



U.S. AIR FORCE

Activity-Based Costing



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Integrity - Service - Excellence



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Course Overview

- **Why ABC**
- **ABC Overview**
- **Legislation**
- **Implementation Challenges**
- **Activity Based Management**
- **Basic Approaches**
- **DoD Future in Cost Management**
- **Wrap-up**



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Why Cost Management?

1. Cost Influences Consumption

- x Quantity Demanded Rises as Cost Falls
- x Free Goods Have Infinite Demand



2. Things that Aren't Free, But Appear Free, Get Over Consumed

3. Attempts to Prevent Over Consumption Lead to Rules, Regulations, Restrictions

Cost Management

- Informs Managers Of Financial Aspects Of the Job
- Cost Awareness Enables Cost Reduction

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Why ABC/ABM

The Symptoms

- **Organizations find themselves on a crisis course**
 - **Selling (funding) the wrong products or services,**
 - **Serving the wrong customers,**
 - **Designing costly products,**
 - **Instituting cost cutting programs that fail, and/or**
 - **Obtaining the wrong (unnecessary) parts from outside suppliers.**



Why ABC/ABM

The Problem

- **Conventional systems are not complete**
 - **Do not show the consequences of resource management decisions**
 - **Do not show the cost of doing business how we do business**
 - **Provide few insights about how to improve, or may even encourage actions that damage competitiveness**
- **Do not provide leaders/managers with the information they need to efficiently run their organization.**
- **Do not fully address Legislative Issues**



- **Car Analogy - Institutional Use**
 - **Focused use at first**
 - **Early efforts necessary but not ideal**
 - **Infrastructure support widened use**
 - **Needed to make production economical**
 - **Another mode already existed**



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ABC BASICS

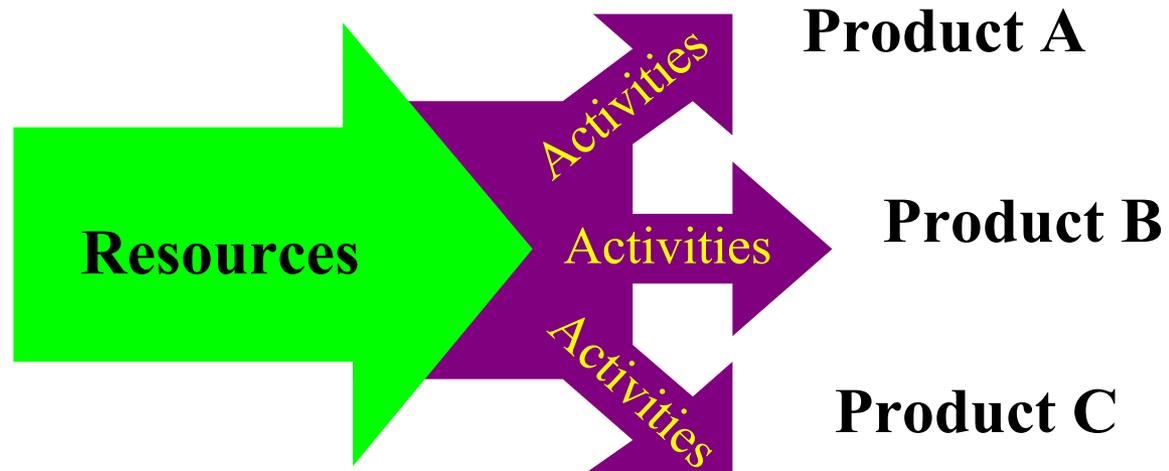
Definition

■ Activity Based Costing

- Modeling technique where costs are expressed in terms of Resources, Activities, and Products
- Assumes work (activities) are performed to create products, and resources are consumed by the work.

