



# IT Financial Metrics Primer: Eleven Essential Metrics for Optimizing the Business Value of IT

## Abstract

In this primer, we discuss the IT financial metrics employed by many of today's leading IT organizations to provide better transparency and align IT to the needs of the business. We focus on the essential IT financial metrics that help you make better decisions (i.e., internal financial transparency) and communicate with stakeholders in the language they understand (i.e., external financial transparency). By reading this primer, you will better understand how to use IT financial metrics to improve the business value of IT.

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## CIOs Must Address a Broad Spectrum of Business Demands

Different business models and goals exert different pressures on IT. Like most CIOs today, yours may be asked to support a variety of simultaneous business models, placing your IT organization at different points in your company's value chain. At one end of the spectrum, the role of IT is a utility provider where IT is bound to tight operational budgets to support existing business services as efficiently as possible. This is where cost-reduction is king. On the other end of the spectrum, IT serves as a strategic partner with business leaders in delivering new lines of revenue or penetrating new markets.

Unfortunately, there is no one-size-fits-all approach to managing the business of IT. You must not only deliver value based on the unique (and often varied) demands of your business units, but you must demonstrate that value in terms that are familiar to your business leaders. Financial metrics combined with data on consumption and quality will prove invaluable to achieving these objectives – but they must be utilized in the proper context based on the needs of your business customers and partners. However, it is imperative that you choose the right metrics based on your business role.

Using sets of performance metrics that vary based on the particular business model chosen is nothing new. Consider the different approaches to company valuations. Mature companies, or those in mature industries, are generally valued on profitability metrics such as earnings per share, gross margin, and [EBITDA](#). Young companies, especially those in high growth markets, are primarily measured on revenue growth, market share, the value of their intellectual property, and other metrics that indicate emerging market dominance.

IT financial managers must deliver both financial and non-financial metrics to IT decision makers and business stakeholders. In turn, these enable the business to manage different IT objectives:

- balance the cost of and demand for IT resources;
- deliver services that match or beat the cost and quality of those offered on the open market; and
- invest in projects that enable long-term competitiveness and business growth.

In this executive brief, we discuss the Technology Business Management (TBM) metrics employed by many of today's leading IT organizations and how they align to the expectations of the business. We focus on IT financial metrics, which will help you communicate with stakeholders in the language they understand. By reading this executive brief, you will better understand how TBM helps you align to the business role that your IT organization serves.

## Understanding the Business Roles of IT

In general, IT plays one of three distinct roles in the business. Since these roles depend on your business demands, your IT organization may exhibit different characteristics of these roles with different business units. The three roles are:

- **IT Efficiency** – In this role, IT is a utility provider, focused on the efficient delivery of basic IT services, such as desktops, networks, telecommunications, storage, and servers. CIOs in this role focus on cost reduction and quality metrics such as infrastructure availability and failure rates. Their business customers view IT as a support role for their business and generally feel that IT costs are unavoidable; they prefer cost reduction and a fair, practical means of allocating those costs back to their business units (if at all). A shrinking number of large IT organizations remain in the utility provider role as most businesses with significant IT budgets expect IT to be an enabler to the business.
- **Service Delivery** – When IT is viewed as an enabler to the business, IT departments typically evolve into a service provider role. This means they define services that are composed of basic (lower-level) IT services combined with service classes, value-added products and services, defined service owners, and structured service-level agreements. Here, the business consumers value the quality of services and are more willing to negotiate service levels in order to strike the right balance between quality and cost.
- **Business Transformation** – When the CIO is seen as a peer to business leaders, they are expected to facilitate long-term competitiveness and revenue growth. IT organizations in this role often struggle to allocate enough of their budget to growth and transformation initiatives. Hence, they must run the business as efficiently as possible in order to free up budget for more strategic priorities.



In our experience, only a small minority of IT organizations are operating in the business transformation role. Those that do tend to exist in technology and financial services sectors. While many IT organizations are operating in the service delivery role, many are moving toward that role with IT service management initiatives and similar efforts. TBM and IT financial management has proven invaluable in helping to enable this transformation.

The IT financial metrics and corresponding TBM practices for each of these roles are distinct, but they build upon one another. To look at it another way, IT organizations in the Service Delivery role must also measure and manage their performance using the IT Efficiency role metrics. Those metrics serve as the foundation for the core metrics in the Service Delivery role.

The rest of this paper describes the essential financial metrics for each IT role and how they should be used to improve performance according to business expectations.

