A Holistic Approach to Understanding Information Technology (IT) Costs

Arlene F Minkiewicz
Chief Scientist
17000 Commerce Parkway
Mt. Laurel, NJ 08054
arlene.minkiewicz@pricesystems.com
856-630-9408

TruePlanning®
by PRICE® Systems

Agenda

- **Introduction**

- **IT Budget – What's Really in There**

- **What IT Really Costs**

- **Supporting Good Decisions with Total Cost of Ownership (TCO)**

- **Conclusions**

TruePlanning®
by PRICE® Systems

Optimize tomorrow today. ®

Introduction

- **State of Washington project to automate the state's vehicle registration and license renewal**

  - License Application Mitigation Project (LAMP) – Initial estimate for $16 M over 5 years

  - Actual and projected costs increased dramatically but the project continued

  - Program continue with cost overruns until it was determined that once deployed the cost to run the system will be 6 times higher than the cost to run the systems it is replacing

  - Program is scrapped after $40 million is spent

- **Would have been nice to know this before the project was launched**

TruePlanning® by PRICE® Systems

Optimize tomorrow today. ®

IT Budget – What's Really in There

- **Application Development Projects – while expensive and often risky – only account for a small part of most organizations IT Budgets**

- **According the Gartner's "IT Spending and Staffing Report 2008" – typical organizations spent about 20% of their budgets on application development**

- **Traditional IT estimating focuses on application development without Total Ownership Costs (TCO) for IT**

TruePlanning®
by PRICE® Systems
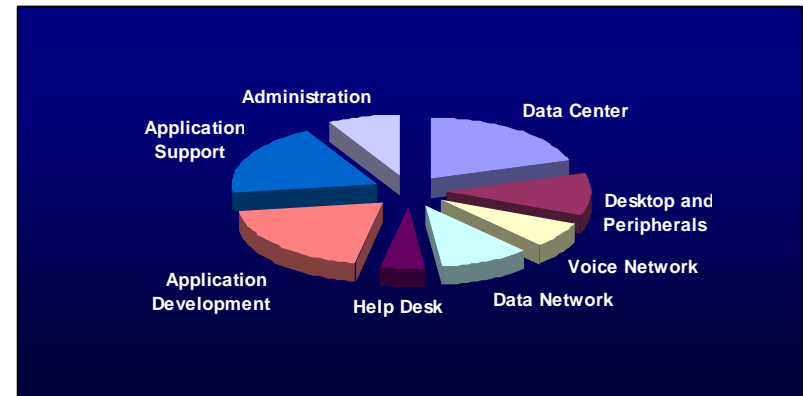
IT Budget – What's Really in There
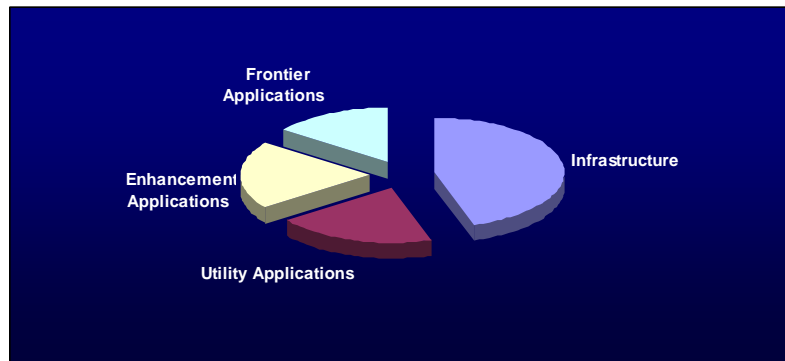
- **Infrastructure**
  - networks
  - Desktops
  - Servers
  - Development Tools
  - Training
  - Help Desk

