# A Holistic Approach to Understanding Information Technology (IT) Costs

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## Agenda

- Introduction
- IT Budget What's Really in There
- What IT Really Costs
- Supporting Good Decisions with Total Cost of Ownership (TCO)
- Conclusions



 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

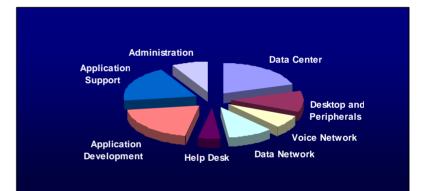


# IT Budget – What's Really in There

- 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

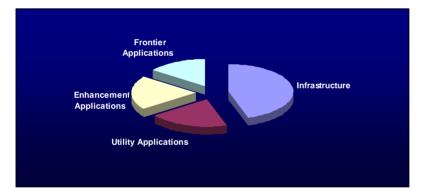
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# IT Budget – What's Really in There



### Infrastructure

- networks
- Desktops
- Servers
- Development Tools
- Training
- Help Desk

## Utility Applications

- Sustain the business
- Enhancement Applications
  - Improve the business
- Frontier Applications
  - Revolutionize the business



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# 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

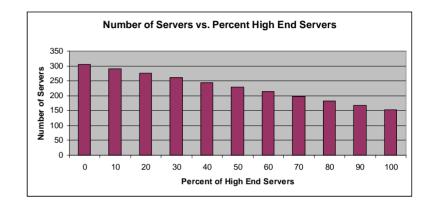
### IT Infrastructure Costs

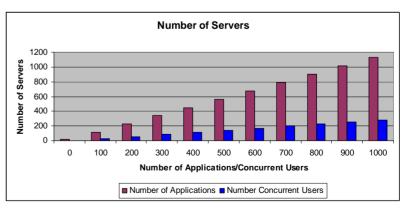
- System Deployment and Networking
  - Purchase of Servers, desktops, notebooks, software, etc.
  - Labor for IT and telecommunications personnel
- Maintenance and Support
  - Monetary costs for maintenance of hardware and software
  - Labor costs for maintenance
  - Desktop Management, security, end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



# 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

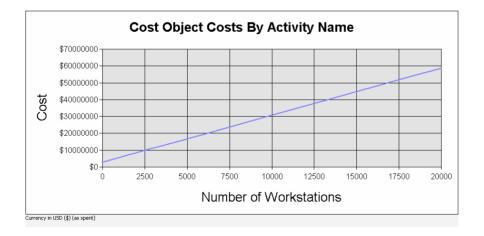






# What IT Really Costs – System Deployment and Networking

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

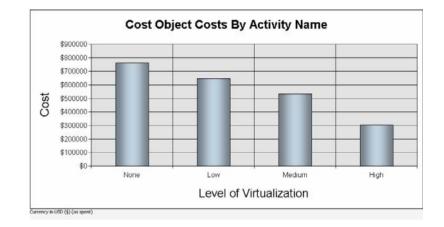


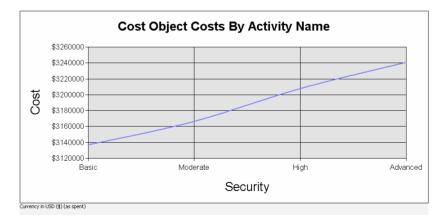


## What IT Really Costs – Maintenance and Support

## 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

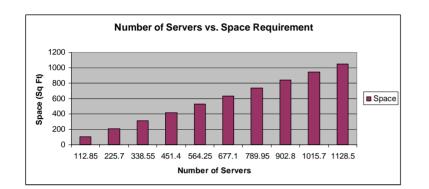




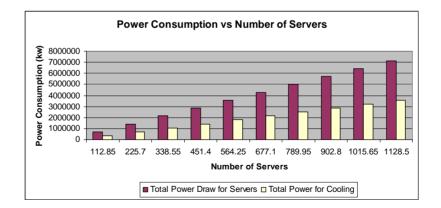


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Presented at the 2009 ISPA/SCEA Joint Annual Conference and Training Workshop - www.iceaaonline.com What IT Really Costs – Operations and Administration



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





## 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



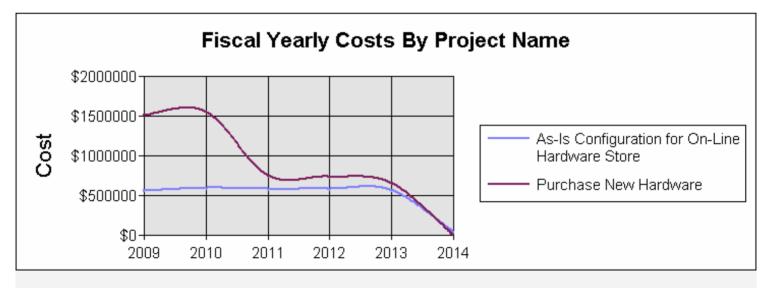
## **Tools-on-Line – Evaluate current state of IT Enterprise**

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## **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



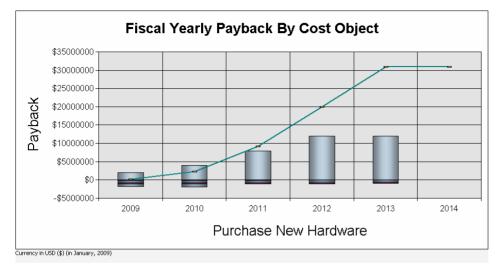


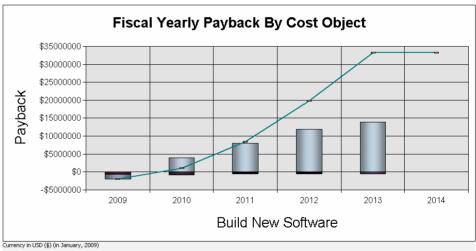
Presented at the 2009 ISPA/SCEA Joint Annual Conference and Training Workshop - www.iceaaonline.com **Tools-on-Line – Scenario 2 – Develop new software** 

- 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



## **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



## **Questions, Comments, Ideas!!**



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