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The Five Essential Metrics For Managing IT

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EXECUTIVE SUMMARY

CIOs frequently ask what IT should measure and report to business executives. The key to success is choosing a small number of metrics that are relevant to the business and have the most impact on business outcomes. The five metrics that meet the criteria for relevance and impact are investment alignment to business strategy, business value of IT investments, IT budget balance, service level excellence, and operational excellence. These five metrics should form the core of an IT performance scorecard.

METRICS FOR IT'S PERFORMANCE MUST MEASURE RELEVANCE AND BUSINESS IMPACT

Most IT metrics efforts lack relevance to the business and are not well linked to business outcomes. They tend to be IT-centric and operationally focused on the underlying technologies, such as WAN availability or server downtime. It's difficult for the business to understand how these measures relate to its objectives, and they provide little insight into the value that IT delivers. As a result, the business typically focuses on the one metric that they understand — the cost of IT and how to reduce it — and this leads to a continuous cycle of cost reductions. To break this cycle, CIOs must create a scorecard that is:

- **Understandable and relevant to business executives.** Often IT and the business speak different languages. Server availability, network throughput, help desk call volumes, capacity utilization, and other IT metrics are not relevant to business executives. These types of metrics must be translated into something the business understands, such as availability of business applications or the cost to support a business area. The IT-centric details should be kept within IT.

- **Connected to business outcomes.** Business executives are concerned with introducing new products and services, improving customer loyalty and satisfaction, increasing gross margins, and growing market share. IT metrics must be linked directly to these business outcomes, specifically demonstrating how IT initiatives contributed favorably to improving these outcomes.

FIVE ESSENTIAL METRICS PROVIDE A BALANCED PICTURE OF IT'S CONTRIBUTION

The five metrics forming the core of an IT scorecard are investment alignment to business strategy, business value of IT investments, IT spend ratio, critical business service availability, and operational performance. These metrics provide a balanced view of IT performance to IT stakeholders including the board of directors, C-level executives, and other business leaders. As simple as these metrics may seem, they require a fairly high degree of IT management and process maturity to capture and report the data and perform at a high level.

Metric #1: Alignment Of IT Investments To Business Strategy

You can't deliver sustained business value if the IT strategy and the business strategy are not aligned and tightly linked. Despite years of making this the No. 1 priority, the 2007 membership survey by the Society for Information Management (SIM) found that IT and business alignment was the No. 2 management concern with 42% of respondents.[1] Alignment implies that business strategy and IT strategy are developed concurrently, not as an afterthought. The IT portfolio should be a reflection of the strategic business objectives or themes. We can show the recommended way for measuring and communicating alignment in one powerful yet simple graphic that displays four important alignment parameters (see Figure 1). This graphic:

- **Clearly articulates the strategic themes.** In this example, the firm has five important strategic themes, which are growing revenues, improving margins through greater efficiency, improving quality of service, expanding strategic partnerships, and expanding its customer-facing applications.

- **Differentiates mandatory investments from discretionary ones.** The graphic segments the portfolio into two major categories: 1) the nondiscretionary or mandatory investments that must be made for compliance or other similar reasons, and 2) the discretionary investments based on the five strategic themes.

- **Shows the level of investment by strategic theme.** The size of each circle represents the amount invested in that portion of the portfolio. In the example below, investments in efficiency-related initiatives have the highest level of investment. This would imply that this initiative is the No. 1 priority. If this is not the case, then the portfolio should be adjusted and funds moved from efficiency-related projects to others with a higher priority.

- **Communicates the expected return of the portfolio.** In addition to showing the relative size of the investment, it also shows the expected return from each of the strategic themes. In the example, the nondiscretionary initiatives have a very low expected return while those focused on revenue growth have a very high expected return. One might argue that more of the portfolio should be invested in growth initiatives. After seeing this, IT and business executives may agree to shift investments from efficiency initiatives to growth ones.
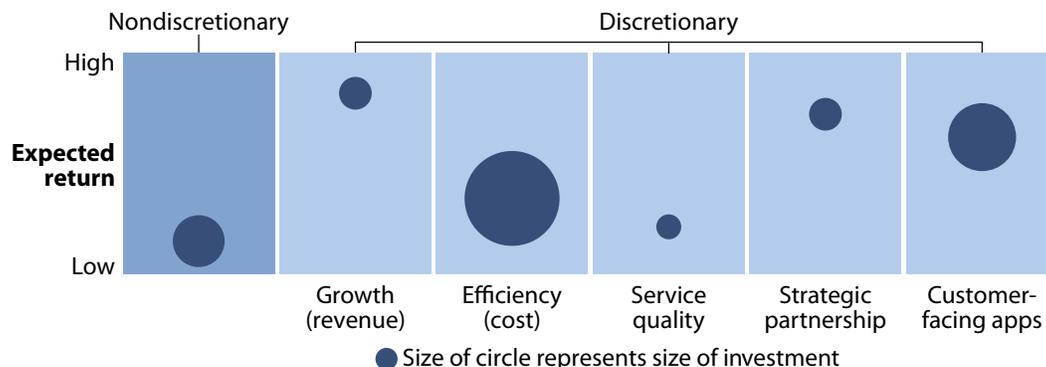
Metric #2: Cumulative Business Value Of IT Investment

