R+D - ARI - 2

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1 Business Area Definition

1.1 Description

Business Area: This plan applies to the U.S. Army Research Institute (ARI) for the Behavioral and Social Sciences, 5001 Eisenhower Avenue, Alexandria, VA 22333-5600. The point of contact for the plan is Dr. Harold Wagner, (703) 617-8622 (phone) or (703) 617-0471 (fax).

1.2 Mission Statement

The mission of the U. S. Army Research Institute is to maximize individual and unit performance and readiness to meet the full range of worldwide Army missions through advances in behavioral and social sciences.

1.3 Organizational Structure

The U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) is the Army's lead laboratory and developing agency for training, leader development and soldier (TLS) science and technology (S&T). Currently, as a directorate in the U.S. Total Army Personnel Command (PERSCOM), ARI leads the Army's TLS research and development (R&D) efforts supporting three of the six Chief of Staff imperatives for a trained and ready Army—Quality People, Leader Development, and Training.

ARI conducts behavioral and social science research in support of current and future Army TLS needs. Behavioral research is of vital importance to the Army in that it seeks to better understand, measure, predict and change performance. Much of ARI R&D leads to new methods for improving individual, unit, and leader performance, often through the cost-effective use of emerging simulation and training technologies. ARI research seeks to understand the underlying skills, knowledge and experiences that are important for effective technical performance and planning, decision making and leadership. In addition, ARI researchers serve as objective, knowledgeable sources for senior Army decision makers in the analysis and assessment of policies and programs.

1.3.1 Employees: 124 civilian, 6 military.

1.3.2 Management Structure

The ARI management structure includes a Director and Technical Director who exercise management control through subordinate research unit and office chiefs as shown in Figure 1-1. They are supported by small staff offices that provide resource management, human relations management and information technology services to the entire organization.