■ Model Elements

- Resources
- Activities
- Cost Objects
- Resource Drivers
- Activity Drivers



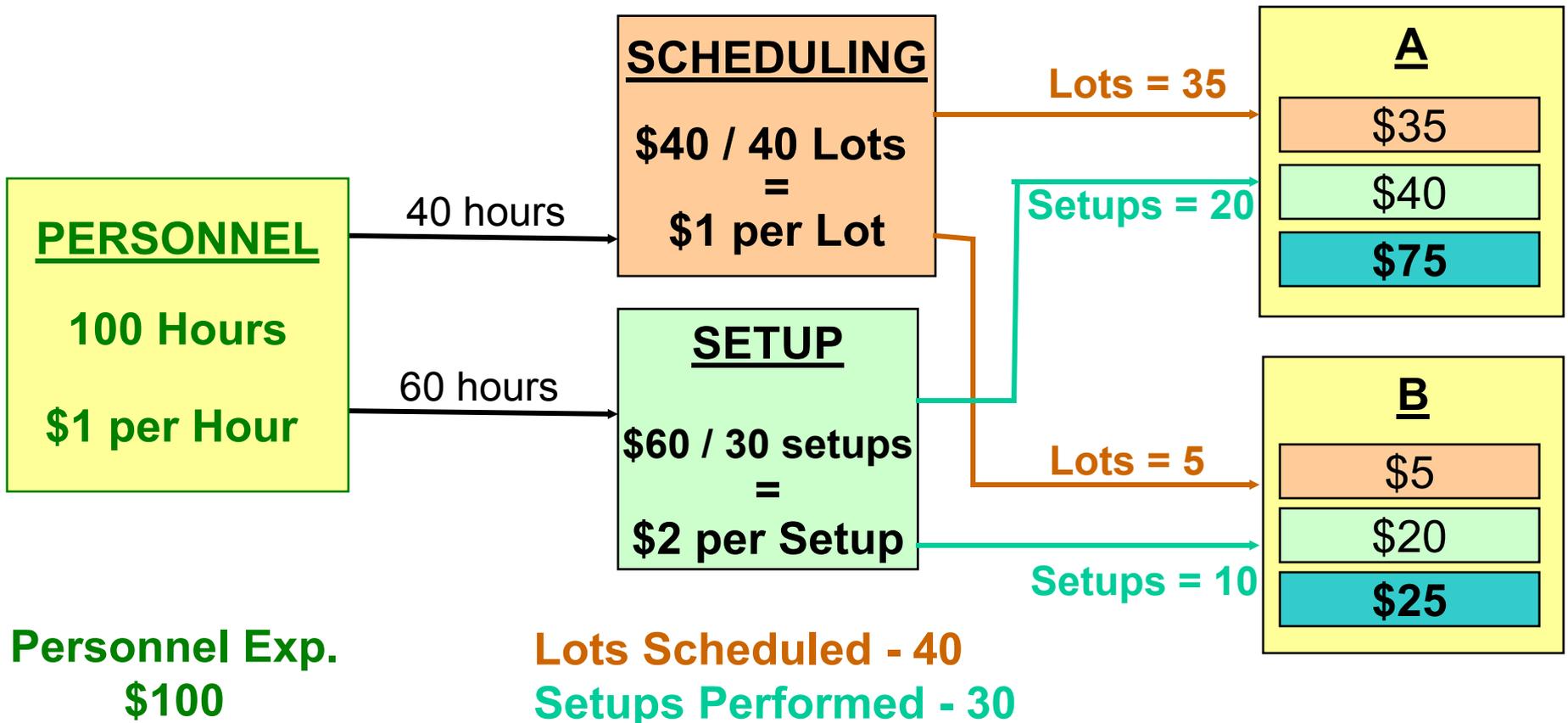


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ABC BASICS

Example

Resources Drivers Activities Drivers Products





ABC Overview

- **Assigning Cost in ABC is a *two-step* process**
 - **Step one: Assign resource costs to the actual processes (activities) that consume those costs**
 - **Step two: Assign activity costs to the actual products (cost objects) delivered.**



Conventional Vs. ABC

Conventional Accounting Perspective		Activity-Based Perspective	
Salaries	\$1,350,000	Compute Requirements	\$430,000
Benefits	495,000	Purchase Materiels	940,000
TDY	45,000	Store Materiels	250,000
Training Facilities	220,000	Inspect Materiels	178,000
Utilities	52,000	Deliver Materiels	52,000
Supplies	38,000	Perform Management	350,000
Total	\$2,200,000	Total	\$2,200,000

Reports WHAT is spent

Reports HOW it is spent



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Legislation

- **Legislative Initiatives**
 - **CFO**
 - **GPRA**
 - **SFFAS #4**
 - **FFMIA**

“Why is it that the Pentagon’s financial systems are inadequate to help compare different types of processes or to monitor efficiencies in programs?”

