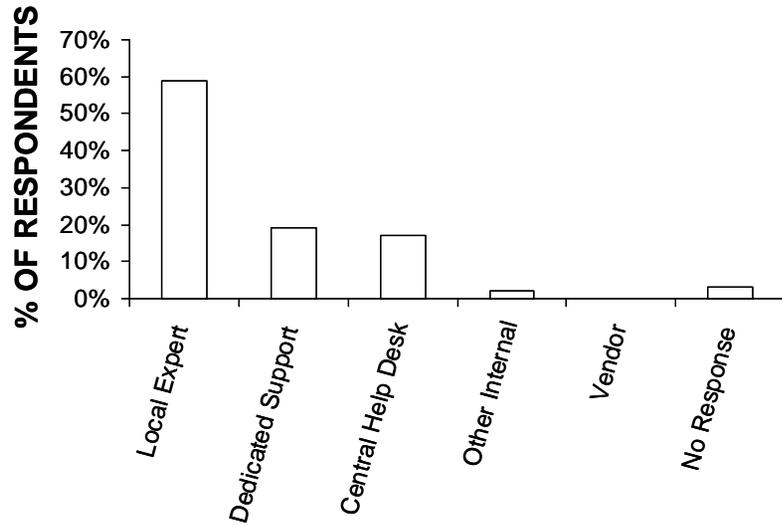
GENERAL QUALITY OF COMMUNICATION WITH THE IS DEPARTMENT



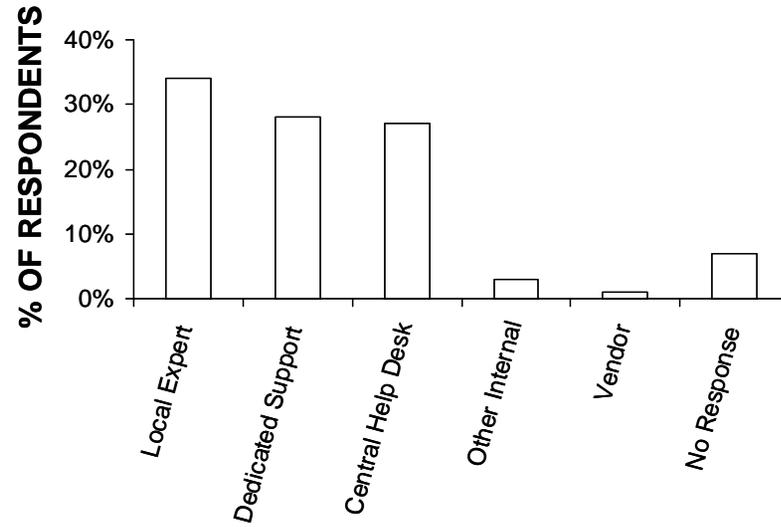
Includes communications about software standards, outages, tips and tricks, etc.

These survey results would seem to indicate that peer support is most likely to be requested when attempting to perform job functions... rather than when encountering technical problems