- **Utility Applications**
  - Sustain the business

- **Enhancement Applications**
  - Improve the business

- **Frontier Applications**
  - Revolutionize the business

TruePlanning®
by PRICE® Systems
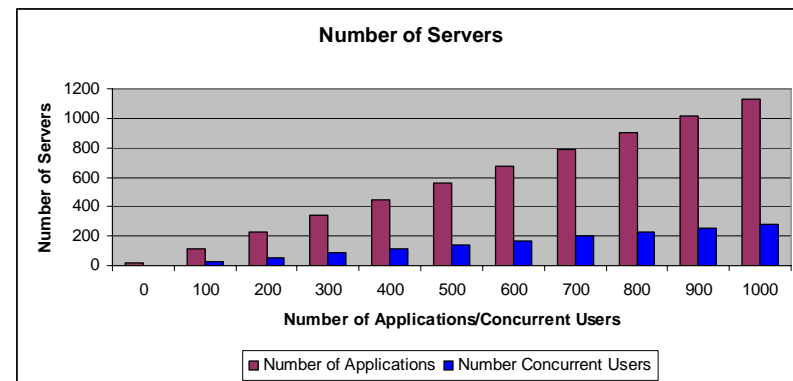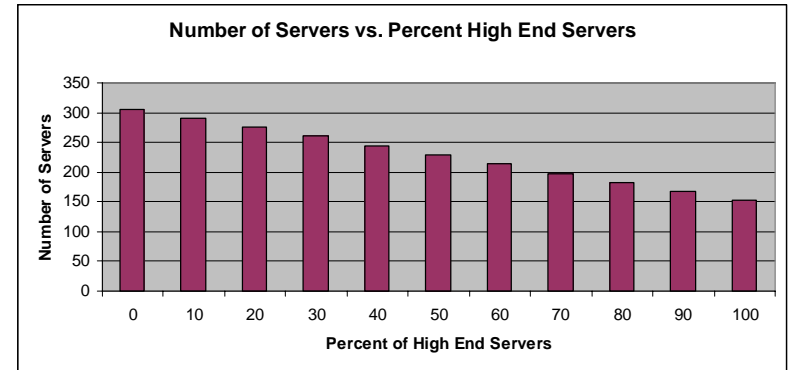
Optimize tomorrow today. ®

What IT Really Costs!

- **Application Development Costs**
  - Care and feeding of Utility Applications (COTS Integration)
  - Development and maintenance of Enhancement Applications and Frontier Applications (New Software Development/COTS Integration

- **IT Infrastructure Costs**
  - System Deployment and Networking
    - Purchase of Servers, desktops, notebooks, software, etc.
    - Labor for IT and telecommunications personnel
  - Maintenance and Support
    - Monetary costs for maintenance of hardware and software
    - Labor costs for maintenance
    - Desktop Management, security, end user down time
  - Operation and Administration
    - Space and facilities costs
    - Power consumption
   - Non-IT labor to fix and account for IT failures and requirements

TruePlanning®
by PRICE® Systems

Optimize tomorrow today. ®

What IT Really Costs – System Deployment and Networking

- **Major Cost Driver – Number of Servers which can be determined by looking at…..**

  – Number of Applications

  – Number of concurrent users

  – Percent and extent of power of servers (mix of high end and low end servers)

  – Level of Virtualization

Number of Servers vs. Percent High End Servers

Number of Servers (y-axis): 0, 50, 100, 150, 200, 250, 300, 350

Percent of High End Servers (x-axis): 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100

Number of Servers

Number of Servers (y-axis): 0, 200, 400, 600, 800, 1000, 1200

Number of Applications/Concurrent Users (x-axis): 0, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000

Legend: ■ Number of Applications ■ Number Concurrent Users

TruePlanning®
by PRICE® Systems

Optimize tomorrow today. ®

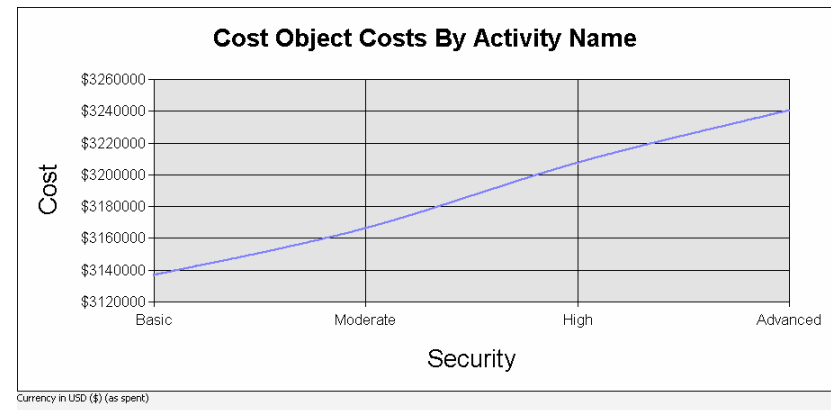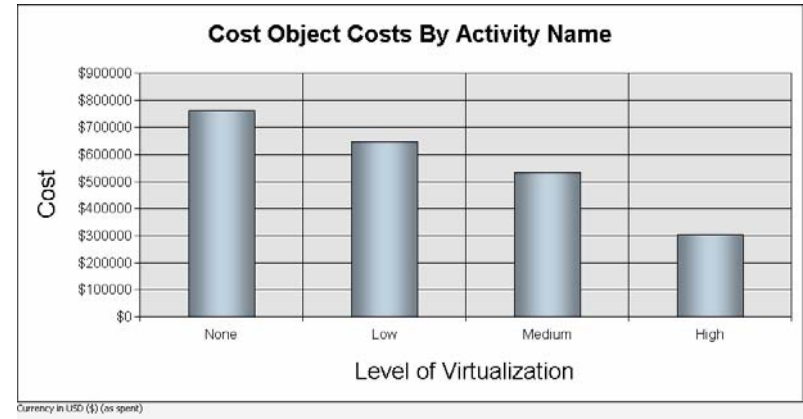# What IT Really Costs – System Deployment and Networking