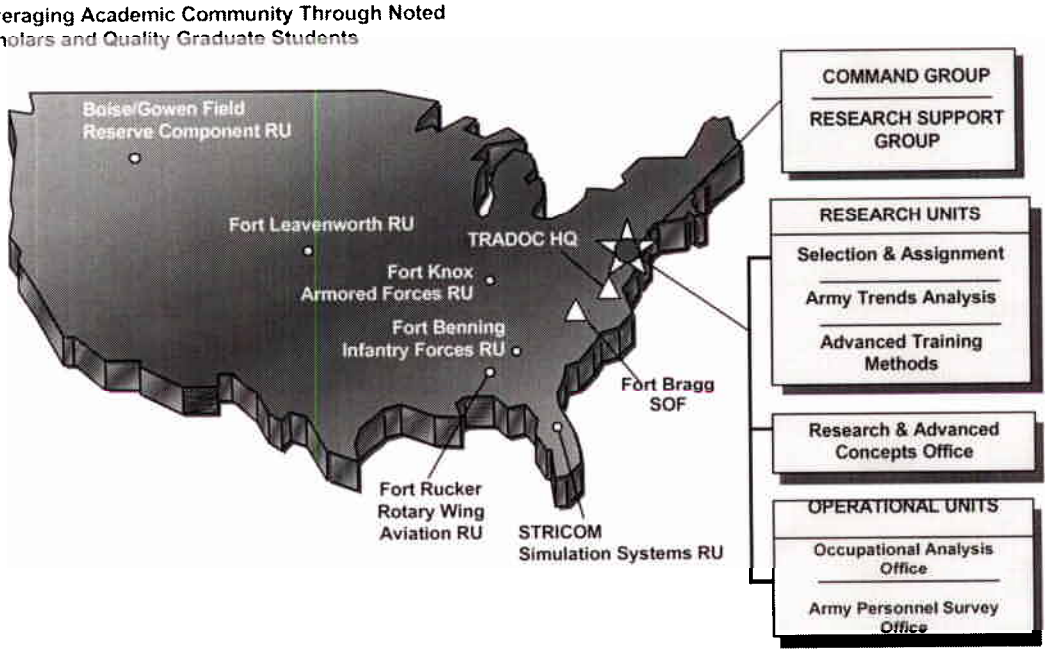
1.3.3 Organization Chart

Figure 1-1 shows ARI's locations in Alexandria, Virginia and at Army installations. Science and Technology (S&T) programs are executed through ten Research Units and Offices. In addition, the Research and Advanced Concepts Office (RACO) manages the ARI Basic Research Program that focuses on issues of the future, primarily through university-based efforts. ARI also has two offices that provide operational support to the Army and one that provides coordination and liaison. Operational efforts are provided by: (1) the Army Personnel Survey Office (APSO) that develops and fields Army-wide surveys and provides expertise on personnel survey development and methodology to other Army and DoD agencies; and (2) the Occupational Analysis Office (OAO) that develops analytical tools and methods and conducts complex Army-wide occupational/job surveys and analyses. Coordination and liaison with the U.S. Army Training and Doctrine Command (TRADOC) is provided by a Scientific Coordination Office located at Fort Monroe, Virginia. A staff directory is provided at Appendix A.

Figure 1-1 *ARI Organization and Locations*

Structure Facilitates:

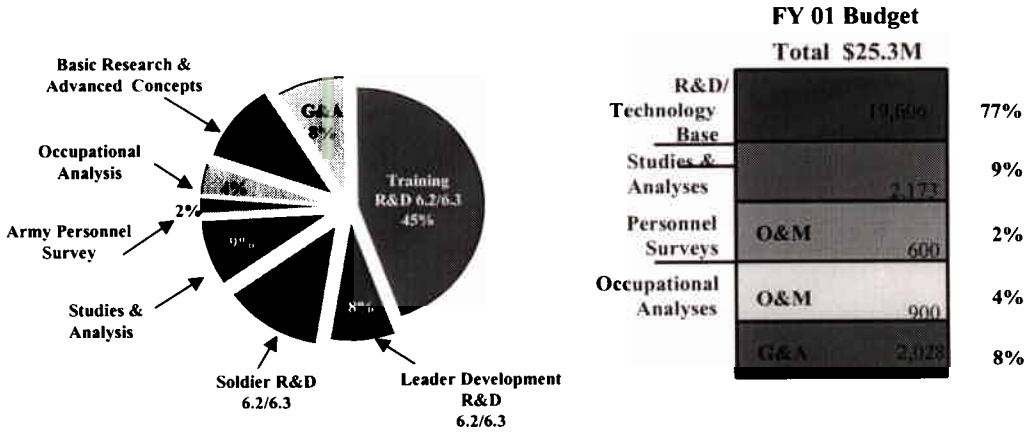
- Program Execution
- Direct Support of Major Proponents
- Transition of Research Products
- Leveraging Academic Community Through Noted Scholars and Quality Graduate Students



1.4 ARI Organization Business Area Funding Sources

Figure 1-2 below shows the percentages of the total ARI budget devoted to each of its program components. The ARI budget for FY2001 is as follows:

Figure 1-2 *FY2001 Budget*



1.5 Products and Services

ARI's approved training, leader development, and soldier program consists of:

- Science and Technology (S&T) Program: Research and Development efforts addressing mid-term (3-6) Army needs. The S&T program includes

development of innovative technologies and strategies for training the digital soldier, preparing units for 21st century missions, maximizing simulation-based training, and capitalizing on distance learning. The goal is to transform Army training to better prepare soldiers and units to win on future battlefields. The leader development program focuses on methods to support decision-making and quick thinking on the battlefield, providing fast-track development of Army leaders, and developing digital command staff. The goal is to leverage cognitive and instructional technology in ways that improve critical thinking skills and the adaptability needed by future leaders. The soldier program includes developing new technologies to recruit, assign and sustain quality personnel. The goal is to maintain and enhance the quality of the Army through research on managing attrition and retention, improving selection, assignment, and promotion procedures, and understanding soldier concerns.