## The Essential Financial Metrics for IT

Most companies, even large ones, leverage financial metrics only as a small part of managing their IT organization. By and large, they rely on non-financial, operational metrics -- except when justifying or measuring IT-related projects or setting their annual budgets. Indeed, few IT shops have the systems, processes and skills in place to *routinely* measure and report on the financial performance of IT. However, the practice of employing financial metrics to run other parts of your business, and your business as a whole, is nothing new and provides many lessons for IT executives.

Consider including the appropriate IT financial metrics below in any balanced scorecard or similar reporting that you provide to your business leaders and stakeholders. They can help put other key metrics, such as service level achievement reports and service quality metrics, in the context of your resources and investments. They will also demonstrate that you are running IT like a business, something familiar to your business customers.

### Financial Metrics for the IT Efficiency Role

Since the primary measurement of value in the IT efficiency role is cost reduction and quality improvement (think *cost-effectiveness*), the financial metrics for this role are cost-oriented. Some are focused purely on amounts, while others are concerned about the relationships of cost categories in order to establish the optimum cost structure.

#### Unit Costs vs. Benchmarks

Unit costs are simply the direct costs on a per-unit basis for key (and generally commoditized) components of your services. Common categories and examples include:

- Client computing such as desktops, laptops, and mobile devices;
- Unified communications costs such as telephone, IP phone, voicemail (per user), contact center, and email (per user, often not including storage costs);
- Storage costs, generally measured on a terabyte basis and broken down by tiers (e.g., SAN Tier, NAS Tier, and tape backup);
- Networking costs generally associated with user support (e.g., home office user, extranet partners) or connectivity for dedicated servers;



- Physical data center space, often at the cabinet or unit level and broken down by data center (which often correspond to different levels of service such as network latency or disaster tolerance); and
- Computing costs, generally measured at a tier or level of service that has been established for your business customers.

Since most of your services comprise these various components, it is vital that you carefully manage their costs. This means you must understand what subcomponents constitute their cost drivers (direct and indirect) so you can get an accurate view of their unit costs. When those costs rise, you will know it is time to take action. This may involve renegotiating with a supplier, finding new sources, or reconsidering your sourcing model (insourced vs. outsourced).

**How to Use:** Benchmark your unit costs against those of your industry and between your own business units. Your unit costs should be in line with the industry benchmarks, and those of each business unit should be in line with each other. Unit costs that are significantly higher and represent a significant portion of your budget should be targeted for further analysis<sup>1</sup> and reduction.

#### **Case Study**

#### **St. Luke's Health System Reduces Costs by Over \$1 million<sup>2</sup>**

Near the end of 2008, Deborah Gash, CIO of St. Luke's Health System, was facing a budget freeze after four years of increased budgets and spending. To address the challenge, St. Luke's undertook a cost transparency initiative with Apptio to provide clear insight into their IT cost structure and, among other goals, reduce their costs.

One of their first steps was to realign their cost structure in order to determine the total cost of ownership by technical service (e.g., desktops, storage, and software). According to Gash, "So armed with that insight, we found ways to keep our service levels high but also go after that higher-than-normal spend: in infrastructure, storage, desktops, networks, operating environments, help desk, and various other components."

St. Luke's quickly identified excessive costs for storage and desktop software. Upon further analysis, St. Luke's was able to cut over \$1 million from their 2009 spend by taking appropriate actions. After using the Apptio system to analyze Saint Luke's IT system, Gash came up with a budget that would reduce expenses by three percent (3%) from 2008 to 2009. Thanks to continued cost cuts, she actually ended 2009 spending eight percent (8%) less than the year prior. Since 2009 proved challenging for hospital revenue once again, the savings were particularly critical.

<sup>1</sup> Benchmarks not only help identify unit costs that are out of line with industry norms. They also help you identify where you may need more granular and/or more accurate cost figures and unit counts. Consequently, Apptio customers often use benchmark comparisons to help identify and address data quality issues.

<sup>2</sup> The full story regarding the IT transparency initiative at St. Luke's Health System can be found online: Evans, Bob. "Global CIO: St. Luke's CIO Saves Millions With Apptio's Help." InformationWeek. UBM TechWeb, 6 Apr. 2010. Web. 13 Dec. 2010. Alternatively, you can listen to Deborah Gash tell the story by registering at <http://www.apptio.com/go/st-lukes-himss>.

### Fixed vs. Variable Cost Ratio

The fixed to variable cost ratio helps you understand your cost structure relative to your strategy. With nearly two-thirds of most IT budgets being fixed cost<sup>3</sup>, you may be seeking a more variable cost structure that favors agility and flexibility (i.e., lower fixed-to-variable cost ratio). By maintaining a high proportion of your costs as variable, oftentimes you can more cost-effectively scale up or down based on demand.