- Sec. Rumsfeld - Defense News June 4-10 2001



- **Chief Financial Officers' Act of 1990**
 - **Findings (abridged)**
 - **Financial management systems are obsolete and inefficient and do not provide complete consistent, reliable and timely information.**
 - **Current financial reporting practices Do not accurately disclose the current and probable future cost of operating & investment decisions.**
 - **.....**



- **Chief Financial Officers' Act of 1990**
 - **Purpose (abridged)**
 - **Bring more effective general and financial management practices to the Federal Government.**
 - **Provide for improvement of systems of accounting, financial management**
 - **Provide for the production of complete, reliable, timely, and consistent financial information.**



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Legislation

- **Government Performance and Results Act of 1993**
 - **Findings (abridged)**
 - **Waste & inefficiency in Federal Programs undermine the confidence of American people.**
 - **Federal managers are seriously disadvantaged in their efforts to improve program efficiency and effectiveness**
 - **Congressional spending decisions are seriously handicapped by insufficient attention to program performance and results**



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Legislation

- **Government Performance and Results Act of 1993**
 - **Purpose (abridged)**
 - **Hold Federal agencies accountable results.**
 - **Measure and report on program goals.**
 - **Focus on results, service, quality and customer satisfaction.**
 - **Improve internal management of programs.**



- **Statement of Federal Financial Accounting Standards (SFFAS) Number 4, 1995**
 - **Objectives (abridged)**
 - **Provide program managers' with reliable information relating costs to outputs and activities.**
 - **Provide relevant cost information to assist Congress in making decisions about funding allocations.**
 - **Ensure consistency between costs reported in general purpose financial reports and costs reported to program managers.**



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Legislation

- **Statement of Federal Financial Accounting Standards (SFFAS) Number 4, 1995 (con't)**
 - **Established 5 Standards**
 - **Requirement for Cost Accounting**
 - **Responsibility Segments**
 - **Full Cost**
 - **Inter-entity Costs**
 - **Costing Methodologies**



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Legislation

- **Federal Financial Management Improvement Act of 1996**
 - **Focused on Federal Accounting Systems**
 - **Improve**
 - **Cost**
 - **Credibility**
 - **Performance**
 - **Requires Incorporation of accounting standards into financial management systems**



■ Legislation Summary

- Goal is not simply compliance, it is more efficient operations and better decision-making.
- SFFAS #4 ties together performance measures and cost and mentions ABC as a cost management tool.
- Cost Management is not going away!!



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IMPLEMENTATION CHALLENGES

- **Ensuring Maintainability**
 - **Developing affordable data collection systems**
 - **Level of Detail**
- **Balancing uniformity and flexibility**
 - **Uniformity needed for higher level decision-making**
 - **Flexibility needed for lower level decisions**
- **Incorporating into decision-making**
 - **Cost Education**
 - **Relevance to operations short-term & long-term**
 - **Reporting**



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IMPLEMENTATION CHALLENGES

- **Getting buy-in / Long-term commitment**

- **Leadership Turnover**
 - **Change in direction of management**
 - **Different level of interest in cost visibility**

- **Flexibility at lower level**
 - **Discretionary Funding**
 - **Limits Decision Making**



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■ ABM Defined

- Management of activities & corresponding costs within the production process
- Using the ABC information

■ Overview

- Improvement
- Improvement/Budget
- Budget
- Sourcing
- Communication



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ABM Considerations

- **Single project versus institutional use**
 - **POM**
 - **Budget drills**
 - **ISSA**
 - **A-76**
 - **Managerial decision-making - optimizing**
 - **Total operating cost**