- Study and Analysis Program: Short-term projects responsive to annual requests for information on specific personnel and training issues.
- Special Projects: One-time efforts performed in response to "hot topics" identified by senior Army leaders.
- Basic Research Program: Basic research dealing with scientific questions of interest to the Army.
- Occupational Analysis Program: Application of known principles and analytical techniques to the improvement of Army job structures.
- Army Personnel Survey Program: Application of data collection technology to the measurement of attitudes and opinions.

1.6 Major Customers

In March 1999, ARI conducted a stakeholder analysis. This analysis identified 77 potential stakeholders. Among these, the following major customers were identified:

- Army National Guard
- Assistant Secretary of the Army for Acquisition, Logistics and Technology
- Army Deputy Chief of Staff for Operations

- Army Deputy Chief of Staff for Personnel
- Deputy Under Secretary of Defense for Science and Technology
- JFK Special Warfare Center and School
- Secretary of the Army
- U.S. Army Simulation Training Instrumentation Command
- U.S. Army Special Operations Command
- U.S. Army Total Personnel Command
- U.S. Army Training and Doctrine Command
- U.S. Army Command and General Staff College

2 Baseline Cost Management/ABC Efforts

2.1 Overview of Current Initiatives

DISTRIBUTE BUDGET
EXECUTE BUDGET
TRACK POSITIONS

Current initiatives include distribution of cost targets to research unit/office level in accordance with the approved program and quarterly Program Budget Advisory Committee (PBAC) review of budget execution by the Institute Director and Technical Director. The plan is adjusted as needed to accomplish changes in workload. Civilian positions are essentially fixed for the short run. Adjustments are made to annual plan and funding targets as approved by the Director.

TRANSFORMATION PLAN
STRATEGIC PROGRAM PLAN
+ BUSINESS PLAN
+ STAKEHOLDER ADVISORY BOARD

ARI is currently developing a transformation plan with the objectives of becoming more cost effective and responsive to the needs of the Army. The planning process includes development of a Strategic Program Plan and a Business Plan in conjunction with a Stakeholders Advisory Board. The board will review the plans in light of the findings of the Stakeholders Analysis already completed and consider alternative strategies to accomplish strategic objectives in a manner that will maximize stakeholder satisfaction.

2.1.1 Current ABC/M Efforts

ABC TECH? RECENT!

HOW ABOUT A TWO-DAY CM COURSE NOW?

A three-day training workshop on ABC/M, including rapid prototyping, was conducted at the ARI Headquarters at 5001 Eisenhower Avenue, Alexandria, Virginia from October 24 to 26, 2000. The purpose of the workshop was to train key managers on ABC/M methodology and to determine if it could provide useful information to ARI management. The workgroup was attended primarily by ARI research unit and office managers. An initial high-level rapid prototype of ARI processes was constructed by the workgroup. This prototype is being improved to better understand what activities are driving the consumption of resources in ARI. Prior to building the initial .5 ARI model, the workgroup recommended the purposes of the ARI model should be:

- To obtain information necessary to correctly price reimbursable work. Reimbursable work is being put on contract by ARI without an accurate way to identify all incremental costs associated with doing the work, such as actions taken to formulate and monitor these contracts. The ARI model will provide a basis for accurately pricing reimbursable work and for explaining charges to customers.
- To determine the effects of unprogrammed mandates. After the annual work program is formulated and approved and matched to capacity (resourced), mandates are received to perform other work. This work needs to be tracked in the model to determine its cost and to prioritize what other work will not be performed in place of the unprogrammed work.

BPR

- To provide information to use in the ARI Transformation Plan. There is a need to understand how alternative organizational structures and processes would consume resources.

NO PRICING OF ALL WORK/SERVICES?

