CS360
Business Information Systems
Analysis and Modeling

Cost Benefit Analysis
Recognizing the Costs

- There are costs to the new system
- There are costs to the current system
  - Progressing obsolescence
  - Growing operational cost
  - Declining reliability
  - Degraded customer confidence
- Lost opportunities
  - Technology based business practice
  - Technology enabled efficiencies
- Some costs are easily quantifiable
  - Equipment maintenance
  - Transaction rate differential
- Some costs are difficult to quantify
  - Employee / customer confidence
  - Business flexibility / opportunity enablement
Locating the Costs

* System components accrue costs
  * People
    * training, workspace, handicapped access, attitude adjustment
  * Procedures
    * business transactions, online help/documentation, disaster recovery, ongoing systems analysis
  * Software
    * operating systems, applications, documentation, database
  * Hardware
    * computers, networks, monitors, printers
  * Networks
    * LAN, WAN, Web, Wireless
  * Data
    * reference services, storage, backup

LJ Waguespack, Ph.D. 2017

Unit 11: 3
Quantifying Costs

A system resource worksheet can help organize the identified costs by system component and highlight cost type and amount.

<table>
<thead>
<tr>
<th>Cost Item</th>
<th>Source vendor, department, developer</th>
<th>Cost capital$, operational$, opportunity$</th>
<th>Cost Category fixed cost, bid cost, intangible</th>
</tr>
</thead>
<tbody>
<tr>
<td>People:</td>
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<tr>
<td>Procedure</td>
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<td>Software:</td>
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<td>Networks:</td>
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<td>Data:</td>
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</tbody>
</table>
Researching Costs

* Literature
  * WWW, trade magazines, professional journals, conferences, conventions, trade shows, retailers

* Vendors
  * Request for Bids
    * predefined item identification with brand and model
    * limited description of intended application
    * best: cost, delivery date, warranty driven decision
    * no dependence on vendor for “fitness for purpose”
  * Request for Proposals
    * capability based item identification without brand/model
    * extensive description of intended application
    * “fitness for purpose,” opportunity as well as cost, delivery, and warranty driven decision
    * broad reliance on vendors “analysis” of “fitness for purpose” in choosing proposed options
Identifying the Benefits

* The project contract
  * current system status
  * new system goals
  * new system objectives

* JAD products
  * operational projections
  * performance predictions
  * cost savings

* Performance projected cost savings
  * depend on employee commitment
  * depend on degree of integration in business practice
  * predicted system life vs. technology advancement
Is the Cost Worth It?

* The project was born based upon a broad range of expectations:
  * improved performance
  * reduced operating cost
  * reduced business risk
  * improved business opportunity

* To be deemed “worth it” the new system must:
  * “pay back” the new system costs with benefits
  * “pay off” development costs with operational cost savings
  * eliminate an intolerable risk (survival instinct)
  * “cost less” than “doing nothing!”
Cost / Benefit Over Time

- Project costs don’t happen all at once
- Project benefits don’t arrive all at once
Pay Back

* Compare costs/benefits of new system
* Break even depends on scope of cost and benefits accounted
Pay Off

* Compare operating savings of new system against development cost

- System Cutover
- Payoff Point

Operating Old System | Operating New System

new system development costs | new system vs. old system operations savings
Design Review

- A careful “reality check”
- A logical point to decide on “go - no go”
- One more chance to certify joint client and developer goals and objectives
- An easily defined “delivery point” for final design documentation
- Sometimes a “point of no return” for the project in benefit vs. time to deliver
Design Review Products

**Documentation**
- Overview of the New System Design
- CD’s, UC’s, SD’s, ERD, Menus, User Interfaces
- System Resource Specifications and Cost Estimates
- Cost / Benefit Analysis and Rationale
- Updated Project Budget
- Updated Project Status Report

**Presentation**
- Visuals
  - New System Design
    - DFDs, ERD, Menus, User Interfaces
  - System Resource Specifications and Cost Estimates
  - Cost / Benefit Analysis and Rationale
- Questions and Answers
- Preview (Pert) of next steps in development