Outsourcing and external service providers offer significant potential for lowering the fixed-to-variable cost ratio. However, the benefits of agility and flexibility must be balanced against other factors, such as potential vendor lock-in, integration requirements, and security and compliance concerns. Furthermore, many businesses have economies of scale or investment horizons that favor a higher degree of fixed investments (i.e., a higher fixed-to-variable ratio) in order to achieve lower service unit costs. In the long run, owning can be more cost-effective than renting.

A deeper understanding of your variable costs also allows you to perform variable cost dynamics. This analysis helps you understand how anticipated changes in your business are going to affect your total costs and budget demands. For example, if a business unit is going to add a site with new employees, how will that impact the cost of delivering IT services? Without knowing your variable cost dynamics, it is impossible to answer this question.

For most IT organizations, this ratio is especially difficult to track without the right system in place. Most purchasing processes and general ledger systems do not tag expenses as either fixed or variable. This must be done separately by taking into account the true nature of your expenses.

***How to Use:*** Monitor your fixed-to-variable cost ratio and ensure it is in line with the needs of your business. Keep in mind that with this ratio, lower is not always better. For some organizations, especially those with economies of scale, a higher proportion of fixed costs may be advantageous. Businesses that experience more significant organizational changes, especially reductions in staff, generally benefit from a higher proportion of variable costs. If adjustments are needed, work with procurement and/or finance to establish guidelines that encourage the right types of purchase contracts.

### Direct vs. Indirect Cost Ratio

When determining direct vs. indirect, you must answer one question first: to what are your costs (primarily) allocated? In organizations that have not completed the transformation to a service delivery model, the objects of allocation are generally business units or cost centers. For example, IT organizations in this model may allocate the cost of a server to the business unit (cost center) to which it is dedicated. In organizations that are aligned to service delivery, the objects of allocation are generally their services. Resources that are dedicated to a business unit or a service would be described as a direct cost.

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<sup>3</sup> Gartner. "Gartner Says Changing the Cost Structure of IT Will Become a Business Imperative for Most CIOs." Gartner, 14 Oct. 2008. Web. 15 Dec. 2010.

The relative proportion of your indirect costs to your direct costs indicates the degree to which your business employs shared resources. This is especially important in organizations that are moving to a shared services model and are hoping to optimize their investments in dedicated resources such as servers, storage, databases and physical data center space. A higher proportion of indirect costs generally indicates greater employment of shared resources, which generally leads to improved rates of utilization and efficiencies.

Some technologies drive shared resource adoption, such as virtualization and cloud computing, both of which share the costs of hardware, utilities, floor space and manpower. However, most technologies, such as applications, database management systems, and communications technologies can equally support a shared model depending on how they are deployed.

Organizational changes to improve a shared resource model include a move (in whole or in part) to a shared services IT department, whereby IT personnel that were dedicated to specific business units are moved into a centralized IT organization. Business unit incentives generally stem from your method for charging (including nominal chargebacks or showback) the business units for resource utilization: dedicated resources should come at a higher cost to the business units.

As with the fixed vs. variable cost ratio above, the direct vs. indirect metric is difficult for most organizations to track due to limitations in their systems and processes. However, this metric, along with utilization metrics, can quickly identify opportunities for cost reduction. In particular, look for direct costs that are associated with poorly utilized resources.

**How to Use:** Monitor your indirect-to-direct cost ratio and seek opportunities for improvement. To improve this ratio, you should seek technologies, organizational changes, and business unit incentives to improve the adoption of shared resources.

### **Capex Ratios**

Opex, or operating expense, is an expenditure that immediately flows through your income statement. Capex, or capital expense, is an expenditure that gets *capitalized*, or booked as an asset, and flows through your income statement as depreciation over a period of time (generally equal to the useful life of the asset). Capex not only includes hardware and software, but also the costs to deploy them and certain application development costs. The accounting rules governing the capitalization of costs are complex and vary from company to company, but every CIO and IT executive should understand how the rules apply to them.

Many CIOs focus on raising their capex-to-opex ratio. This gives you an indicator of how much of your expense represents an investment for the business. Since these investments create useful assets, a higher ratio means you are investing more of your money in long-term value. However, a higher ratio



also contributes to a higher fixed cost structure, as fixed asset depreciation is a fixed cost<sup>4</sup>. Regardless, there is no magic number for the right level of investment; it depends on your business.