FIRST SOURCE FOR "HOW-TO" ISSUES



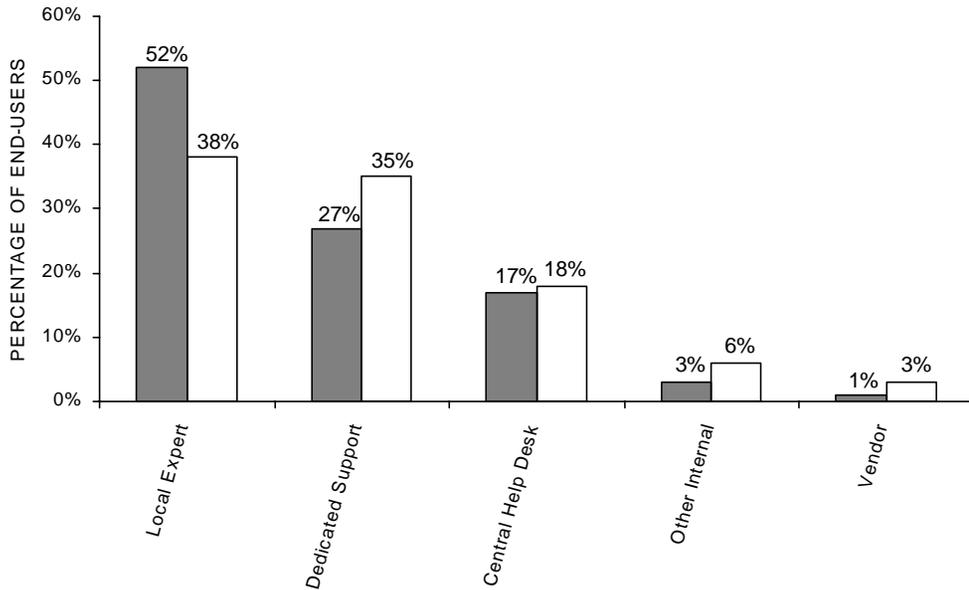
BEST SOURCE FOR "HOW-TO" ISSUES



IMCEN END-USERS ASK THE HELP DESK WHEN THEY NEED TECHNICAL ADVICE AND THEIR CO-WORKERS (SEE FACER) WHEN THEY NEED "HOW-TO" ADVICE...

IMCEN end-users prefer their central help desk (48%) in marked contrast to industry trends (18%)