The second metric explicitly measures and communicates the value of IT investments by looking at the cumulative return of the entire portfolio as illustrated below (see Figure 2). This view is generated by sorting all projects in the portfolio by their net present value (NPV) in descending order. Again, this simple graphic provides multiple key insights into the value of the portfolio:

- **It shows the maximum value.** In this example, L1 demonstrates the maximum return of the portfolio. The sum of the projects indicates a total return of $410 million provided by 61 of the projects.

- **It shows the actual value.** In this example, L2 demonstrates the actual NPV to expect from 71 projects is $325 million, which is less than the maximum value. This implies that some projects have a negative NPV. In fact, L4 shows $85 million of destroyed value represented by 10 projects to the right of L3.

- **It shows that not all projects are equal.** An interesting insight is demonstrated by L5. Of the 71 projects in the portfolio, 10 of them are expected to return almost 80% of the cumulative value. The majority of the projects in the portfolio have very small or even negative returns.

This view of the portfolio should lead to some discussions about the mix. For example, why are projects 62 to 71 being done? They may represent mandatory projects required by compliance or other regulatory reasons, or they may just be a waste of time and money. And what about projects 11 to 61? Some of these have very small expected returns. A critical review of these projects might lead to a re-balancing of the portfolio.
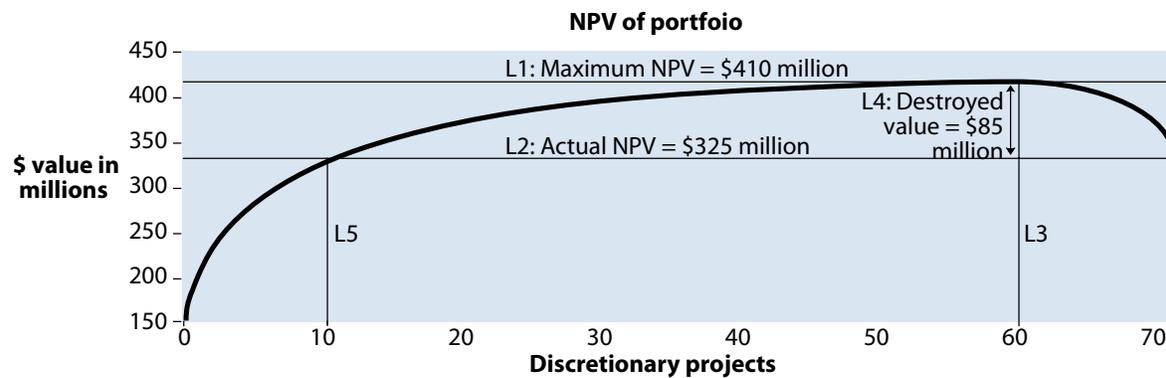
Figure 1 IT Portfolio By Strategic Initiative

Source: Forrester Research and AXA

Figure 2 Cumulative Value Of The Portfolio

NPV of portfoio

L1: Maximum NPV = $410 million

L4: Destroyed value = $85 million

L2: Actual NPV = $325 million

$ value in millions

L5

L3

Discretionary projects

Source: Forrester Research and SeaQuation

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Source: Forrester Research, Inc.