More important than opex-to-capex ratio is the IT capex-to-asset ratio. For CapEx requirements to address asset refresh needs, we recommend using a ratio that compares your annual capex budget with the purchase value (original value at time of creation) of your assets that are fully depreciated or will be fully depreciated within the planning horizon. For example, if you have fully depreciated servers with a combined purchase price of \$10 million, and another \$2 million in servers that will fully depreciate in the next fiscal year, your capex budget for server refresh should be based on \$12 million. Studies have shown that failing to invest adequate capital back into IT generally costs more in the long run. This ratio is crucial to maintaining the long-term cost-effectiveness of your IT organization.<sup>5</sup>

*How to Use:* There is no magic capex-to-asset value for IT. Many organizations will find a capex-to-asset value (as calculated above) of less than one (100%) adequate as the price/performance ratio of different technologies improves. While this metric provides a gross measure of capital adequacy, it should be combined with a more careful planning for asset refresh that considers break-fix cycles, mean time between failure (MTBF) rates and other measures that drive hardware refreshes. Furthermore, capacity planning and business projects add to capital requirements and should be included separately.

### **Budget vs. Actuals and Forecast**

While budgeting is generally an annual exercise, forecasting should be done on at least a monthly basis. Forecasting is the process of estimating how much you expect to spend in a given period or for the remainder of a project. Forecasted amounts are generally added to actual expenses in order to determine any variance that is expected from your budget.

*How to Use:* Knowing your expected variances is vital for effective IT management. By identifying variances early, you can take prescriptive action. At a minimum, you must inform stakeholders who are directly impacted by variances, such as the business units that will be charged for them. There are few things as detrimental to the CIO-to-business relationship than large, unexpected budget variances.

Armed in advance, you can also look for ways to offset any variances. You may be able to reduce expenditures in other areas, or in other quarterly periods, to make up for any shortfall. On the other hand, you may identify budget surpluses that allow you to invest more heavily in other projects that are important to the business.

### **Financial Metrics for the Service Delivery Role**

In some organizations, the business units have tremendous freedom to outsource some or all of their IT services. This puts significant pressure on internal IT departments to demonstrate competitiveness and cost-effectiveness. In the Service Delivery role, IT is focused on both internal and external

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<sup>4</sup> On the other hand, renting capacity through service providers represents opex, but generally provides a much more variable cost structure.

<sup>5</sup> For a discussion of IT capex-to-asset ratio, see: Buchanan, Stewart and Jack Heine. "Use Financial Sustainability Metrics That Optimize the IT Asset Portfolio to Optimize Cost." Rep. no. G00171629. Gartner, 26 Oct. 2009.

competitiveness, defining and delivering services that match the cost, quality and value of those provided by other options.

Here, performance should be measured at the service-level, not the technology component level. Your services (and service-levels) must be defined and their costs determined.

Revenue-related metrics come into play with the Service Delivery role<sup>6</sup>. With the growth in external IT services and the emergence of cloud computing, it has become easier to determine the market rates for the services provided by IT. For example, storage, messaging, IP telephony, business applications and desktop applications can all be acquired through the cloud, and their costs are readily available. When moving to a chargeback or Bill of IT model, you should expect your business customers to compare your rates to those that are readily available from external providers.

### Total Cost of Ownership by Business Application

Very few organizations truly understand the total cost of ownership for their business applications, which are the main cost driver for IT and often represent a significant expense for the business units. This is unfortunate. In one case study prepared by MIT Sloan School of Management<sup>7</sup>, a large insurance company discovered that one business unit was being undercharged (via chargebacks) by \$12 million, or more than 10% of their total infrastructure costs.

To address the situation, the insurance company established a cross-functional team to address the \$12 million shortfall. Among their tactics, they implemented total cost of ownership (TCO) reports for their business applications. This not only fostered a better understanding of the true costs of their applications, but enabled them to make better investment decisions based on their criticality to the business. In the end, the team credited the TCO reports for being the most helpful communication vehicle in solving the problem.

TCO reports are also incredibly useful for managing demand. When business owners understand the true costs of their applications, they make better decisions about their criticality and spend. Since applications drive the consumption of many of your services, such as storage, networking, databases and more, application-level TCO reports can be the most effective means for balancing business demand.



<sup>6</sup> Throughout this brief where we discuss revenue, profit, margin and any other revenue-related metric, we mean the value of your IT services to the business. The way you determine this value is up to you and your customers.

<sup>7</sup> Fonstad, Nils O., and Mani Subramani. "Engaging Non-IT Executives in IT Infrastructure Decisions." Working paper no. 375. Cambridge, Massachusetts: MIT Sloan School of Management, 2008. Print.

