: Where can I find information about KPIs for building DSS in different industries?

The topic of identifying KPIs or Key Performance Indicators is a major issue in developing Executive Information Systems, Balanced Scorecard Systems and Performance Management Information Systems. Allan Yiin posted a question requesting information about KPI (key performance indicators) that the managers should track, especially for manufacturing and finance. I've also had a number of inquiries about what software is best for tracking KPIs. So this Ask Dan! tries to resolve some of the issues associated with tracking and identifying performance indicators and to identify web resources for finding more information.

In 1979, John Rockart identified an approach for defining decision-making data needs that is appropriate for many data-driven DSS and especially Executive Information Systems (EIS). Rockart's Critical Success Factors (CSF) Design Method focuses on individual managers and on each manager's current hard and soft information needs. A CSF analysis can be beneficial in identifying "the limited number of areas in which results, if they are satisfactory, will insure successful competitive performance for the organization." If organizational goals were to be attained, then these key areas of activity - usually three to six factors - would need careful and consistent attention from management.

Key Performance Indicators were originally called Critical Success Factors (CSF) and were used in Executive Information Systems (EIS). These indicators of performance were rediscovered and renamed KPIs and MPIs (Management Performance Indicators). KPIs, CSFs or MPIs are strategic measures or a set of measurements used to measure strategic initiatives. Metrics can be expressed as ratios or absolute values. It is important to identify metrics appropriate to a specific company. The metrics should be key areas of business activity in which favorable results are necessary for a company to reach its goals. Establishing key performance metrics should start with business/organization planning. Managers should define appropriate goals, measures (metrics), targets, schedules, data collection processes, and analysis procedures.

Robert Kaplan and David Norton (1996) pioneered the Balanced Scorecard (BSC) approach to develop KPIs. They first introduced the idea in the January/February 1992 issue of the Harvard Business Review. The BSC focuses on financial and non-financial measures in the areas of financial performance, customer satisfaction, internal business processes, and organizational growth, learning and innovation. A balanced scorecard attempts to translate a company's objectives and strategies into tangible measures.

For a manufacturing organization one might identify performance metrics like: revenue per employee, average machining time, warranty claims, ratio of sales to inquiries, in-process inventory levels, and order fulfillment time. For a finance unit KPIs might focus on metrics like: average cash balances, revenue per employee, return on capital, total cost per transaction or inventory turnover. KPIs for a university or college might include student turnover or "defections", articles per faculty member, employment rates of graduates or graduation rates by program.

In 2001, Vodafone identified and reported on its KPIs. The KPIs included registered blended average revenue per user ("ARPU") based on a 12 month rolling average as a measure of customer activity, data revenues as a percentage of service revenues, EBITDA margins and operating profit margin.

Some of the advantages of tracking performance metrics include providing a continuity of knowledge

in a firm, improving communications, reducing biases, facilitating analysis of trends, and improving planning (cf., Camillus, 1986).

There are a wide range of definitions and approaches for performance measurement. Performance management can be enhanced by a web-based decision support/executive information system. Some vendors with BSC software include SAS Institute (sas.com), Dialog Software (dialogsoftware.com), Executive Dashboard (iexecutivedashboard.com) and PM-Express(TM) (www.pm-express.com).

Also, readers may want to check the Balanced Scorecard Institute (http://balancedscorecard.org/) for more information. The website is a clearinghouse for managers to exchange information, ideas and lessons learned in building strategic management systems using the balanced scorecard approach. Kaplan and Norton operate the Balanced Scorecard Collaborative, Inc. and its website at http://www.bscol.com/. Also, Hopf et al. prepared a guide to performance management targeted to procurement executives that is available on the web.

References

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The above response is from Power, D., Where can I find information about KPIs for building DSS in different industries? DSS News, Vol. 3, No. 18, September 1, 2002.

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Last update: 2005-08-06 22:04