Metric #3: IT Spend Ratio — New Versus Maintenance

The third metric focuses on the total IT spend. Depending on the industry, IT budgets consume anywhere from 2% to 15% of revenues and more than half of all capital spending. However, many IT organizations find themselves locked each year into a cycle of spending increasing amounts of the budget on just keeping the lights on — leaving less and less to spend on new initiatives. In fact, our research has shown that the average IT organization spends 70% to 80% of its budget on maintaining the status quo versus only 20% to 30% on new initiatives.[2] Best practices companies have taken this ratio to 60/40, and some are actually driving toward 50/50. Measuring and reporting this ratio can be a key indicator of both the efficiency of IT as well as IT value creation.

The graphic below the shows the ratio of IT spending on new initiatives versus maintenance or "keeping the lights on" presented by quarter (see Figure 3). In this example, the numbers reported for 2007 are actual results while the numbers for 2008 represent targets. This IT organization is attempting to favorably shift its ratio of spending from 80/20 at the beginning of 2007 to 68/32 by the end of 2008. A $1 billion company spending 5% of its revenues on IT would have a total IT budget of $50 million. If it spent 20% of the budget on new initiatives, it would be spending $10 million. By moving that ratio to 32%, it would increase its new initiatives budget to $16 million, a 60% increase in funding for new initiatives without increasing the overall size of the IT budget. Of course, this implies that it can find $6 million in cost reductions in the operations and maintenance budget.

Metrics #4: Critical Business Service Availability

The fourth metric focuses on the customers of IT and their satisfaction with the services IT provides. The most useful metric would be one giving insight into current and future customer satisfaction — it would be a leading, not lagging, indicator. Most IT organizations consider two options for customer satisfaction:

- **Customer satisfaction survey results.** Most mature IT organizations conduct periodic satisfaction surveys — unfortunately, these tend to have low response rates, and the nature of the questions and the people surveyed often fails to uncover the real issues that customers may be having. Even if the response rates are high and the questions are well crafted, these surveys are a lagging indicator telling you only how their satisfaction was at the moment surveyed.

- **IT performance against service-level agreements.** IT performance against its service-level agreements (SLAs) has proven to be a good leading indicator of customer satisfaction. When these SLAs are segmented by critical application or business service, they are even more valuable indicators. The most mature IT organizations have been able to quantify the business impact of failing to meet SLAs by measuring lost opportunities and/or the cost of incurring and correcting the outage.

  It is extremely important that any SLA-related metrics are linked to applications or services that are used by IT customers and not to generic technology assets. For example, an SLA that measures performance of the Web-based online customer ordering system is relevant and meaningful while the performance of the Apache server cluster is not.

In the example below, SLA performance for critical applications and services is reported (see Figure 4). Five end-to-end services are being monitored and reported including email, applications deemed to be "tier one," CRM, Financials, and the Web-based customer portal. The graphic indicates that CRM availability is falling below the targeted SLA and needs attention, and the customer portal is experiencing serious availability problems requiring immediate attention.
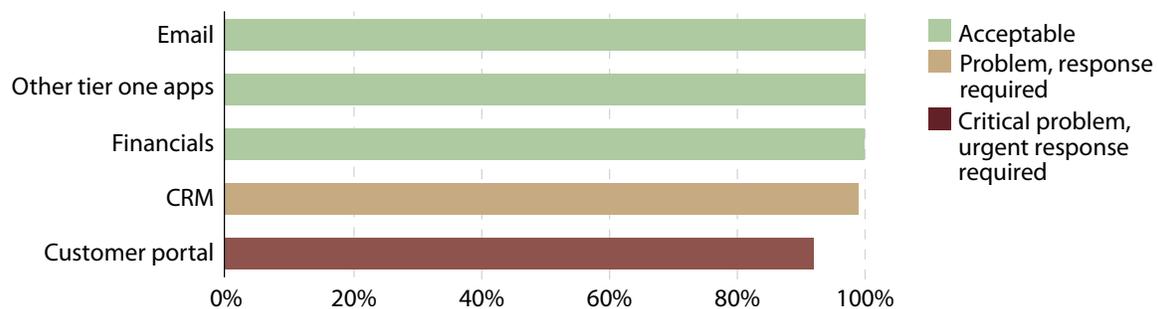
Figure 3 IT Spend Ratio: New Versus Maintenance
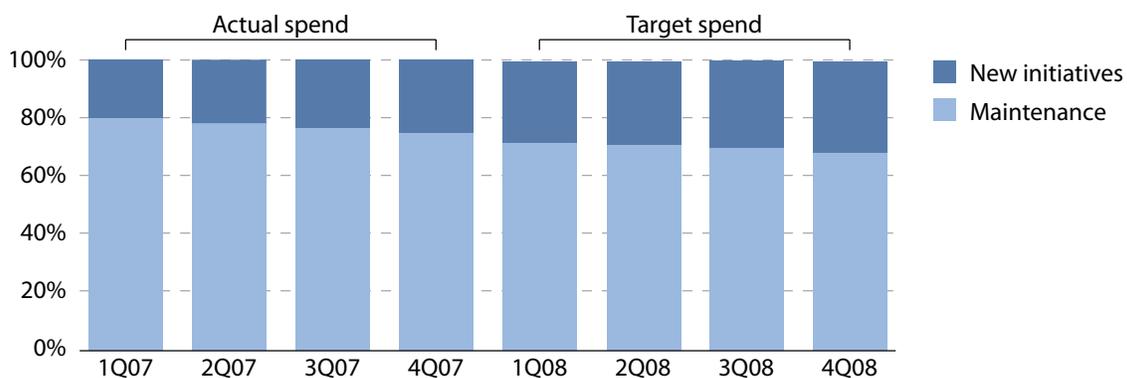
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Source: Forrester Research, Inc.