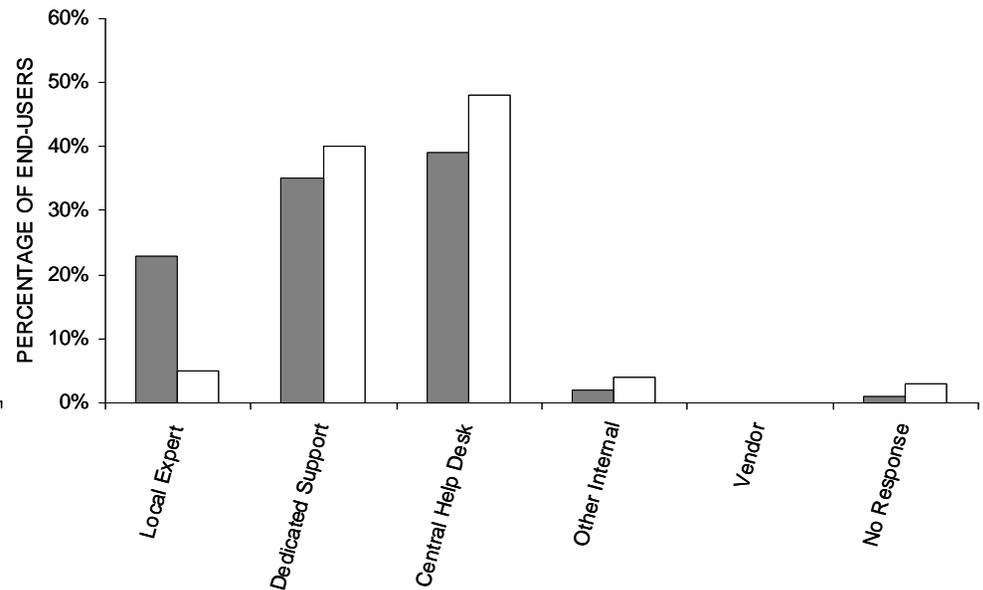
END-USER SUPPORT PREFERENCES
INDUSTRY



Source: GartnerGroup

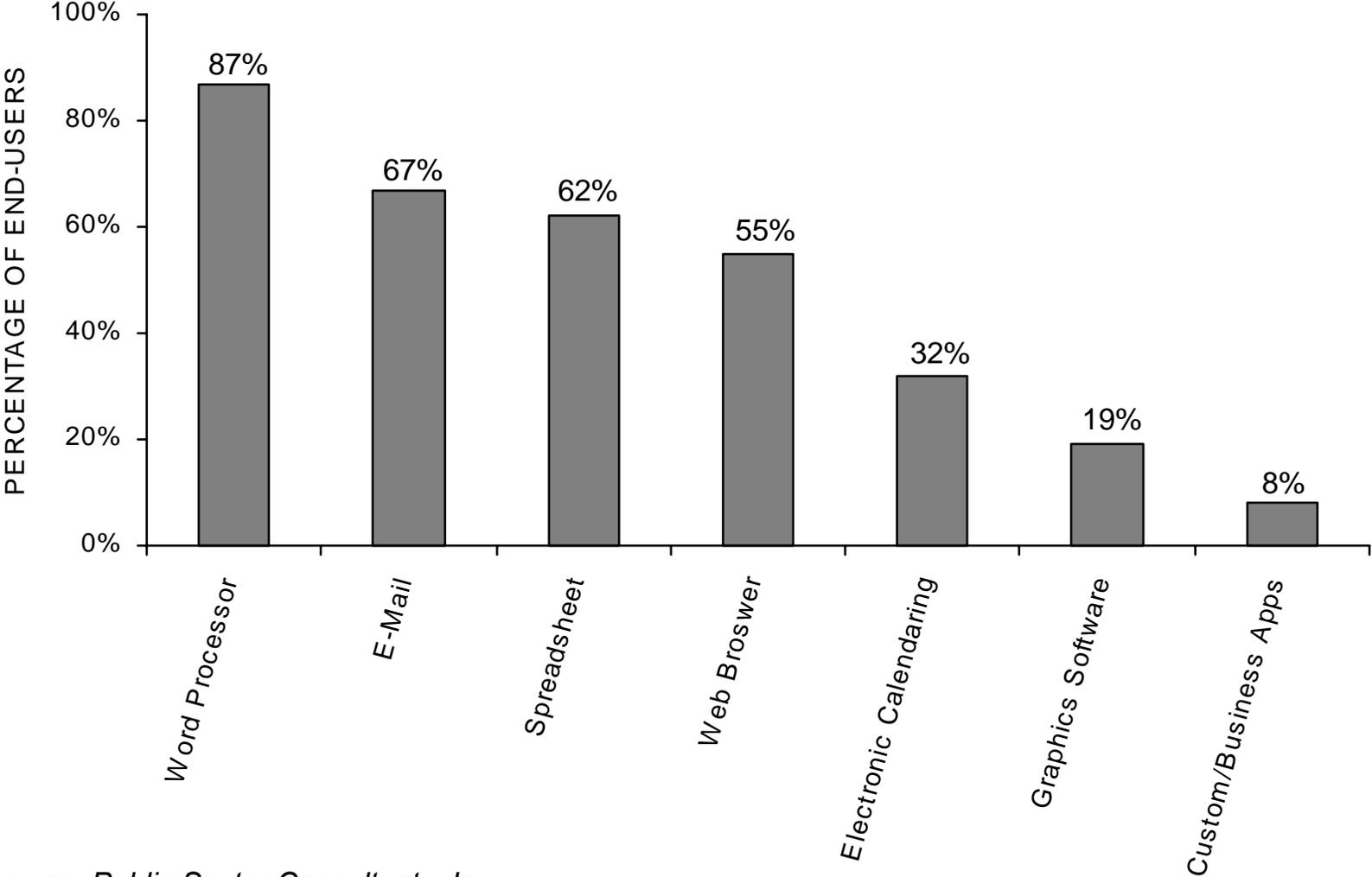
■ First Choice □ Best Source

END-USER SUPPORT PREFERENCES
IMCEN



■ First Choice □ Best Source

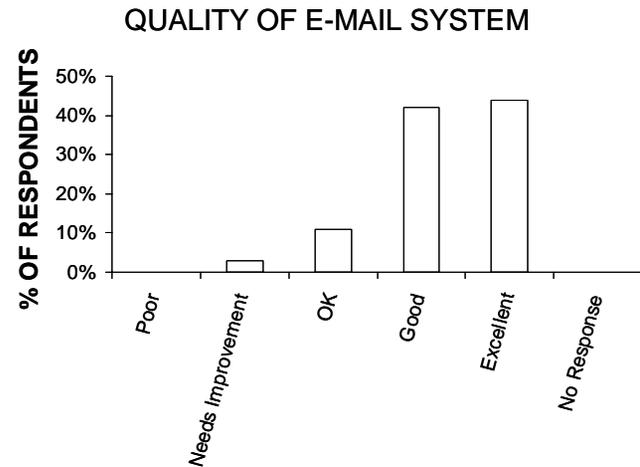
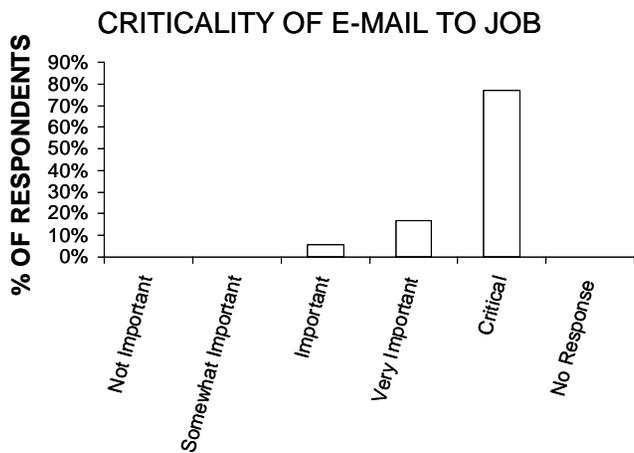
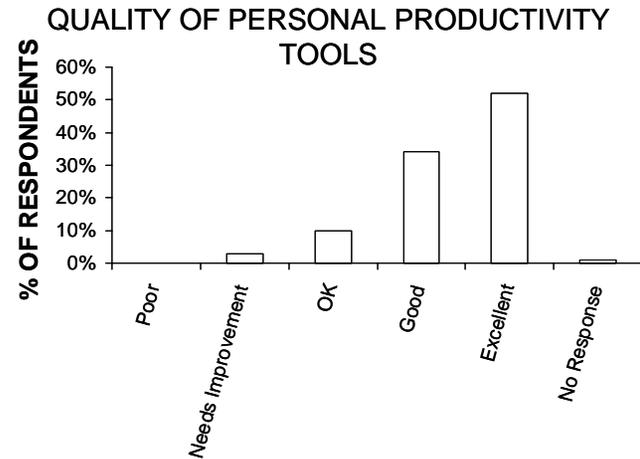