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Activity Based Management Improvement

- **Process Improvement (Internal)**
 - **Lower Cost / Increase Performance**
 - **Models initially isolated**
 - **Part of every effort (Low hanging fruit first).**
 - **Early Efforts (Not sustained)**

- **Benchmarking**
 - **Finding and adapting best practices to improve organizational performance**
 - **Requires a standardized approach**
 - **Common location for best practices (Web)**



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Activity Based Management

Improvement - Benchmarking

■ **ABC & Benchmarking**

- **Helps define process to be benchmarked (must know own process before you benchmark)**
 - **Uncovers what data to ask of benchmarking partners (High Cost areas / Scope of Activity)**
 - **Helps identify your current performance measure (Scope of Activity Measured)**
- **Helps track improvement efforts toward goal**



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Activity Based Management

Improvement/Budget

- **Resource Determinant**
 - **Choose Best in Class**
 - **Use ABC to determine resources required to operate at a given level of performance**
 - **Must normalize the data for local conditions**

- **Statistical Process Control**
 - **Determine cost variance in a process**
 - **Use control limits to define normal cost variance in a process**
 - **Requires a good knowledge of level of performance associated with the cost**
 - **Requires a sustained model**



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Activity Based Management Improvement/Budget

- **Trade Off Analysis**
 - **Use cost & performance information to make shop level or higher decisions**
 - **Example - Trade-off different Hazardous Materials**

- **Total Ownership Cost (Life cycle Cost)**
 - **Determine total weapon system cost**
 - **Involves making cross-functional cost assignments**
 - **Requires large infrastructure for wide-scale sustained application**



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Activity Based Management

Budget

- **Budget Justification**
 - **Make budget adjustments based on activity / product cost**
 - **Similar to unfunded requirements (activity and output based)**
- **Requirement Based Budgeting**
 - **Use ABC to find cost per unit.**
 - **Forecast quantity of units in future years**
 - **Build budget using forecast and cost/unit**
 - **Pay close attention to behavior of cost**
 - **Fixed / Variable / Step**



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Activity Based Management

Sourcing

- **Competitive Sourcing**
 - **Use model to build Performance Work Statement**
 - **Unit under study must build a Most Efficient Organization (MEO)**
 - **Activity Based Costing is being used to make the MEO as competitive and realistic as possible.**
 - **Actual comparison (for Air Force) made using a separate estimate (COMPARE) (Regulation Based)**



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Cost Management / ABC Plans Basic Approaches

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- **Purpose - Improved Cost Management for Operational Managers. Increase the effectiveness of Business Practices.**

- **Scope**
 - ✓ **Army - Business Areas (11) That Support the War Fighter**
 - ✓ **Air Force - Mixed, Implementation by MAJCOM**
 - ✓ **Navy & Marine Corp - Base Operations**
 - ✓ **Defense Agencies - Mixed, By Process**

- **Software - All Use SAS ABC OROS**

- **Resources**
 - ✓ **Army - Provide Software, Training, Prototype Support**
 - ✓ **Air Force - Provide Software, Training, & Matching Funds**
 - ✓ **Navy - Provide by CINCPAC, CINCLANT, etc.**
 - ✓ **Marine Corp – Provide Software, Training, Contact Support**



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DoD and Cost Management

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- **DOD Financial Management Modernization Program**
 - **Contract Already Awarded**
 - IBM Prime
 - Contract is to establish Architecture
 - Contract value up to \$100M
 - **Statement of Work included SFFAS #4**
 - Includes Cost Accounting Requirement
 - **Includes more than Financial Management**
 - Logistics /Personnel / Acquisition / Etc
 - Feeder Systems to Financial Systems



DoD and Cost Management

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- **Impact of Technology**
 - **Smart Card**
 - Could play a future role in timekeeping
 - **Data Warehouses**
 - Provide detailed information more rapidly
 - CRIS
 - **Automating Routine Financial Tasks**