- **Additional Cost Drivers include….**
  - Number of Workstations
  - Number of Laptops
  - Security Considerations

Cost Object Costs By Activity Name

Currency in USD ($) (as spent)
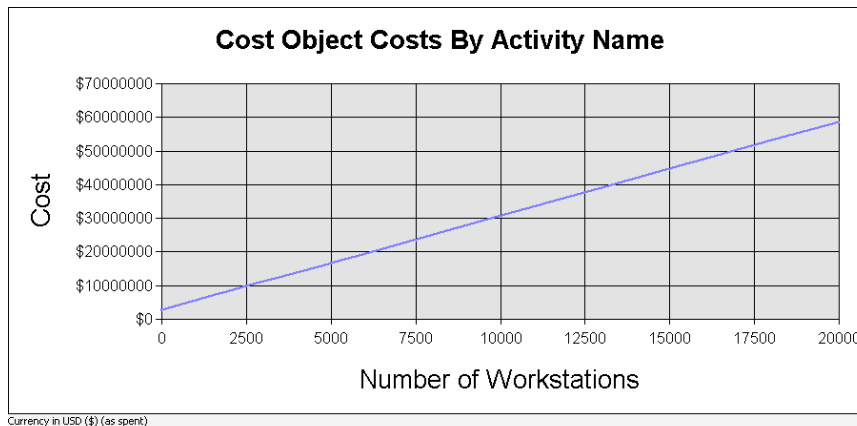
# What IT Really Costs – Maintenance and Support

- **Primary cost drivers**
  - Number of Servers
  - Desktop Management Philosophy
    - End user can change anything
    - Strict usage policies
  - Security
  - Level of Virtualization
    - One physical server is used to create multiple 'virtual' server
    - End user sees completely different servers

Cost Object Costs By Activity Name

Cost vs Level of Virtualization (None, Low, Medium, High). Currency in USD ($) (as spent)

Cost Object Costs By Activity Name

Cost vs Security (Basic, Moderate, High, Advanced). Currency in USD ($) (as spent)

TruePlanning®
by PRICE® Systems

Optimize tomorrow today. ®

What IT Really Costs – Operations and Administration

Number of Servers vs. Space Requirement

- **Primary Cost Drivers**
  - Number of Servers
  - Space requirements
  - Geographical locality
  - Level of Virtualization

Power Consumption vs Number of Servers

TruePlanning®
by PRICE® Systems

Optimize tomorrow today. ®
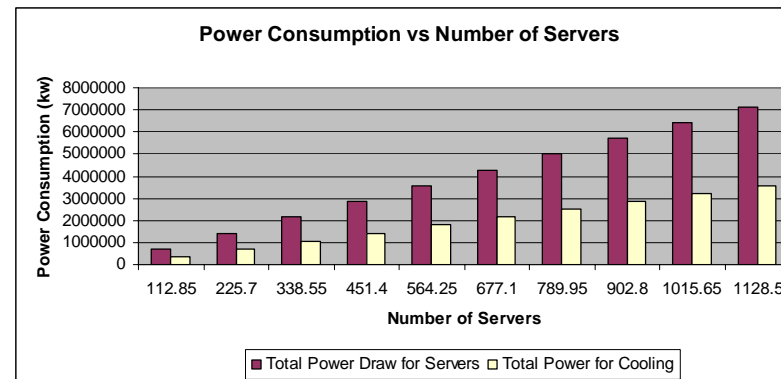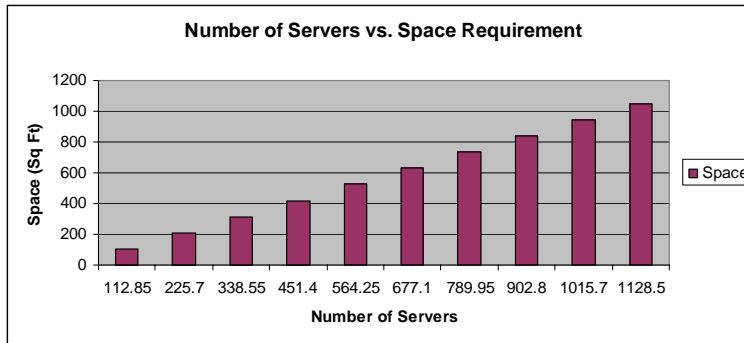
Supporting Good Decisions with Total Cost of Ownership – an example