Figure 4 Critical Services Availability

45537   Source: Forrester Research, Inc.

Metric #5: Operational Health

The fifth metric focuses on operational health and stability, without which IT will be unable to establish credibility with its users and is more likely to be relegated to a role as a cost center rather than a value center. There are a number of components to consider concerning operational health including:

- **Dial-tone reliability of IT services.** Users experience the most significant impact from outages, and severe outages are defined as those that have an impact on business outcomes. From a user's perspective, a primary concern relates to applications and services availability. For external customers accessing Web sites, response time has been found to be a critical factor in customer satisfaction. In fact, it goes beyond satisfaction and can have financial impact since one of the reasons for abandoned shopping carts is slow response time. For these reasons, SLA performance is measured as a leading user/customer satisfaction metric.

- **Safe and secure systems and networks.** Security issues are becoming significant for IT organizations. Whether they come in the form of viruses, spam, denial of service attacks, hacker penetrations, or in some other form, security breaches have an impact on business. These business impacts can range from denial of service to identity theft and many other outcomes that can lead to significant adverse monetary costs in lost revenues, recovery costs, and even fines.

- **Crisp and consistent project execution.** On the development side, IT must deliver its projects with more success than they have historically. There are four dimensions of project execution that must be measured and improved including delivering on time (schedule), delivering on budget (cost), delivering the expected functionality (scope), and delivering without defects (quality).

An operational health metric can be constructed as an index comprised of four components (see Figure 5). Performance for each of the components is measured on a scale of 1 (best) to five (worst) based on its value. For example, there were two unplanned outages during the period, which results in a performance level of 2. Each of the four components can be weighted (in this case, all are equal). Each score is added to come up with the index. This index can be tracked over time to show performance trends.

Figure 5 Operational Health

Performance indicator (PI)	Performance level					Example calculations			
	1	2	3	4	5	Value	Level	Weight	Score
Unplanned outages	0	1-2	3-4	5	>5	2	2	25	50
Security incidents	0	1-2	3-4	5	>5	1	2	25	50
Project on time, budget, scope	100%	95%	90%	80%	<80%	85%	4	25	100
Average defect rate	0%	2%	3%	4%	>4%	2%	2	25	50
							Operational health index		250

45537 Source: Forrester Research, Inc.

RECOMMENDATIONS

TAKE THE CUSTOMER-CENTRIC VIEW

Effective programs for measuring and communicating IT performance to stakeholders assume an outward-looking perspective. The best place to start such a program is by interviewing key IT stakeholders to first understand their current perception of IT and then what they expect or need from IT to be successful. Ultimately, this defines how they measure IT. Based on the input from these interviews a customer-centric scorecard can be developed. Be sure to review draft scorecards with the stakeholders and get their feedback. Cascade the scorecard to develop the internal metrics that IT will need to execute operationally.

ENDNOTES

[1] The Society for Information Management conducts an annual survey of its membership in conjunction with its annual SIMposium event, held most recently in October 2007. The survey findings were published on SIMnet, the society's Web site, and are available for download to its members.

[2] Each year Forrester surveys a large base of IT decision-makers about their IT spending and budgeting practices. One of the questions asked each year is about the ratio of spending to maintain and operate the IT organization, systems, and equipment. See the November 13, 2007, "US IT Spending Benchmarks For 2007" report.