WORK PACKAGES L

GOOD OCE PPBES

2.1.2 Existing MIS Used to Manage Costs

Excel is used in the programming process to create Work Package Funding Profiles (WPFP). Costs are collected in the ARI budget account structure by Account Processing Code at program element level and object class in the Standard Finance System (STANFINS). The Database Commitment Accounting System (DbCAS) is used to record commitments and obligations by unit/office and WPFP. Funds are received from Operating Agency 22 through the Program Budget Accounting System (PBAS). The Commercial Accounts Payment System (CAPS) is used to pay commercial payments and the Integrated Automated Travel System (IATS) is used to pay travel payments. The Defense Finance and Accounting Service—Indianapolis, accomplishes all disbursing. The Defense Finance and Accounting Service-Indianapolis operates STANFINS and DBCAS for ARI. Month-end files are also sent to the PERSCOM Deputy Chief of Staff for Resource Management where they are reported on a Lotus spreadsheet to PERSCOM Management since ARI is a directorate of PERSCOM. PERSCOM also conducts quarterly PBAC's but this involves primarily the Operation and Maintenance, Army (OMA) accounts. The Assistant Secretary of the Army for Acquisition, Logistics and Technology requires a monthly status report of all obligations and disbursements and conducts periodic execution reviews.

2.1.3 Other Cost Management Methodology: None

2.1.4 Software Used: Microsoft Excel

2.2 Assessment of Employee Cost Management Skills

2.2.1 Management Level Trained to Do ABC/M:

Frank Moses—Chief, Advance Training Methods Research Unit
Darrell Worstine—Chief, Occupational Analysis Office
Dennis Wightman—Chief, Rotary Wing Aviation Research Unit
Judy Brooks—Research Psychologist
Bruce Knerr—Research Psychologist
Myron Fischl—Research Psychologist
Paul Gade—Assistant to the Director for Transition Planning
Joyce Svedberg—Resource Manager

2.2.2 Staff Trained to Do Other Cost Management Methodologies: Resource Manager and supervisors at all levels.

2.2.3 Existing Cost Accounting Systems: The Resource Manager provides information on project costs periodically to supervisors at all levels. These reports are built in Excel.

2.2.4 Current Performance Management System Metrics

The FY2000 performance metrics measure technical output, customer satisfaction, collaborative agreements/intellectual interchange, the internal personnel profile and fiscal performance. The following goals and performance metrics were established for FY2000:

- Technical Output
  - Percentage of top five technical objectives met—80%
  - Percentage of technical objectives met overall—75%

- Total number of referred articles, book chapters and books accepted for publication—40
- Total number of ARI publications—61
- Number of conference presentations—68
- Number of non-refered DoD publications—report

◆ Customer Satisfaction

- Customer satisfaction ratings—report
- Number of times R&D efforts result in utilization—report
- Number of times surveys associated with Army decisions—report
- Number of occupational analyses—20
- Number of operational and attitude surveys—7

◆ Collaborative agreements and intellectual exchanges

- Number of cooperative agreements—3
- Number of international collaborative R&D efforts—5
- Number of international visitors—report

◆ Personnel profile

- Percent scientific staff with Ph. D degrees
- Percentage of scientists and engineers
- Ratio of supervisors to non-supervisors
- Number of guest researchers
- Participation rate in professional societies
- Number of Fellow positions
- External awards
- Number of prestigious posts
- Number of panel memberships
- Percent completing developmental assignment

◆ Fiscal Performance

- Quarterly contract commitment rate
- Obligation rate for R&D funds

- Disbursement rate for R&D funds
- Customer funding
- In-house/out-of-house expenditure ratio
- Percentage of total program spent on overhead

Performance Management Methods

ARI developed the metrics shown in 2.2.4 with specific goals for FY 2000. The ARI goals represent metrics and goals set by the individual research units and offices. ARI uses this input to manage and assess performance and to provide feedback within the Institute. The performance metrics established by ARI allow management to establish an annual program plan which is justified by past performance, to obtain the resources the Army needs for this work, to measure progress against goals and objectives, to explain to stakeholders what has been accomplished, and to continuously seek to improve performance. Monthly management reports are provided to the Director, Technical Director and all Research Unit and Office managers. Performance is assessed against established metrics and corrective actions are taken as appropriate.