Tools-on-Line

Tools-On-Line

- **Launched in 2006**

- **Instant success**
  - Hundreds of popular brands
  - Same day delivery (in most locations)

- **By early 2009, average 150,000 orders a day**

- **Reports that business is being lost due to poor performance of their existing infrastructure**

- **Managing partners OK $1.5 million spend to provide solution to enable orders to double in 4 years**

TruePlanning®
by PRICE® Systems

Optimize tomorrow today. ®

Tools-on-Line – Evaluate current state of IT Enterprise

# Tools-on-Line – Scenario 1 – Purchase New Hardware

- **Purchase enough additional servers to double number of concurrent users**

- **Within the $1.5M allotment**

- **Managing Partners first question "Where are you going to put them?"**

- **Additional analysis shows that adding servers increases operational costs from $573K to $1024K**

Fiscal Yearly Costs By Project Name

Cost axis: $0, $500000, $1000000, $1500000, $2000000

Years: 2009, 2010, 2011, 2012, 2013, 2014

Legend:
— As-Is Configuration for On-Line Hardware Store
— Purchase New Hardware

TruePlanning® by PRICE® Systems

Optimize tomorrow today. ®
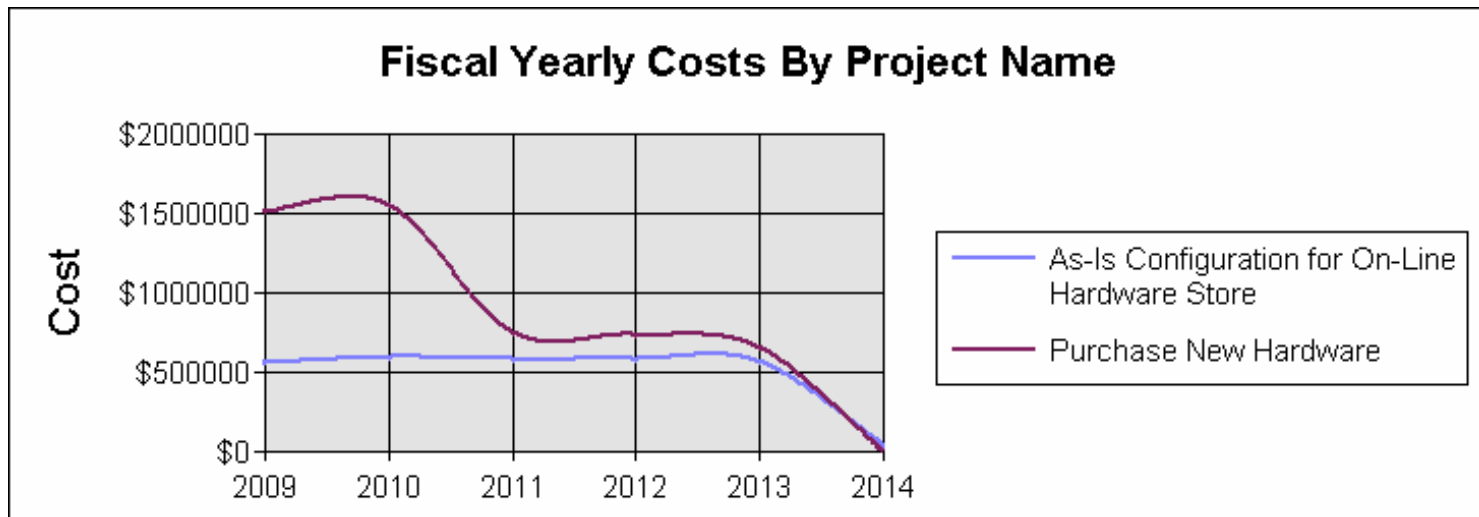
Tools-on-Line – Scenario 2 – Develop new software