- **Consistent Pressure**
 - **Congress**
 - **The Press**
 - **The Public**

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Sustaining A Model

- **Create useful reports**
- **Update the ABC model**
- **Improve support systems**
- **Distribute the ABC Information**
- **Train the users**



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Summary

- Why ABC
- ABC Overview
- Legislation
- Implementation Challenges
- Activity Based Management
- Basic Approaches
- The DoD and Cost Management
- Wrap-up

Activity based costing provides insight into the cost of doing business “How we do business.” As a result, leaders and managers are armed with information to more efficiently run their organizations



- **SAF/FMCE, POC: Jerry Maatta DSN 223-9346**
 - **Study consultations and support**
 - **Training**
 - **Website -**
www.saffm.hq.af.mil/SAFFM/FMC/ABC/Index.htm

Headquarters U.S. Air Force

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BACKUP SLIDES



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Part 2

AF Activity Based Management



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Activity Based Management

A-76

- **Data collection is relatively similar**
 - **Personnel**
 - **Supplies**
 - **Equipment**
 - **Facilities**
 - **TDY**
 - **Other (Contracts)**



- **Major distinctions**
 - **A-76 is requires multi-period forecast**
 - **ABC is a record of what happened in a given period**
 - **ABC data can be used to build a multi-period analysis**
 - **A-76 costs are guided by OMB Circular**
 - **ABC costs are guided by the analysis needs of the user.**



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Activity Based Management

A-76

- **Major distinctions**
 - **A-76 is primarily concerned with resource/functional costs**
 - **ABC includes Activity and Product costs**
 - **A-76 has contractor concerns**
 - **ABC looks at the organization as it is**
 - **Can perform what-if drills**



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Activity Based Management Communication

- **Common Communication**
 - **The language is \$\$**
 - **Translate in and out of goods/services**
 - **Comparison of Alternatives**

SUMMARY

IMPROVEMENT

Best
Practice

Process
Improvement

SOURCING

COMMON
COMMUNICATION

Total
Ownership
Cost

Resource
Determinant

Trade-Off
Analysis

Statistical
Process Control

BUDGET

Requirement
Based
Budgeting

Budget
Justification



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Additional Material



Documentation

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Documentation Overview

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- **Why Document**
- **When & Where**
- **What Documentation Includes**



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Documentation

Why

- **Provides a history of Cost**
- **Provides a data base for future efforts**
- **Supports the credibility of the model**



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Documentation When & Where

- **Initial Documentation**
- **During the model Building Process**
- **After the Model is Built**
- **Excel/Access are good tools**
- **Electronic and Hard Copy**



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Documentation What to Include

- **Table of Contents**
- **Executive Summary**
 - **Introduction (Include Purpose)**
 - **Team Composition**
 - **Project Description/Scope/G&A**
 - **Data Sources and How Collected**
 - **Cost Summary**
 - **Findings & Recommendations**



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Documentation What to Include

- **Costs**
 - **By Activity**
 - **Key Breakouts**
 - **Resource Contributions to Activities**
 - **Resource Accounts & Cost Elements**
 - **By Cost Object**
- **Model Update Instructions**



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Documentation What to Include

- **Basis of Estimate**
 - Resources
 - Activities
 - Cost Objects
- **Model Change Log**
- **Idef Model** (If Idef was performed)
 - Summary & Node Graphics
 - Definitions



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Documentation What to Include

- **Flow Chart (If Flow Chart was built)**
- **Backup Data (Appendix)**
 - **Handwritten Notes**
 - **E-Mail**
 - **Anything used in the model**
- **Briefs (Appendix)**
- **Related Information (Appendix)**



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Documentation Summary

- **Ensure Model is Repeatable**

- **Ensure Model is Sustainable**

- **Communicate Clearly**
 - **Wall Street Journal Approach**



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Balancing ABC Costs

- Implementation (Investment Cost)

versus

- Sustainment Time / Cost

versus

- Level of Detail in the Model





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Why ABC

- **Structured model building approach**
 - **IDEF - ABC**
- **Data collection similar to A-76/Standard Dev.**
- **Manpower only**
 - **Little additional effort from manpower standard**
 - **ABC Flexibility allows varied resources**
- **Other than manpower resources**
 - **Probably needed for cost comparison**
 - **Balance manpower and other resources (Eglin)**
 - **Can lead to savings**



