How to Measure IT Value

HOWARD A. RUBIN

WILL THAT NEW PROJECT CUT ANYONE'S COSTS OTHER THAN the IT department's? Will upgrading that sales system help improve our margins? What's the payoff of training? CIOs and other executives have struggled for decades to measure the return on their IT investments, in hopes of finding a direct connection between their various systems and such top- and bottom-line benefits as revenues, earnings and cost savings. But except for cost savings within the IT department, IT systems and initiatives don't generate value directly. Instead, they do so by enabling business processes that create value for paying customers or bring in more revenue and save money for the company.

This whiteboard, by Howard A. Rubin, an expert on IT measurement and performance metrics, provides a roadmap that shows how to reveal and measure each part of this value chain, along with two examples that illustrate how it can be done. Applicable to any kind of IT initiative, system or investment, new or ongoing, the whiteboard provides guidelines for measuring the value IT brings to a company, and choosing the metrics to use. It enables executives to show demonstrable value in many forms, not just as a single ROI number, and to monitor operations in terms of value. By using the whiteboard, an IT organization will be in a position to get the most out of its IT investments and assets.

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TURN AND FOLD OUT TO VIEW METHODOLOGY

CIO INSIGHT

How to Measure IT Value

This whiteboard provides a complete way of viewing and measuring business value for any IT initiative or system. The first diagram (near right) maps out the methodology, showing how value created at the internal IT, business process and customer levels supports the creation of business value, and indicating how each level's stakeholders fit into the process of choosing appropriate metrics. The next two diagrams (center, far right) apply this concept to two examples: an inventory management and distribution system, and a customer relationship management system.

No corporation should initiate or prolong an IT system without a clear business reason for doing so. And only in the context of that business priority can the value of a system be measured. Think of the business priority as the most important top- or bottom-line payoff the system or initiative is expected to provide the business. This must be a value that drives the success of the business, and should be expressed as measures that matter to the CEO or board of directors, such as revenue growth, income growth, protecting future revenues, cost reduction, future cost avoidance, or regulatory compliance.

While a system may generate many kinds of value, deciding which value is the most important one to measure is necessary in order to ensure alignment with strategy, to make sure the system or initiative meets the business' expectations, and to clarify which metrics and perhaps which stakeholders are most important. IT executives may also want to identify and model the second or third most important payoff, in order to more broadly measure the value of the system and make sure other expectations are met.

1 Make certain the business priority of the system you are investigating is clearly understood by all stakeholders. If there is more than one business priority, rank them.

2 Define the value you are looking for, given the system's business priority. Do this for each value level—Internal IT, Business Process, Customer and Business Value. If there is more than one priority, repeat this step for each one.

3 Select the metrics for measuring that value. Do this with the help of the stakeholders at each level, to make sure the metrics reflect their concerns and needs. To judge whether the amount of value is increasing or decreasing, or meeting specific requirements, metrics are best reported as trend data, comparing current versus historical performance by rate and direction of change, and against a target goal.

4 Start measuring. Measure the value created at each level. The most important metric is the one at the top of the pyramid: business value. While cost savings at any level can be counted as business value, other kinds of value are best thought of as secondary benefits that help create business value.

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CONCEPT

SYSTEM OR INITIATIVE

BUSINESS PRIORITY

Every IT investment—whether it be a system that's currently in operation, an IT project that is under way or under consideration, or an organizational initiative such as a training or quality-improvement program—must be linked to a specific business priority, whose success is measured in terms of a specific primary business value.

STAKEHOLDERS
The stakeholders at the business-value level are the top executives responsible for top- and bottom-line growth and for creating shareholder value—the CEO, CFO, directors, and ultimately shareholders themselves.

METRICS
It is critical to keep in mind that the stakeholders at this level are looking for business metrics—the kinds of measures that might be found in an annual report, such as revenues, net income, earnings per share and return on assets. If the primary value is cost savings, then the cost savings achieved at the other three levels are added together.

PRIMARY BUSINESS VALUE

This is the measurable result of every system's business priority—the sum total of the value created by the system, through cost savings at the internal IT and business-process levels, and through revenues from customers or capital investments. This may be expressed either as an amount or as a goal achieved.

STAKEHOLDERS
Unlike other stakeholders, paying customers' own sense of value is based primarily on perceptions, not quantitative measures. Employees should track those perceptions through surveys, focus groups and advisory panels.

METRICS
Measures such as customer satisfaction, retention, profitability and service levels are critical in judging whether business processes are performing well enough.