**How to Use:** Upon determining your application TCO, work closely with business leaders to ensure the value of their applications is in line with their expectations. If significant differences exist, look for opportunities to alter the cost structure of your applications, such as reducing storage tiers or renegotiating your license and/or maintenance agreements with the vendor.

Furthermore, monitor the unit or per-user TCO trends for each of your major applications. In general, the unit costs of your applications should fall over time as your hardware depreciates and your license costs are fully amortized, along with other benefits of application maturity such as reduced operating costs. They should also fall as more users adopt your applications, resulting in a broader distribution of fixed costs. In some cases, your application TCO will rise as the result of major new releases and upgrades.

### **Service Costs**

Service costs are comprised of your unit costs (i.e., those described above in the IT Efficiency role) plus the costs of the activities and products that constitute the value of the service to the business. For example, a desktop service includes more than just a PC (hardware), but also the setup, maintenance, technical support, network, and software as well. Without those additional components, a desktop is of little value to the business consumer.

At the service level is where your cost accounting becomes much more complex: many IT organizations are unable to determine the total cost of their services due to the multitude of options, cost pools, and allocation methods. This is where activity-based costing, or ABC, is helpful. With ABC, you determine the standard cost of services by costing the activities that comprise them. ABC not only provides more accurate cost allocation, but it supports decision-making to improve the quality and reliability of IT services and service components. ABC also helps identify outlying cost drivers in IT operations and shows how the use of IT services drives cost increases.

Having a system that enables you to allocate cost pools at multiple levels and based on a variety of drivers is crucial to understanding your service costs. Some cost pools support multiple services which, in turn, support other services. Take the cost of your network, for example. Your network supports your data center systems and applications, desktop services, IP telephony, video, and others, many of which are part of other higher-level services.

**How to Use:** Similar to the recommendation above for application TCO, work closely with business leaders to ensure the value of your services is in line with their expectations. You may have the opportunity to define additional service levels at lower costs that adequately meet the needs of your business users, thus providing clear opportunities for cost reduction. Also, monitor the trend of unit (per-user) service costs.

**Case Study****Motorola Reduced the Cost of IT and Improved Business Alignment with IT Service Costing<sup>8</sup>**

In early 2009, Motorola struggled without an efficient and repeatable means to provide visibility and transparency into operational IT costs. With over 1,800 business applications and services spread across 3,000 servers and 10 data centers, Motorola needed cost reporting that was meaningful to the business so they could jointly make decisions about service levels and resource utilization.

John Hogan, director of the business management office in Motorola's IT department, implemented Apptio to provide reports to his finance counterparts and the CIO's office. Hogan uses Apptio to consume data from a number of "sources of truth" (e.g., fixed assets, accounts payable, general ledger) and identify the costs to provide applications for Motorola's various divisions, like its supply chain or marketing departments.

According to Hogan, "You can lower your costs by doing this: Cut the number of applications, cut the service levels. I can show your top 10 applications are consuming 80% of your budget." Using this information, Motorola IT and the business units can make more informed decisions.

More importantly, Motorola IT has been able to shift discussions with the business away from allocations. By costing applications and services, Hogan now talks to internal customers about the quality and cost of services they consume.

**Operating Profit and Margin**

In demonstrating financial value to the business, there is no single metric better than operating profit. Operating profit is your total revenue less your operating expenses. In essence, higher profits and a higher margin (the percent of total revenue that flows through to profit) mean you are delivering value efficiently.

Operating margins for internal IT organizations vary considerably, depending on the agreed upon methods for determining value. For example, many CIOs agree on much more favorable service rates (values) than can be found on the open market, thus limiting their operating margins. As a benchmark, note that managed services providers often see operating margins between 8% and 15%, but they incur greater operating expenses resulting from sales and marketing, general and administrative costs, and the amortization of intangible assets. Your internal operating margin could be much higher, and help offset other expenses that you're not able to charge back to the business.

**How to Use:** Operating profit and margin depend on quantifying the value of your IT services in financial terms, which few IT organizations do today. Consider establishing prices based on market rates and costing the IT services whose value is most heavily scrutinized by business leaders, such as desktops, storage and business applications. Then produce and communicate operating profit and margin to

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<sup>8</sup> More about Motorola's IT operational cost management solution can be found online: Stansberry, Matt. "Companies Turn to IT Cost Analysis via SaaS Model." SearchDataCenter.com. TechTarget, 29 Nov. 2010. Web. 13 Dec. 2010.

business leaders and other stakeholders in order to demonstrate the importance of quantifying the value of your services. This can justify the expansion of pricing to other IT services.

### Return on IT Assets

The term *return on IT assets* has been abused by technology marketers, yet a clear definition remains elusive. The term is borrowed from a common metric applied to capital intensive companies and reflects how efficiently your assets generate income. Since IT is capital intensive, it applies equally well here.