GPRA Linkage

ARI developed and submitted its first annual performance plan in FY 1996 in response to the Government Performance and Results Act (GPRA) of 1993, Public Law 103-62. This is ARI's fifth year of preparing for and ensuring compliance with GPRA requirements. Performance measurement is not, however, an unfamiliar concept for ARI. It is an underlying element of much of the TLS research and a natural extension of the organizational planning process.

Alignment of Performance Measures and Cost Management System

The current cost management system does align with ARI performance measures. However it does not provide all of the information needed to

effectively manage laboratory capacity for unprogrammed mandates and reimbursable work. The improvement of the current ABC model will provide a better alignment and make the effects of resource consumption alternatives more visible.

3 Description of Full Implementation of Cost Management/ABC

3.1 End State Vision of Cost Management/ABC/M

The end state vision is to use ABC/M as a cost estimating and management tool that would:

RESEARCH PACKAGE

- Provide strategic information to support the ARI Transformation Plan. Building an ABC model to do "what if" analysis on the contracting out decisions needed for the Transformation Plan is possible for all aspects of the ARI operation except for direct research. This is because every research package is a unique work unit, which has never been done before and will not be repeated. However, it is possible to construct a model, which will produce a mean cost and confidence interval for an activity-based, fully-burdened "research month." This typical "research month" cost will then be used with an estimate of the number of "research months" a package might be expected to consume to make an estimate of total in-house cost for comparison with contracting out alternatives. A stratified sample by type of research package will add value to the information. The model will also provide objective information to the Transformation Plan for process reengineering.

ACTIVITIES DON'T GET "BURDONED". DOES HE MEAN "TRUE COST" OF A RESEARCH-MONTH?

- Provide operational information necessary to price reimbursable work. Reimbursable work is being accomplished by contract by ARI without an accurate way to identify all incremental costs associated with doing the

work, such as actions taken to formulate and monitor these contracts. The ARI ABC model will provide a basis for accurately pricing reimbursable work and for explaining charges to customers.

WHY NOT "MEASURE"

- Estimate the operational effects of program changes in the year of execution (unprogrammed mandates). After the annual work program is formulated and approved and matched to capacity (resourced), unprogrammed mandates are received to perform other work. The cost of this work needs to be estimated to determine programmatic impact.

- Estimate the cost of providing Technical Advisory Service (TAS). TAS is operationally defined as execution of ARI's mission through unprogrammatic expenditure of ARI scientific resources in immediate response to needs of the Army, other DoD Agencies or academic institutions.

3.1.1 How CM Will Drive Continuous Process and Cost Improvement

WORK PACKAGES?

CM information from the ABC model will be used in several ways. Building an ABC model to do "what if" analysis on the "make versus buy" decisions needed for the Transformation Plan is ARI's first priority. The estimated cost of doing work packages in-house versus contracting them out is needed to make Transformation Plan decisions about alternative organizational structures and process reengineering. The model will also allow ARI to respond to queries regarding its estimated in-house costs compared to those of contractors.

COST OF UFRS? or UF MANDATES!

The model can also be used to determine the effects of unprogrammed mandates on overall program execution and planning. When the ARI ABC model version 1.0 is complete it will be used to establish a baseline for all subsequent programs. Execution reporting can be improved by adjusting priorities and associated performance goals for unprogrammed changes in workload. Currently these unprogrammed mandates are "eaten out of hide" with little recognition of their effects on the rest of the work program. This leads to a distorted view of performance for the remainder of the program.

Reimbursable contracts are currently charged a flat 5% fee for managing and processing them. (4% if greater than $100,000) This amount is probably low. However, there exists no objective basis to determine actual charges, to make

REIM TRUE COST

a more informed estimate or to justify costs to customers. The process of determining true activity costs will be greatly improved by using the model to justify the reimbursable charges. By recouping these hidden costs, funds can be applied to other work that was foregone as a result of accomplishing the reimbursable work. The process of program planning and execution can be improved by measuring the true effects of reimbursable work on in-house research capacity.

