

THE IMMEASURABILITY PROBLEM OF IT INVESTMENT

The IT department typically has a large and rapidly growing budget. In addition, most IT departments have had at least a few high-profile failures, causing business executives to be somewhat suspicious of IT's value. If the line works, and IT leaders persuade business executives that IT investments are somehow fundamentally different from other types of business investment, IT is relieved of the responsibility of attaching dollar values to those investments.

Measuring methods of information technology investment is a part of business-performance management. It is rather young branch of knowledge, so the question of its effectiveness measurement is not comprehensively studied yet. The works of the following authors are devoted to the topic explored: Dr. Robert Kaplan, David Norton (the Balanced Scorecard) [1], Marilyn Parker, Robert Benson (Information Economics) [2], Ted Smith, Fernando Flores, Dale Skeen, Ismael Ghalimi, Phil Gilbert (Business-performance management) [3].

The first problem is that results have no meaning when compared to other investments. The second problem is that, to date, there is no empirical evidence that this method improves decisions.

The "immeasurability" problem is caused by three basic types of misunderstanding about measurement problems. Firstly, the object of measurement (i. e., the thing being measured) & the concept (the meaning) of measurement is not understood. The methods of measurement (proven techniques used by science) generally are not well understood [2].

The aim of this article is to define the IT investment effectiveness measuring problem field and to analyze business-performance management optimization methods.

Business-performance management, though defined in various ways, is generally considered to be a set of management and analytic processes – supported by technology – that addresses financial and operational activities.

Businesses set strategic goals and then measure and manage performance against those goals. Core processes include strategic, financial, and operational planning; consolidation and reporting; modeling and analysis;

metrics such as scorecards and Six Sigma; and monitoring of key performance indicators linked to organizational strategy using dashboards.

Enterprises are using business-performance management for a variety of reasons. Among the common drivers: to improve decision making, reduce costs, increase accountability, improve business planning, and achieve better visibility into business processes such as sales.

As part of their efforts, companies are using various performance metrics and standards. The most popular are business-activity monitoring (61%), ISO 9000X (47%), balanced scorecards (44%), and Six Sigma (35%) [4].

One of the concepts in the Balanced Scorecard methodology that appeals to many executives or other business decision-makers is the idea of having “leading measures.”

When Dr. Robert Kaplan and David Norton introduced the Balanced Scorecard over a decade ago, part of the “balance” that they introduced was balancing the traditional financial measure, which they characterized as lagging measures, with measures that gave a better indication of likely future performance - leading measures [1].

The Balanced Scorecard methodology stresses that objectives and measures from multiple perspectives should all be considered.

The classic perspectives for for-profit businesses are Financial, Customer, Internal Operations/Processes, and Learning and Growth (which focuses on human capital, technology and organizational culture – the intangible assets that create value).

By looking carefully at all four perspectives, organizations can focus on both the causal drivers of performance and the outcomes.

In the Balanced Scorecard, the strategic objectives often consist of a verb-adjective-noun phrase. For example, an objective may be something like “Grow International Sales” or “Build Deep Client Partnerships”.

These objectives should be linked in cause and effect chains that cross the multiple scorecard perspectives — graphically depicted in what has become known as a strategy map.

The following diagram (fig. 1) shows objectives linked in cause and effect chains that are part of a strategy map for a software company based in the U.S. that wants to execute a strategy of growing international sales [1].