The return on IT assets (ROITA) is calculated by dividing your annual (or trailing twelve month) operating income by your average annual IT assets (capitalized hardware, software, and other costs). The higher the return (as a percentage), the better you're doing to derive service value (e.g., IT billings) from your fixed assets.

As with the other metrics, ROITA varies considerably from one company to the next. You should focus on improving this metric over time. For example, many CIOs have grown this metric over the past few years through virtualization efforts, which helped reduce hardware costs and free up data center space, both of which are components of IT asset value. Some grew it by improving the value of their services through differentiation, raising their operating income. With ROITA, a dollar earned (added to operating income) is generally better than a dollar saved (removed from IT assets).

Note that the Return on Assets from managed services providers typically ranges from 5% to 10%. Due to their corporate cost structure, you should strive for better.

*How to Use:* As with operating profit and margin, you may need to segment your IT services and assets to calculate ROITA. Use this metric to identify opportunities to minimize capital expenditures (or potentially write-down assets due to impairment). Capitalized assets with poor returns generally indicate there are market alternatives that are more cost-effective.

### Financial Metrics for the Business Transformation Role

Leveraging IT to support business transformation demands a clear alignment of IT priorities to the business. A transformational IT role often results in the rationalization of service levels to maximize investments in transformational projects. As such, the Business Transformation role clearly builds on the Service Delivery role.

What are *transformational* projects?

The definition of transformational projects largely depends on your business, and many CIOs and business leaders define them somewhat differently. In general, transformational projects are those that improve the long-term competitiveness and growth opportunities of the company. They are game-changing, so to speak. They often allow the business to employ revolutionary sourcing models, tap into new markets, dramatically improve efficiency or rapidly launch new and significantly different products and services.

As a result, the key financial metrics for the Business Transformation role focus on the allocation of resources to achieving that goal, and their associated return to the business.

### IT Spend Ratio

Many CIOs that engage in IT portfolio management stratify their IT investment portfolio according to four categories of investment: infrastructure, transactional, informational, and strategic<sup>9</sup>. These categories are aligned to the type of benefit conferred by the investment.

Over the past few years, we have worked with many CIOs who are managing their investments in a way that better reflects their value to the business. Instead of type-oriented categories, they stratify their investments by the benefit horizon and strategic nature, with an emphasis on top-line business growth. Their portfolios are cast along the following three strata: run-the-business (RtB), grow-the-business (GtB), and transform-the-business (TtB).

According to Forrester Research, 70% of most IT budgets traditionally have been consumed by spending to maintain and operate the organization, systems, and equipment (what Forrester calls MOOSE), leaving little for business growth and transformation. While Forrester cites good news in 2010 (primary research reveals this percentage trending down), a closer look at their data for IT-capital intensive industries such as financial services, insurance, and healthcare reveals MOOSE-to-IT spending ratios that are in line with historical norms (around 70%).

**How to Use:** Regardless of how you stratify your investment portfolio, seek a healthy balance and treat your current ratios as a benchmark. Most CIOs tell us that they continue to seek cost improvements in order to reduce their RtB investment ratio (as a percent of total IT spend), increasing their investment ratios in GtB and TtB. Over the past several years, CIOs have seen their budgets tighten and have had less to allocate to these two categories. Their combined ratios (GtB + TtB) fell from about 38% of total IT budgets in 2005 to 33% in 2008, but have made modest improvements since then (i.e., to 35% in 2010)<sup>10</sup>.



<sup>9</sup> For an excellent discussion of IT portfolio management along these four dimensions, refer to: Weill, Peter, and Sinan Aral. "Generating Premium Returns on Your IT Investments." MIT Sloan Management Review 47.2 (2006): 39-48. Print.

<sup>10</sup> Kumar, Rakesh, and Jay E. Pultz. "I&O Cost Reduction and Investment Are Both Required in 2010." Rep. no. G00174307. Gartner, 16 Feb. 2010.



### Case Study

#### Cisco Optimizes Its IT Investment Portfolio to Maximize Growth<sup>11</sup>

Apptio customer, partner and investor, Cisco Systems, takes its IT spend very seriously. With over 3,000 Cisco-badged IT employees and a multi-billion dollar budget, Cisco CIO Rebecca Jacoby works hard to maximize the amount of investment in growth and transformation initiatives.

According to Jacoby, Cisco divides its IT spending into three categories of investment. At the most basic level is Operational Functionality, which represents IT services to run the business. Most of this investment goes to the services portfolio that Cisco IT delivers to the business and is aimed at improving employee productivity and maintaining compliance.