The model will also be used to determine the amount of ARI capacity, which is being consumed by TAS. With the information the model will provide on TAS, it will be possible to see the effect TAS is having on performance as well. The amount of capacity devoted to TAS in a research unit has a direct bearing on the attainment of other unit goals and objectives and must be considered when assessing unit performance. By measuring the amount of TAS provided, the Institute will be able to explain to stakeholders what the effect of providing the TAS was on the remainder of the program.

MEASURING TAS

IF ABC TO MEASURE, FOR WHAT WILL RESULTS BE USED? HOW REPORT W/IT?

3.1.2 How ABC/M Will Be Used

NO CONTINUOUS IMPROVEMENT PROCESS. ABC USED TO MEASURE & ESTIMATE COSTS FOR BUDGETING KIND OF AN ECON. ANALYSIS USE.

ARI will use its ABC model to provide an improved method for estimating the cost of work packages. The estimates developed can be used to assess program and budget changes. By using the ABC model in various stages of the PPBES process, planning and programming decisions which consider the actual capacity and cost of ARI to do work in-house, or contract out the work, can be made. This information will feed the annual program planning process and the transformation planning process. In execution, adjustments can be made for changes in priorities, which take into account the actual capacity of ARI to accomplish the work. The ABC model will also be used to establish reimbursable rates, which recover all in-house cost, associated with doing reimbursable work.

HOW? HOW?

IS THE $ UNLIMITED?

WP3

3.1.3 Performance Measurement System

FOR MGT

INCORP. BALANCED SCORECARD METHOD?

It will be necessary to link the cost information resulting from the application of the methodology to unprogrammed mandates and reimbursable cost recovery to performance objectives. This is because recovering the full cost of reimbursable work will add capacity to the organization to do additional

MISSES CONTINUOUS IMPROVEMENT CYCLE COMPLETELY.

work. Reimbursable work will no longer constitute a hidden cost and a drain on capacity. Funds recovered can be used to resource additional work so performance should be expected to increase. The cost of unprogrammed mandates will have to be considered in performance measurement in a different way. Once identified, these costs will represent a drain on capacity which can not be recovered. Performance expectations will have to be adjusted downward for other work to reflect the loss of capacity represented by the unprogrammed mandates. A Balanced Scorecard will be used to link operational performance measures to business area strategic objectives. ARI will formulate and execute an annual program that will take into account a financial perspective, customer perspective, internal process perspective and a workforce perspective.

SEEM TO MISS THE FUTURE STATE POINT.

FUTURE POSITIONS

3.2 Horizontal and Vertical Integration of Cost Management/ABC

WP4 ?

The ARI goal of identifying all costs associated with work packages will require researchers and administrative support personnel to identify the time they spend on various types of work packages. This data will be traced in the ABC model to work packages which are identified as cost objects. Cost objects will be grouped by work package type for decision-making purposes when formulating the annual program, e.g., multiyear large Science and Technology (S&T) projects, multiyear small S&T projects, one year studies, TAS, etc. Adjustments in the annual program will be made based on the information received from periodic surveys and the relative importance of the work packages. This information will be disseminated to all personnel in the organization in the form of revisions to the annual work program.

The ARI goal of determining the effects of unprogrammed mandates will require coordination by the unit/office chief and the Chief, Research Support Group to establish a new cost object in the ARI ABC model to capture costs for the unprogrammed mandate and to determine what part of the prior work breakdown structure will be adjusted to provide capacity for the requirement. These coordinations will be documented in a memorandum issued by the Chief, RSG which will be forwarded to the Technical Director for approval. Approvals will be distributed to all office/unit chiefs for information and adjustment of their tracking of the work packages.

