



## The Value of IT Investments: It's not just Return On Investment

Best Practices Committee  
Value Measuring Methodology (VMM)

The Federal Chief Information Officers Council, Best Practices Committee has recently released a report, *Value Measuring Methodology (VMM), How-To-Guide*<sup>1</sup>, which focuses on sound investment management. VMM is a proven toolkit of existing techniques used to define, capture and measure both quantitative and qualitative value associated with information technology (IT) investments. The How-To-Guide provides the methodology to evaluate and select projects that will yield the greatest benefit to the Government, and consists of the following three components: value (benefit), cost and risk.



The data obtained during the VMM process will help in preparing OMB Exhibit 300, Capital Asset Plan and Business Case, which requires a rigorous analysis and justification to support funding requests.

Measuring the value of an investment is an inextricable part of business planning. A Return on Investment (ROI) calculation is only a small part of the total value of an investment. It is an internally focused metric giving a dollar value only. An ROI calculation for a particular investment may, in fact, be negative, but the intangible benefits such as customer satisfaction and easy access to information, may justify the expense. ROI is an important metric, but it needs to be balanced with a rigorous analysis of all the value factors.

Let's briefly look at the steps involved in VMM:

1. Develop a decision framework in order to plan, evaluate, select and implement the most effective and efficient initiative. Structures are developed for value, cost and risk. Within the Value Structure, Value Factors should be developed for:
  - ❑ **Customers** (users) – providing services electronically
  - ❑ **Social** – benefits to society as a whole
  - ❑ **Government Operational/Foundational** – improvements in Government operations and enabling future initiatives
  - ❑ **Strategic/Political** – contributions that will help achieve strategic goals, priorities and mandates
  - ❑ **Government Financial** – financial benefits to both sponsoring and other agencies (Standardized measures include the amount of money the Federal Government will save/avoid spending by implementing an initiative.)

The weight and priority of these factors should be defined by those responsible for shaping E-Government and overseeing investment decisions across the Federal Government, or undertaken at the highest appropriate level of agency management. Identifying and prioritizing of measures of success will be performed within each Value Factor. These measures will be used to define alternatives, and serve as a basis for analysis, comparison and selection.



Measures can be defined at a higher level to be applied across a portfolio of initiatives. These standardized measures then facilitate “apples to apples” comparison across multiple initiatives, providing a standard management “yardstick” against which to judge investments.

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<sup>1</sup> Value Measuring Methodology, How-To-Guide, CIO Council Best Practices Committee, [www.cio.gov](http://www.cio.gov) under Best Practices

2. Perform an alternatives analysis. Value, cost and risk structures are used to compare a potential investment against alternative methods. Uncertainty, sensitivity and risk analyses are conducted to better calculate cost and value.
3. Gather all the information. Cost estimates, value projections and analyses are brought together to see how these elements relate to each other. Value and risk “scores” are developed, along with decision metrics that [compare value to investment and financial ROI](#).
4. Communicate and document. The value of the initiative needs to be communicated to customers and stakeholders. Budget justifications, including OMB Exhibit 300, can be prepared at this point. The lessons learned can be used to improve processes, and the documentation will provide an audit trail.

ROI evaluates an investment’s potential by comparing the magnitude and timing of expected gains to the investment costs. For example, a new initiative costs \$500,000 and will deliver an additional \$700,000 in increased profits. Simple ROI = gains – investment costs ÷ investment costs. (\$700,000 - \$500,000 = \$200,000. \$200,000 ÷ \$500,000 = 40%.) This calculation works well in situations where benefits and costs are easily known, and is usually expressed as an annual percentage return.

However, investments frequently involve financial consequences that extend over several years. In this case, the metric has meaning only when the time period is clearly stated. [Net Present Value \(NPV\)](#) recognizes the time value of money by discounting costs and benefits over a period of time, and focuses either on the impact on cash flow rather than net profit, or savings.

A meaningful NPV requires sound estimates of the costs and benefits and use of the appropriate discount rate. An investment is acceptable if the NPV is positive. For example, an investment costing \$1M has a NPV of savings of \$1.5M. Therefore, ROI = the NPV of savings – initial investment cost ÷ initial investment cost. (\$1,500,000 - \$1,000,000 = \$500,000. \$500,000 ÷ \$1,000,000 = 50%.) This may also be expressed as ROI = \$1.5M (NPV of savings) ÷ \$1M (initial investment) x 100 = 150%.



VMM lists several financial methods to compute ROI, one of which is [Net Present Value \(NPV\)](#). NPV is the most commonly used method, and is required by OMB Circular A-94<sup>2</sup>. (Microsoft Excel will automatically calculate NPV.)



Here are some sample value measures for the Government Financial Value Factor: costs of correcting errors, costs associated with continued operation and maintenance of disparate legacy systems avoided, costs associated with continued legacy business processes avoided, and costs associated with inefficient use of resources (failure to leverage economies of scale) avoided. The amount of savings/avoidance can be argued, but measures will provide a standard management “yardstick.”

In the past, the mechanics to develop an ROI were well developed, while a structured approach to evaluating non-financial benefits was ill defined, emphasizing ROI and diminishing the importance of evaluating potential benefits to other stakeholders. E-Government projects require a new approach to business planning and analysis. A multi-dimensional analysis of all five value factors will capture total value.

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<sup>2</sup> OMB Circular A-94, Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs, 10/29/92, revised 1/22/02