The next category of investment is called Business Capabilities. This represents improvements in business scale (expanding capabilities within Cisco's current or adjacent markets) and large optimizations (significantly improving operational capabilities or delivering innovation).

The third category is Strategic Growth. This includes investments to drive long-term business growth, such as tapping into new or early stage markets or improving the speed-to-market of new products and services.

Working with Apptio, Cisco IT has been able to cost their IT services and report on the amounts spent in each of their categories of IT investment. Furthermore, Cisco has been able to identify cost-optimization opportunities (e.g., around directory services and storage) that help reduce Operational Functionality (run-the-business) spending. In doing so, Cisco is rebalancing its IT investment portfolio to provide greater value back to the business.

### NPV of the IT Investment Portfolio

Net present value (NPV) is a method of determining the return on investment from a projected stream of cash flows. It reflects the value, in today's dollars, of expected cash receipts less expected cash paid out for a project or investment. In discounting the cash flow, most organizations use their average cost of capital or another discount rate that reflects their cost of money. Generally this is set by the finance department.

Most IT organizations determine NPV of projects when they prepare business cases for them. Some organizations periodically reevaluate NPV at various intervals or as costs and other assumptions change. However, the cash receipts for these calculations are generally based on the receipts of the business. Instead, we recommend you base the inflows on your expected bills of IT (or other service valuation) to better reflect the value of IT's contribution.

**How to Use:** Evaluate the NPV of your projects and portfolio on a very regular basis, just like you should stay on top of your personal investment portfolio. IT projects are fraught with risk, and rarely do they come in on time and under budget. Budgets and forecasts are key components of this periodic evaluation. Moreover, the business value (and therefore service value) often changes over the course of

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<sup>11</sup> More about Cisco's IT investment philosophy can be found online: Lawson, Stephen. "CIO Rebecca Jacoby Steers Cisco's IT Ship." CIO.com. CXO Media, Inc., 13 Dec. 2010. Web. 15 Dec. 2010.

a project. Frequent reevaluation gives you the opportunity to shift investment from less productive projects to more productive ones.

There are no simple rules for calculating the NPV of your portfolio. Most importantly, it should grow, just like any investment portfolio. Growth demonstrates that you are delivering more value to the business, helping it grow revenues and meet strategic goals.

### Economic Value Added (EVA)

Gartner recently predicted<sup>12</sup> that many IT organizations will begin using a different measure called *Economic Value Added*, or EVA, to determine and communicate the value provided by IT. While not without its flaws, EVA provides an effective measure of profitability from the operations of a business unit *from the perspective of the shareholder*. It does so by essentially reducing the net operating profit (after taxes) by the average cost of capital for the business unit.

EVA was developed in the 1980s and has since become the dominant corporate measure of value creation. Many boards of directors incent their top managers according to EVA calculations. According to Joel Stern, co-author of the EVA model, “EVA makes managers think more like shareholders because they have a better understanding of what’s been invested to generate earnings. Like entrepreneurs, they become much more cost conscious, aggressively seeking ways to conserve capital and operate more efficiently.”<sup>13</sup> Hence, it promises to effectively incent IT leaders to make the best decisions in the interests of the shareholders.

The major difference between EVA and NPV (described above) are the time horizons for each. EVA considers only the current time period (e.g., current fiscal year) while NPV is based on the expected long-term cash flows of an investment. Therefore, EVA promises to provide an accurate measure of profit contribution for a period of activity, while NPV is subject to errors in future cash flow estimations. This is why it is so important that the NPV of projects or investments be adjusted from time-to-time to reflect the most current understanding of future cash flows.

**How to Use:** EVA is not a measure to be undertaken by IT alone, as it relies on assumptions about the amount of capital invested in IT that is not traditionally available to IT decision makers. Instead, employ EVA if the rest of your business is also applying EVA valuations. If that is the case, corporate finance should have a well-defined method of allocating capital and determining average capital costs, both of which are required for EVA calculations. If EVA is not employed by your business, instead rely on NPV and your IT spend ratio to determine, manage and communicate the business value of IT.