WBS

EV STUFF

3.3 Statement of Cost Management Goals and Objectives

ARI has established the following cost management goals and objectives in addition to those previously supported by GPRA metrics:

- To accomplish process improvement and assess organizational alternatives for the Transformation Plan. Objectives include developing data to make process improvements and estimate the cost of doing work packages in-house or by contracting the work out.
- To obtain information necessary to correctly price reimbursable work. Objectives include ensuring that reimbursable work costs do not degrade the accomplishment of in-house work packages and being able to explain charges to reimbursable customers.
- To determine the effects of unprogrammed mandates. Objectives include the maintenance of an annual program which is balanced to capacity and adjusting performance goals to changes in capacity and keeping stakeholders informed of how unprogrammed mandates effect the annual program and performance.

4 Plan to Get from Baseline to Full Implementation

4.1 Strategic and Operational Plans

4.1.1 Goals and Objectives

See 3.1 and 3.3 above.

3.1 INFO FOR T.P. (ABC, WBS/F)
" TO PRICE REIMB'S
COST MANDATES
COST TECH. ADVISORY SVC

3.3 ID. T.P. ALTERNATIVES
INFO TO PRICE REIMB'S
COST MANDATES

4.1.2 Concept of the Operations

See 2.1, 3.1, 3,2 above.

DISTRIBUTE BUDGET
EXECUTE "
TRACK POSITIONS
T.P.

INFO FOR T.P.
" TO PRICE REIMBS
COST MANDATES
COST TECH ADV/SOCY SVC

TRACE COST TO WORK PACKAGES
ADD MANDATES TO COST OBJS

4.1.3 Size and Scope

This plan applies to all ARI units and offices.

4.1.4 Roles and Responsibilities

RESEARCH SUPPORT GROUP

WHERE'S THE DIRECTOR FIT IN THIS PICTURE?

While ABC/CM is essentially a management tool, implementation of the plan will involve virtually everyone assigned to ARI in some manner. The program proponent for ABC in ARI is the Chief, RSG. The Chief RSG has designated a program analyst to maintain the ARI ABC model. This analyst will maintain the current version and all previous versions of the ARI ABC model in Oros ABC Software by ABC Technologies, Inc. The analyst will also maintain the ARI ABC dictionary that defines all activities and cost objects used in all versions of the ARI ABC model. As program proponent, the Chief, RSG, will exercise overall supervision of the ARI ABC plan. This includes scheduling ARI ABC Implementation Team meetings, publication/modification of this plan, recommended changes to the plan and the model and integration of the model into ARI performance plans and the ARI Transformation Plan. The ABC Implementation Team will meet as required to make changes to the model, consider the addition of cost management goals and objectives, review model outputs, iterate the model, provide cost management advice and assistance for the Transformation Plan and to link the cost management goals and objectives to performance objectives and the strategic planning process. The team will consist of the individuals designated in 2.2.1 and other Research Unit Chiefs as designated by the Technical Director or Director. The Chief, RSG will coordinate with the Resource Manager to include ABC data in PBAC's as appropriate. The Technical Director or the Director will approve all changes to objectives or the annual work program.

4.1.5 Implementation Schedule

This plan, as currently formulated, will be implemented by 1 October 2001 and will be used to estimate the cost of work packages, establish reimbursable rates and make program capacity adjustments due to unprogrammed mandates for FY02. Creating an effective cost management doctrine and cost management system for ARI is viewed as a continuous process. It is anticipated that as ARI gains experience with ABC it will refine its doctrine and tools and broaden its application of the methodology to all ARI business processes.

4.1.6 Prototypes

The prototype referenced in 2.2.1 is supporting ARI's initial efforts. Other prototypes will be developed as needed. The ABC Implementation Team has discussed the possibility of creating other types of prototypes to support business needs. This will be a subject discussed at future team meetings.

CM PROTOTYPE? (2-DAY COURSE)

The ARI prototype, model version .5, established 35 work packages as cost objects. When this model is improved to achieve the model version 1.0, TAS will be added as a final cost object and intermediate cost objects will be established for the reimbursable portion of each of the 35 work packages. The .5 version did not include the Office of the Director, Office of the Technical Director and Research Support Group. Activities for these areas will be incorporated in the 1.0 model. The activities contained in the.5 model will also be revised to provide a greater level of detail for the research support units and offices included in the .5 model. Resources for activities other than labor costs, i.e., travel, printing, etc., will also be added to achieve the 1.0 model. The .5 model only includes resources related to direct labor charges.

