

MEASURING IT PERFORMANCE WITH THE BALANCED SCORECARD

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ABSTRACT

It is generally recognized that there are not very many metrics available for effectively measuring organizational performance. As information technology (IT) becomes increasingly important to the attainment of business objectives, it is particularly critical to be able to effectively measure IT performance, within the organizational context, and to assess its overall contribution to corporate strategy and performance. This paper describes the development of a performance measurement tool, the Balanced Scorecard, which may be used to assess IT performance. Data for the development of the scorecard was obtained from a survey of senior IT executives. Guidelines for successful implementation are also provided.

1. INTRODUCTION

Information technology is beginning to play an increasingly important role for many organizations, in their quest for competitive advantage. The IT departments in most organizations have progressed beyond their typically reactive roles, where their main focus has been almost exclusively on internal efficiency and effectiveness improvements [14] [38]. Today, many organizations are leveraging IT for strategic advantage, in addition to the necessary internal efficiencies. As one author puts it, "IT has grown from being a means of automating data processing to being the critical infrastructure for doing business today" [37]. Indeed, IT has permeated the very core of business, and plays a critical role in helping to create new products, enhance existing lines of products, redesign core business processes, create new distribution channels, and facilitate electronic business. Several authors have noted that for many, if not most, organizations, IT is actually driving overall business strategy [1] [10] [11] [15] [25] [26] [28] [36]. It comes as no surprise, therefore, that many organizations are investing quite heavily in their IT functions. According to one estimate, about one-third of the annual capital investment by US corporations is in IT [37].

Unfortunately, in spite of the many reported success stories about IT, and the heavy investments that many organizations have poured into their IT functions, many IT projects and initiatives are unsuccessful. According to a survey by the Standish Group, 73 percent of corporate America's IT projects in 1996 were late, over budget, or canceled. Project failures cost an estimated \$145 billion per year [35]. IT project failures have been attributed to a number of factors, including the failure to use appropriate measures [5] [35], ineffective project management [29], a lack of alignment of the IT project with the business strategy [12], lack of organizational readiness [31], and a lack of integration of IT into the activities of the people who actually use the technology [4].

In this paper, we present a technique that can be used to address the problems listed above and help to ensure the success of IT projects and applications. This technique is called the *Balanced Scorecard*, and was first proposed by Kaplan and Norton [19] [20] [21]. The Balanced Scorecard provides measures

that link performance to strategy by combining the tangible, well-established financial measures of past performance (lag indicators), such as Return on Investment (ROI), with intangible measures of the firm's drivers of future performance (lead indicators), and shows cause-and-effect linkages among the component measures.

2. THE BALANCED SCORECARD

As proposed by Kaplan and Norton [19], the Balanced Scorecard measures an organizational unit's (in this case IT) or an entire organization's performance along at least four main perspectives:

Financial perspective: *How well are we doing financially?* The financial perspective serves as the ultimate focus for the objectives and measures in the other scorecard perspectives.

Customer perspective: *Customer Satisfaction/How do customers see us?* The customer perspective allows companies to align their measures of customer values (i.e., satisfaction, loyalty, retention, acquisition, and profitability) with targeted customers and market segments.

Internal Business Process perspective: *In what business processes must we excel?* These are those processes that will deliver the objectives that the financial and customer perspectives have established for customers and shareholders.

Innovation and Learning perspective: *Can we continue to improve and create value?* This perspective focuses on the need to learn and grow, in order to maximize successful outcomes in the first three perspectives.

Figure 1 illustrates how a Balanced Scorecard may be used to link IT performance to overall corporate strategy and performance.

3. THE SURVEY

For this study, a survey was conducted to determine the actual and potential use of the Balanced Scorecard in selected IT organizations. The survey was in the form of a questionnaire mailed out to senior IT executives in several organizations in the United States (mostly in southern California). Altogether, 20 IT executives completed and returned the surveys. The participating organizations were from various industries, including high-tech, engineering, scientific research, IT consulting services, and the utilities. The organizations ranged in size from 22 to 45,000 employees (with a mean size of 13,238 employees). The survey asked respondents to specify, for each of the four major Balanced Scorecard perspectives, at least three to four goals that they believe their IT organizations should have. Then for each of these goals, they were to specify one or more relevant performance measures. The results are shown in Tables 1 through 4. They represent an *aggregation* of the responses obtained. Each IT organization will have to develop and customize its own scorecard to reflect its own corporate strategy.

Salient results from the survey include the following: (a) All the survey respondents currently have performance measures that bear at least *some* similarity to the Balanced Scorecard, but the degree of similarity varied widely; (b) An overwhelming majority of respondents (over 85%) thought that a measurement system similar to the balanced scorecard would be very beneficial to their departments; (c) Among the biggest benefits they expect the balanced scorecard to provide to their organizations are the following: a heightened focus on key business initiatives and drivers; structure and consistency; proper

balancing of goals; ability to proactively manage long-term plans; expectations that are well understood; inclusion of client's view; understanding relationships between goals and tradeoffs that often must be made; focus on higher level items—prevents people from digging into politics and resisting change; (d) Fifty percent of the respondents anticipate fairly high levels of difficulty in implementing an IT Balanced Scorecard within their organizations; the reasons cited for this include the following: change is hard; sometimes the goals are not very clearly articulated; difficulty in getting buy-in across decentralized groups; need to develop several scorecards for a heterogeneous community; expense of measuring some goals; organizational culture; leadership stability; getting people to agree on the measurements. These findings are shown in Tables 5 through 7.

4. IMPLICATIONS OF THE SURVEY

The following implications are readily apparent from the results of the survey:

1. There is a clear need for a comprehensive performance measurement system such as the balanced scorecard for IT organizations.
2. Performance metrics must be flexible and adaptable to a particular organization's circumstances.
3. Setting goals is critical; goals must be clearly defined in order for the balanced scorecard to work.
4. Implementing a balanced scorecard is not easy; it requires major commitments of time and money [21] [27] [32], strong leadership and commitment from IT management as well as senior management, and a good working relationship between the Chief Information Officer (CIO) and the CEO.

5. GUIDELINES FOR IMPLEMENTING AN IT BALANCED SCORECARD

The strong need for an IT Balanced Scorecard articulated by our survey participants, coupled with the difficulty in implementing such a system, indicates a need for some guidelines. The following are recommended balanced scorecard implementation stages (see Figure 2):

Stage 1: Agree on the corporate mission.

Stage 2: Translate the corporate vision and gain consensus on corporate IT goals and objectives.

Stage 3: Communicate business objectives to IT staff, set goals, and link strategies.

Stage 4: Set targets, allocate resources, and establish milestones (this is the stage where the balanced scorecard is actually developed).

Stage 5: Get continual feedback—and learn!

Some potential implementation pitfalls to avoid:

1. Designing the balanced scorecard without an articulated vision.
2. Blindly copying another company's scorecard.
3. Data Overload—attempting to measure everything!
4. Failure to heed the performance results from the scorecard.
5. Failure to link balanced scorecard performance to reward systems.
6. Treating the balanced scorecard as a one-time activity instead of an on-going activity.

Success in the development of an IT Balanced Scorecard can also be greatly facilitated by holding one- to two-day retreats away from the office, where staff can devote their full attention to the process of articulating and communicating critical goals and measures, as well as building consensus. By developing and using a balanced scorecard, the IT function can demonstrate its contribution to overall corporate performance and strategy through the cause-and-effect linkages inherent in the scorecard.

[NOTE: References, tables, and figures are available upon request.]