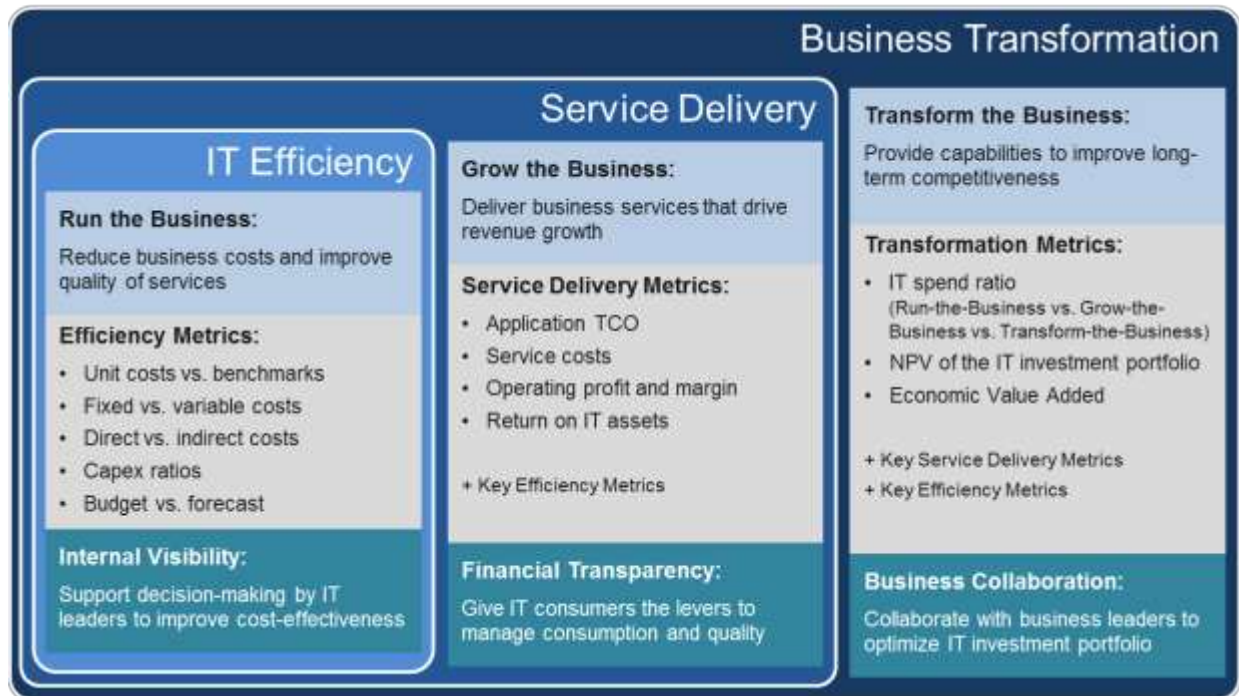
<sup>12</sup> Biswajeet Mahapatra. “EVA Helps Companies Evaluate the Cost of IT Operations.” Rep. no. G00209593. Gartner, 3 Feb. 2011.

<sup>13</sup> “The Distinguished Alumnus Awards: Joel Stern.” GSB | Chicago. The University of Chicago Booth School of Business, Sept. 1998. Web. 10 Feb. 2011. <<http://www.chicagobooth.edu/magazine/summer98/Stern.html>>.



## Where to Go from Here

Using IT financial metrics not only demonstrates value to the business in a language business leaders understand, they also enable both IT leaders and the business consumers (or partners) of IT make informed decisions to improve business value. Respecting the relationship of metrics to the business role of IT is crucial. Employing the right metrics will help ensure better alignment.



At the most advanced level, calculating these metrics is often the biggest challenge for IT organizations; in practice, few of these metrics are simple. They rely on clear definitions of IT services (and their compositions), complex allocation methods, and pricing your IT services using fair market values. In most IT organizations, very little of this data is readily available without an investment in skill sets, processes and systems.

As with any discipline, there are varying levels of maturity. Most Apptio customers start simple by leveraging IT financial management practices that are already in place. They use Apptio as their system of record for providing these metrics and supporting Technology Business Management best practices. In doing so, they create a solid foundation for running IT like a business.

If you would like to learn how to get started, please [contact us](#).

## About Apptio

Apptio is the leading, independent provider of SaaS-based [Technology Business Management \(TBM\)](#) solutions for managing the business of IT. Apptio enables IT leaders to manage the cost, quality and value of IT Services by providing deep visibility into the total [cost of IT services](#), communicating the value of IT to the business through an interactive "[Bill of IT](#)," and strategically aligning the planning, [budgeting and forecasting](#) processes. Apptio's TBM solutions play a critical role in helping companies understand and drive [chargeback](#), [virtualization](#), [cloud](#) and other key technology initiatives. Organizations such as Blue Cross Blue Shield of Kansas City, BNP Paribas, Cisco, EMD Chemical and Starbucks use Apptio to reduce costs and align IT with business priorities. For more information on Apptio, please visit <http://www.apptio.com> or the Lean IT blog at <http://leanit.apptio.com/>.