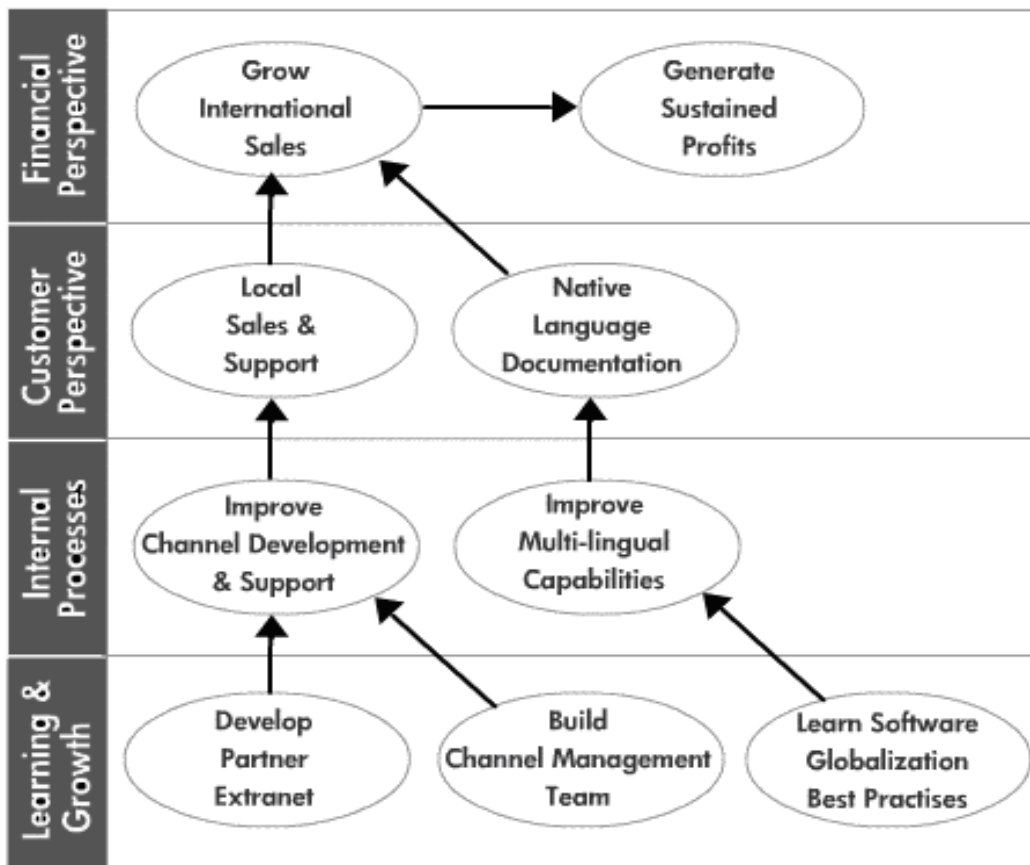


Fig. 1. Part of a Strategy Map for a Software Company

The graphical representation of KPIs and metrics (fig. 2) makes it easier to analyze the information in an efficient manner.

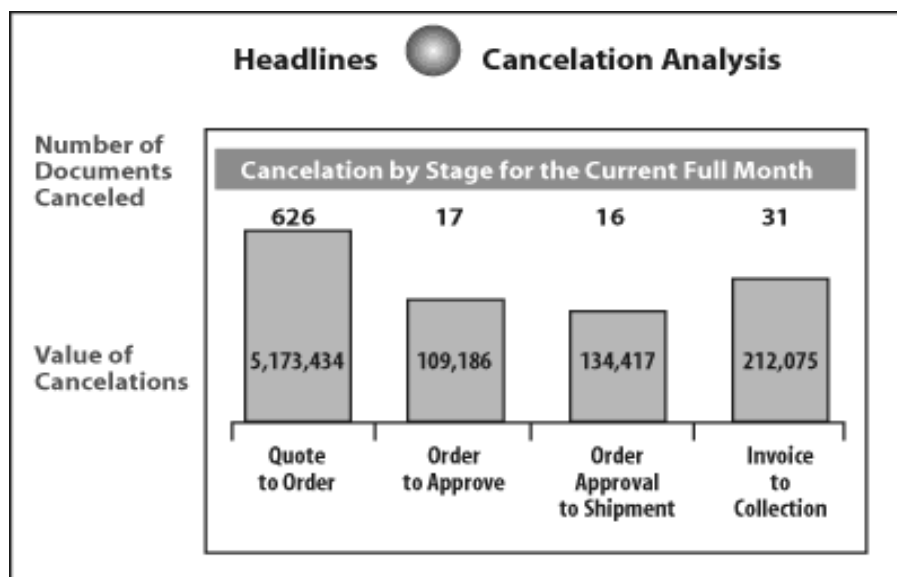


Fig. 2. Detailed Metrics that Visually Represent Order Cancellation by Sales Process Stage