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Major Components of ABC

- **Resources**
- **Activities**
- **Cost Objects**
- **Cost Drivers**
 - **Resource Drivers**
 - **Activity Drivers**



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Major Components Resources

- **Examples of resource accounts**
 - **Manpower**
 - **Supplies**
 - **Equipment**
 - **Facilities**
 - **Utilities**



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RESOURCES

THE LEARNING CENTER EXAMPLE

Manpower

\$3,589K

(Salary)

Travel

\$113K

Facilities

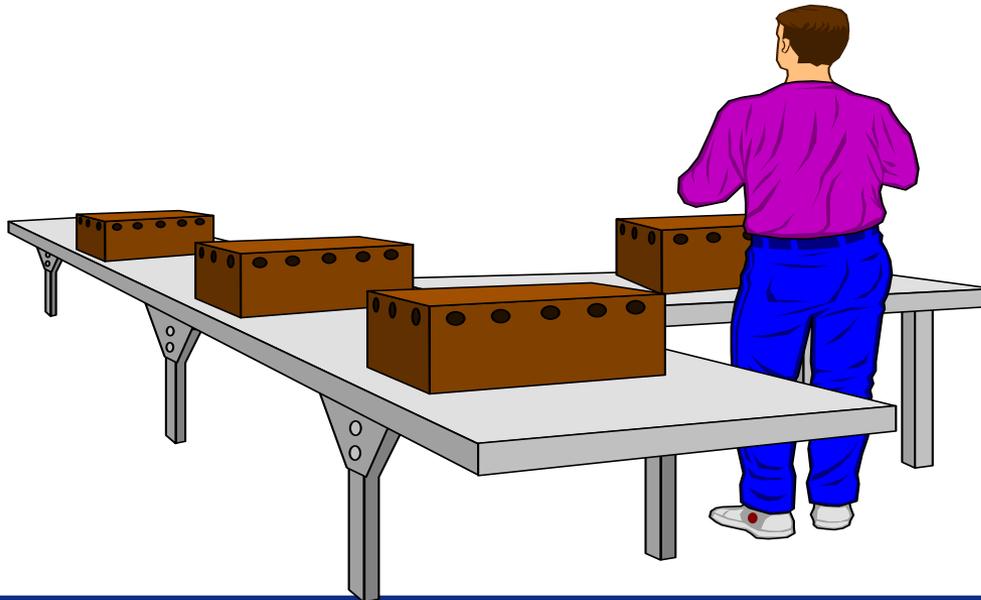
\$6,250K



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Major Components Activities

Processes that accomplish an organization's mission--the steps necessary to deliver a product to a customer.



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ACTIVITIES

THE LEARNING CENTER EXAMPLE

Manpower
\$3,589K
(Salary)

Travel
\$113K

Facilities
\$6,250K

Deliver
Training

Certify
Attendees



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Major Components

Cost Objects

The actual products delivered to a customer (internal or external) i.e., deliverables.

- **Examples of cost objects:**
 - **Training Course Developed**
 - **Aircraft Part Delivered**
 - **Medical Exam Completed**



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COST OBJECTS

THE LEARNING CENTER EXAMPLE

Manpower
\$3,589K
(Salary)

Travel
\$113K

Facilities
\$6,250K

Deliver
Training

Certify
Attendees

Manpower
& Quality
Course

Financial
Mgmt
Course



Major Components Cost Drivers

- **Two types of cost drivers--resource drivers and activity drivers**
 - **Resource drivers assign resource costs to activities based upon consumption**
 - **Activity drivers indicate consumption of activities by cost objects**
 - **Examples of cost drivers:**
 - **Man-hours (expended)**
 - **Square feet (occupied)**
 - **Units of issue (used)**
 - **Number of Courses Given (performed)**



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Major Components of ABC

THE LEARNING CENTER EXAMPLE