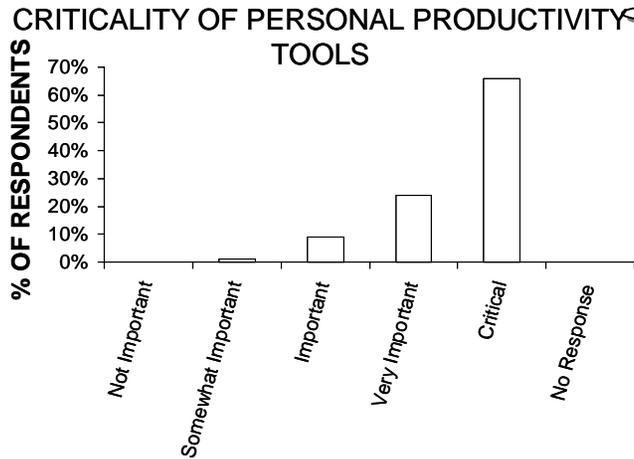
END-USER FREQUENCY OF DAILY USE OF APPLICATIONS



Source: Public Sector Consultants, Inc.

IMCEN END-USERS REFLECT INDUSTRY TRENDS IN THEIR RATING OF THE IMPORTANCE OF SOFTWARE TOOLS AND E-MAIL...

Examples: word processor, spreadsheet, etc.



HOW MUCH IS YOUR BUSINESS INFORMATION WORTH?

