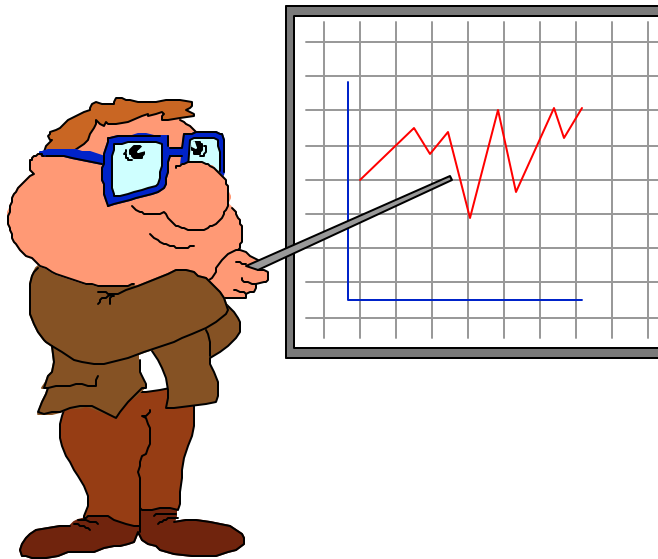

Metrics for Metrics

Cost Analysis and Justifications

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What We're Talking About



- Metrics²
 - Measures and metrics
 - Processes and products
 - Improvement initiatives
- Economics of Metrics
 - Where the \$ are
 - ROI

Software Models

- Abstract representation
- Product / Process
- Attributes
- Examples

Setting Up Metrics²

- Know why metrics are needed
 - Relate to the model
 - Do the right things
 - Effective activities
- Apply the Pareto principle
- Only measure what you must
(Use what you've got)
- Automate

Data Mining

- Use values you already have
- Metrics from diverse data sets or warehouses
- Tools to pull data together centrally
 - cross system boundaries*
 - overcome data structure differences*
 - facilitate views into aggregated data*
- Evaluate for patterns, trends, improvements

* Zinnote® from Positive Support Review, Inc. is an example

IT Metrics Tool Kit

- Metric's inventory
- Data Capture/Integration/Display tools
 - Use what you have first
 - Data already is captured electronically
 - Locate and use (No added cost)
- Acceptable models
- Reporting system

Psychology of Metrics

- Results based
- Clear objectives
- Process and product focus
- Focus on the numbers
- Avoid misuse
- Hawthorne effect

What Goes Wrong?

- IT metrics are “seat of the pants”
- Relevant metrics are not well defined
- Measurements are not consistent
- Measurements are not accurate
- Management is cost focused
- Little trust between IT and its customers
 - High dissatisfaction with IT
 - Negative perception of the value of IT
 - Fear of measures and metrics
 - Adversaries

Potential Problems

- IT metrics information shift costs
- Investments counter to “Rightsizing”
- Process change is cultural change
- Always up-front costs in changes
- Metrics only “tell a story”
(They don’t write the book)

Analyzing Metrics Results



- Model effectiveness
- Telling the desired stories
- Cost effective measures
- Data accuracy
- Data consistency

Refining Metrics

- Less expensive way to measure
- Tell the right stories
 - Valid model
 - Appropriate values
 - New areas to pursue
 - Something left to gain
- Consistency of values
- Accuracy of values

IT Economics

- Traditional Focus
 - Doing things right
 - Costs
 - Efficiency
 - Potential Problems
 - Best “Slide Rule”
 - Metrics (QA) is overhead
 - Cut costs into oblivion
- 

Economics of Metrics

- Separate costs from returns
 - Different timeframes
 - Different functions
- Keep in mind
 - A metric is only information
(Information is power)
 - People must act to effect changes
 - TANSTAFL

Relating \$ to Metrics

- Metrics direct \$
 - Collecting
 - Reporting
- Metrics indirect \$
 - Reducing rework
 - Change planning
- Metrics related \$
 - Goodwill
 - Sales advantage

Metrics and the IT Budget

- Costs Increased
 - Planning
 - Measures
 - Tools
 - Analysis
 - Changes
- Costs Reduced
 - Improved productivity
 - Superfluous activities
 - Rework
 - Errors
 - Support

ROI For Metrics

$$\frac{\text{Value of Information}}{\text{Cost of Acquisition}}$$

Value of Information

- Direct
 - Net cost reduction
 - Net efficiency improvement
 - Net cost shifting
- Indirect
 - Quality improvement
 - Faster time to market
 - Risk reduction

Cost of Acquisition

- Incremental collection cost
- Computation and manipulation
- Interpretation of results
- Confidence (“fuzz factor”)

Short Term Justification

$$\frac{\text{Perceived Value to User}}{\text{Cost of 1}^{\text{st}} - \text{Order Estimate}}$$

Keys for Success

- Understand the purpose of metrics
- Focus on results
- Objective measures
- Knowledge acceptance and transfer
- Clear, relevant metrics
- Minimize added infrastructure



Conclusions

- Measures necessary for knowing success
- Metrics² justify knowledge
- KISS: Keep It Simple, Silly
- Solutions differ with situation