Although selection of the appropriate visuals and graphs contribute to the effectiveness of a Business-performance management dashboard, the true "soul" of the dashboard is the key performance indicators (KPIs). They also provide the focal point for enterprise-wide standardization, collaboration and coordination.

Incorporating visualization with KPIs provides individuals with a powerful tool to manage the activities of their organization. Through visualization of KPIs, individuals can quickly and easily spot events or trends that are of concern and can focus their resources on those activities that require their attention.

There are several products categories that support visualization of KPIs. These product categories have their advantages and disadvantages where are highlighted in the table below (tab. 1) [6].

Table

Product categories that support visualization of KPIs

Product Category	Advantages	Disadvantages
Spreadsheet Software	<ol style="list-style-type: none"> 1. Software is the least expensive of the three product categories. 2. Easy to use. 3. Rich in functionality. 	<ol style="list-style-type: none"> 1. Manually intensive and prone to errors and inconsistencies. 2. KPIs and metrics will need to be defined. 3. Updates are time-consuming
Business Intelligence Software	<ol style="list-style-type: none"> 1. Easy to use. 2. Rich in functionality. 3. Enables research and analysis through ad hoc query capabilities. 	<ol style="list-style-type: none"> 1. Requires configuration of the software. 2. KPIs and metrics will need to be defined. 3. Presentation of the information may be too detailed and not in a manner that is suitable for executive or senior management
Analytic Applications	<ol style="list-style-type: none"> 1. Easy to use. 2. Standard templates which contain KPIs and metrics by subject area are often available by vendor. 3. Automated process of data extraction and updating of KPIs and metrics. 	<ol style="list-style-type: none"> 1. Software is the most expensive of the three product categories. 2. Requires configuration of the application and validation of KPIs and metrics. 3. No value is provided if the source data is not available for the subject area templates

Non-IT executives agree most strongly that the role of information technology in their organization is to reduce costs. Most agree that IT supports the needs of the company well, is an important part of the business and is aligned to company strategy. Less agreement can be found, however, for the statement that information technology represents a means to increase sales and/or to achieve competitive advantage.

There is a low level of agreement among non-IT executives that IT is a core competency of their organization. Surprisingly, most IT executives agree that information technology is a core competency of their company.

This increased conservatism is illustrated in the shortening of expected pay-back periods for information technology projects. Two-thirds of GMA-member companies (Grocery Manufacturers of America) expect IT projects to recoup their costs in one to two years – up from 43 percent last year. The numbers of those expecting a longer pay back of two to five years [5].

In order to effectively make informed business decisions, individuals must have access to relevant information. KPIs and metrics aid individuals with assessing performance, identifying activities or events that are of concern and focusing resources on those activities that require attention.

In this rapidly changing and competitive business environment, management needs all the relevant information that they can get to steer the best course for their organization.

To ensure that business-performance management works, companies evaluate their efforts fairly frequently. Despite the benefits, deployment can present significant challenges. Nearly three-quarters of those implementing business-performance management said they've had difficulty changing or adapting their corporate business processes to use it. About two-thirds have grappled with technical-integration issues in linking Business-performance management technologies with existing financial systems, and half have had a hard time educating IT and corporate employees about Business-performance management [6].

As a result of these and other efforts, such as standards, companies should achieve improvements not only in performance, but in their ability to measure their progress.

References:

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