CUSTOMER VALUE

This is the value to the paying customer—retailers, distributors, businesses or consumers—of the product or service created by the business processes under investigation. Without customers, there can be no revenues, improved profitability or increases in market share. Poor customer satisfaction can also lead to increased costs through product returns and service calls.

STAKEHOLDERS
The line-of-business executives responsible for, or benefiting from, these business processes. They either set the metrics themselves, or advise IT on which metrics to use to measure value.

METRICS
Cost and productivity metrics include dollars-, labor- and time-per-goods or process cycle. Revenue-oriented metrics look at increases in sales, products or items created.

BUSINESS PROCESS VALUE

This is the value created by building, improving, or lowering the cost of the processes that make it possible to provide competitive products and services and generate income or lower costs. Include only those business processes that depend on the IT initiative or system to run at all, or run optimally.

STAKEHOLDERS
The IT executives responsible for building and efficiently running the systems or initiatives under investigation. They work with or under the CIO to set IT internal metrics, keeping in mind the primary value of the system.

METRICS
The capabilities of an IT system are typically measured in numbers or cost of function points, data units, features, transactions processed, staff required, overall costs and deadlines met, etc.

IT VALUE

At this level, value is created by building, operating or improving an efficient, effective information system or IT organization that enables new or more effective business processes while minimizing costs.

EXAMPLE A

INVENTORY MANAGEMENT & DISTRIBUTION SYSTEM

BUSINESS PRIORITY: REDUCE COSTS

This example covers a system used for managing warehouses and inventory, as well as logistics and shipping.

STAKEHOLDERS
The CEO, CFO, board of directors and shareholders.

METRICS
Earnings per share.

PRIMARY BUSINESS VALUE

At this level, the business value will be the sum total of savings achieved through lowering inventory levels—and thus costs—distribution costs and return penalties from retailers.

STAKEHOLDERS
Distributors, retailers or consumers.

METRICS
Lower rate of goods returned; lower cost of goods compared to previous quarter (if company passes system savings on to customers in the form of lower prices).

CUSTOMER VALUE

At this level, customers will gain value though reductions in the cost of shipping. Meanwhile, more accurate shipping should lead to fewer returns by customers, thereby reducing their cost of returning goods.

STAKEHOLDERS
Line-of-business executives and managers for product, brand and manufacturing managers, and warehouse and distribution managers.

METRICS
Dollar value of finished goods in inventory; inventory turns per year (total sales/inventory size); inventory accuracy (percent gap between physical inventory and inventory logged in system); total cost of shipping and distribution (both per SKU and per item shipped).

BUSINESS PROCESS VALUE

Minimize business process costs (e.g., inventory storage, tracking, management and shipping). Minimize costs from handling returns and penalties from customers and distributors.

STAKEHOLDERS
CIO, application maintenance managers, IT operations managers. (While system is being created, systems development managers are also stakeholders.)

METRICS
Systems operations and maintenance cost per SKU and per item shipped.

IT VALUE

Run an inventory and distribution management system that meets requirements at minimum cost and maximum efficiency.

EXAMPLE B

CUSTOMER RELATIONSHIP MANAGEMENT SYSTEM

BUSINESS PRIORITY: INCREASE REVENUES

This example is for an integrated, Siebel-type system used by customer service, sales and marketing for cross-selling and service.

STAKEHOLDERS
The CEO, CFO, board of directors and shareholders.

METRICS
Total sales; total sales per customer.

PRIMARY BUSINESS VALUE

At this level, the business value will be the sum total of benefits accruing from superior customer service, more sales per customer, and greater customer retention.

STAKEHOLDERS
Business or consumer customer.

METRICS
Results such as increased desire to do business with company, higher satisfaction with products and service based on perception of speed of response, concerns handled at one call, and improved awareness of offerings can be measured by assessing customer retention, satisfaction and profitability.

CUSTOMER VALUE

At this level, the customer gains value by getting more and better information about new products, products on order, and their own accounts, and through the company's improved responsiveness to customer requests and complaints.

STAKEHOLDERS
Line-of-business executives and managers for inbound customer service, outbound sales prospecting, and marketing.

METRICS
Sales per customer (both dollars and units sold); number of products sold per customer; customer satisfaction (results of customer satisfaction survey); number of qualified leads generated; customer retention rates.

BUSINESS PROCESS VALUE

Supply more capability to customer service personnel to better serve customers, identify new customer needs and product opportunities, and cross-sell during interactions with customers.

STAKEHOLDERS
CIO, application maintenance managers, IT operations managers. (While system is being created, systems development managers are also stakeholders.)

METRICS
Number of function points for customer service functionality in CRM system; number of data elements available per customer in CRM system.

IT VALUE

Build or improve CRM system's features and functions while maintaining efficient operations.