Costs of the Loss of Business Information

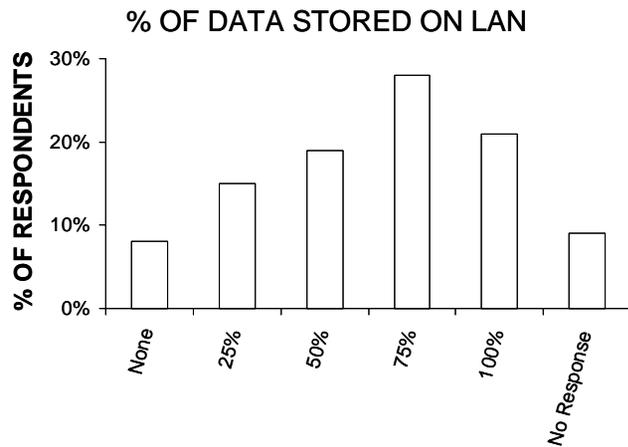
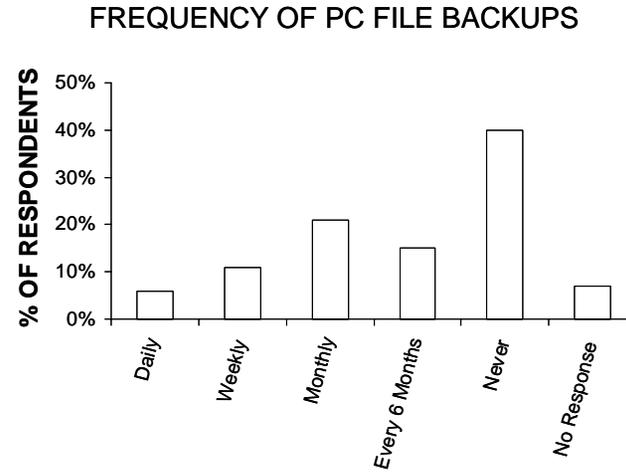
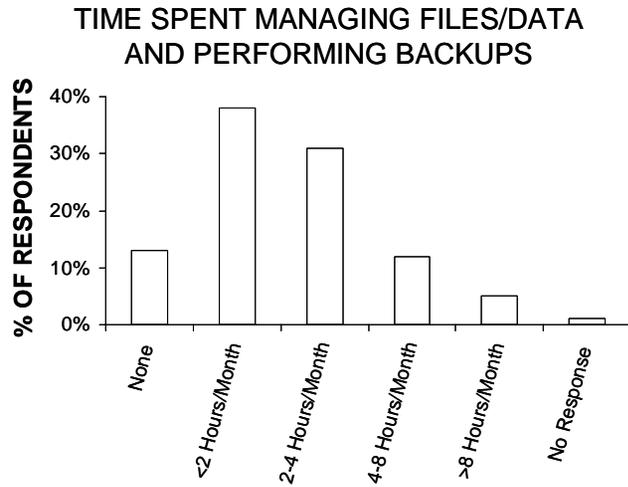
Replacement Costs	Replacement costs are probably the easiest to understand. Depending on the type of data lost, your business may have to repurchase information or reconstruct it. Repurchase is straightforward, if expensive, but reconstruction is worse: it may mean working from paper source documents to key data back in or recollecting information from its original source inside or outside your business. Data is lost more often than most businesses (or IT staff) will admit—all that's needed is an untested automated procedure
Unavailability Costs	Unavailability—or not having your business' information available—is where the real damage occurs. Your business could potentially grind to a halt, affecting your relationship with suppliers (through accounts payable) and causing problems with your credit rating. The same lack of information could also wreak havoc with your cash flow (through accounts receivable) and affect market share... Tack on civil, criminal and regulatory penalties—not forgetting hefty legal fees—and a lack of critical information could put your company out of business
Disclosure Costs	Sensitive information, if disclosed, could have negative consequences for your business. Simple oversights could make your company liable for possible additional civil, criminal or regulatory penalties or create the potential for blackmail. More ominously, your business could lose its competitive advantage or market share if strategic plans or trade secrets become publicly known

Consequences of the Loss of Business Information

Many people are adversely affected when business information is lost, unavailable or inappropriately disclosed. Employees, vendors, shareholders and customers may all seek legal remedies from your company. Worse yet, they may seek compensation from your company's officers and directors personally as an outgrowth of their responsibility to exercise due diligence to preserve a company's assets. This potential liability is one of the main reasons IT staff have a duty to ensure that appropriate policies, procedures and plans are in place to protect a business' information assets

Source: Comprehensive Network Services Incorporated

IMCEN'S EXPOSURE APPEARS TO BE LIMITED BECAUSE MUCH OF THE USERS' DATA IS STORED ON THE LAN...