4.1.7 Initial Training Program

The initial training program resulted in the training of key individuals selected for the ABC Implementation Team as identified in 2.2.1 plus the Technical Director for a total of ten people. Training remains to be completed for four Research Unit Chiefs, Chief, Army Personnel Survey Office and the Chief, Research and Advanced Concepts Office. A booklet will be prepared

How about to measure cost for cost mgt?

which will be used to explain the ARI ABC cost management doctrine and how to use the ABC model for cost estimates.

4.1.8 Software Requirements

Quantities? Costs?

ARI anticipates that it will be able to take advantage of the software procured by CEAC from ABC Technologies, i.e., Oros, in which it will run its ABC model. It may be necessary to install an intranet version of the software to support all field offices.

4.1.9 Criteria for Assessing ABC as a Cost Management Tool

ARI will continuously assess and improve its cost management efforts by integrating cost and performance measures and by analyzing them to determine if they meet the following criteria: useful, cost-effective, measurable, accurate, practical and consistent.

4.2 Performance Measures

4.2.1 Metric Development

While it is felt that adequate metrics already exist, implementing this plan will more closely align cost, total capacity and the existing metrics. As experience is gained with implementation of this plan, ARI anticipates revising or modifying existing metrics for FY03 as a result of gaining experience with ABC/M.

4.2.2 Performance Measurement

See 2.2.4 and Section 3 above.

4.2.3 Support to Continuous Process Improvement

WHATS A BSC? BALANCED SCORECARD?

The primary means of continuous process improvement will be linking the ARI cost management program and doctrine to the Transformation Plan using the BSC. The planning process for studies has already been identified as a candidate for process improvement in the Transformation Plan. A separate study of this process will be undertaken as a spin-off of the cost management effort. Other alternatives will be evaluated as they are identified in the course of considering alternative organizational structures and processes.

4.2.4 Linkage of Performance Measures to Strategic Goals and Objectives

The Institute will use a Balance Scorecard approach to link performance measures to strategic goals and objectives. Business area strategic objectives will be linked to operational performance measures for FY03 using the Balanced Scorecard methodology.

4.2.5 ABC/Cost Management Program Sustainment and Improvement

Support for model building, training and analysis for the sustainment of the ARI cost management program will be through a combination of contractor and in-house resources. A contractor will provide support for model iteration and training. In-house resources will operate Oros software and meet periodically as the ARI ABC Implementation Team. The needs dictated by the Transformation Plan will also sustain the program.

4.2.6 How Training Support Will Be Provided

Training support for model building, implementation and sustainment will be provided by contractor support.

5 Special Considerations

5.1 Business Area Unique Requirements

A definite limiting factor in the application of ABC methodology to ARI output is the fact that every ARI work package is unique. This is because every research package is a unique work unit, which has never been done before and will not be repeated. Because of this unique nature of the work, descriptive ABC models are the most powerful for assessing ARI performance as opposed to predictive models. Whereas descriptive models can provide a great deal of relevant information about how ARI's inputs were combined to produce output in a past period, a predictive model that can produce a "should cost" for a future program is a significant challenge. Also, because each work unit is totally unique the comparison of unit costs is of little or no value. The very nature of research and development involves going from the unknown to the known and back again with the creation of new knowledge. Even the act of discovering a technique thought to be applicable as the proof for a hypothesis, which is determined through research to be the wrong approach, does not constitute waste. The knowledge that the technique is not applicable has value.

5.2 Constraints or Obstacles

Using the ARI ABC model to develop unit costs for the surrogate of a "typical research month" for different categories of research will take time to mature. Initial data collection efforts will produce costs based upon a single point estimate. It will take several iterations to develop a model which can predict costs with some degree of accuracy.

5.3 Relationship and Support of ARI Initiatives to VAMOSC

Visibility and Management of Operating and Support Costs (VAMOSC) does not apply.