- **Consultation with marketing reveals that shoppers are no nonsense about their tool shopping – not much 'window shopping'**

- **IT group developed a plan that would streamline shopping process, cutting the time the average shopper would be on the system by more than 50%**

- **Software takes longer to deploy and longer to add value, the payback over the five year period is significant**

TruePlanning®
by **PRICE® Systems**

Optimize tomorrow today. ®

Tools-on-Line – Payback of two options
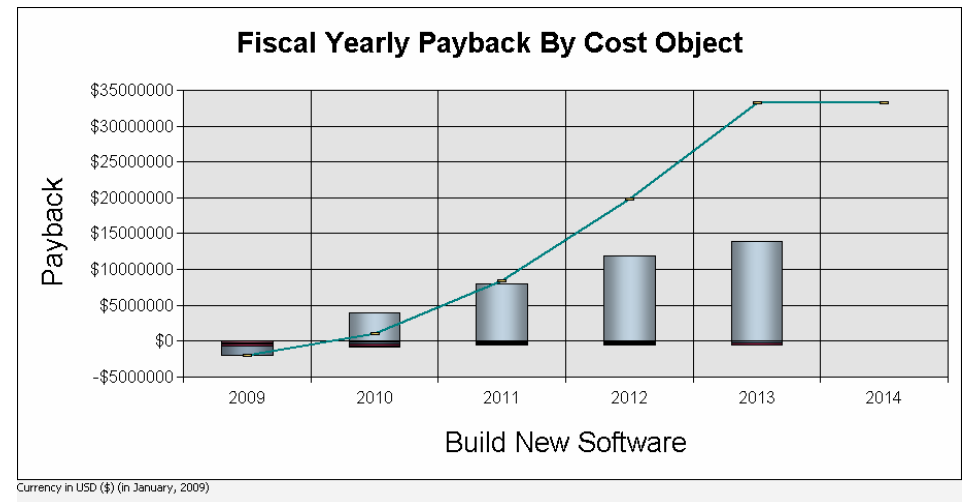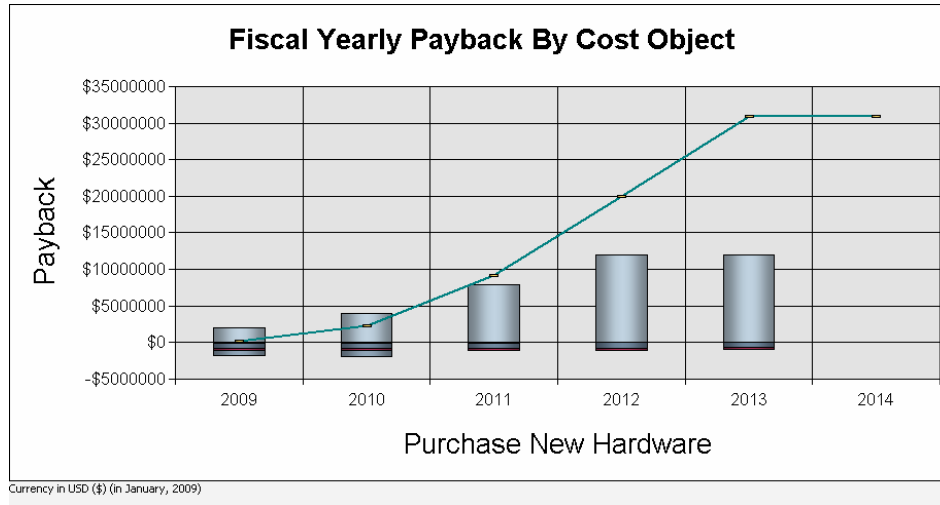
Conclusions

- **Traditional IT estimates have focused primarily on application development efforts**
  - This is an excellent practice and should continue but by itself it will not provide comprehensive analysis

- **65-75% of the typical IT budget is spent on things other than application development.**

- **In order to make informed decisions about the right application development and infrastructure decisions – businesses must make a holistic assessment of all of the cost implications of such decisions**
  - Costs of the new project or equipment
  - Cost impacts on infrastructure and operations of the new project or equipment
  - Factors that drive these costs

TruePlanning®
by PRICE® Systems

Optimize tomorrow today. ®

Questions, Comments, Ideas!!

Arlene F Minkiewicz
Chief Scientist
17000 Commerce Parkway
Mt. Laurel, NJ 08054
arlene.minkiewicz@pricesystems.com
856-630-9408

TruePlanning®
by PRICE® Systems

Optimize tomorrow today. ®