More than 1/3 of end-users report never backing up their PCs, however, it appears much of the users' data is stored on the LAN, where it is automatically backed up

APPENDIX C. SENSITIVITY ANALYSIS

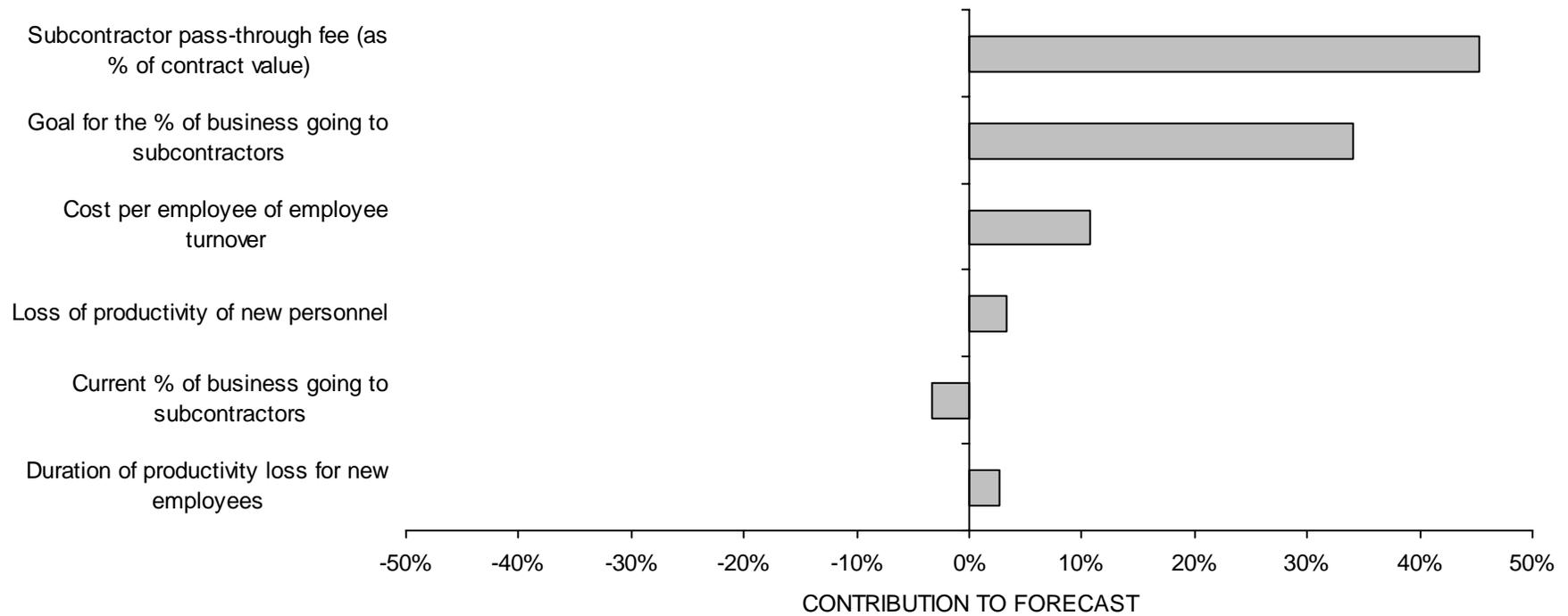
SENSITIVITY ANALYSIS

When performing the Monte Carlo analysis on the cost estimate, Crystal Ball® captures the sensitivity of the variable inputs. The overall sensitivity of a variable is a combination of two factors: the variable's uncertainty (i.e., the size of the range of the variable) and the measured effect a change in the variable has on the output of the model.

Variables are listed down the left side, starting with the variables with the highest sensitivity. The direction of each variable's contribution to the target forecast is also displayed. Variables with positive contributions have bars on the right side of the zero line to reflect a direct relationship between the variable and the output of the model (i.e., as the variable goes *up*, the output cost goes *up*). Variables with negative contributions have bars on the left of the zero line to reflect an inverse relationship between the variable and the output of the model (i.e., as the variable goes *up*, the output cost goes *down*).

SENSITIVITY ANALYSIS FOR THE GOVERNMENT INTEGRATOR ALTERNATIVE...

SENSITIVITY ANALYSIS FOR THE GI ALTERNATIVE



SENSITIVITY ANALYSIS FOR THE CONTRACTOR INTEGRATOR ALTERNATIVE...

SENSITIVITY ANALYSIS FOR THE CI ALTERNATIVE

