



Activities for Business Intelligence Efforts

Introduction

In the September issue's article "Get Smart – Business Intelligence for the Masses," Kristen Craft provided an excellent introduction to the topic. This article builds on the background from that article and outlines the common activities in any business intelligence effort.

To briefly review, business intelligence is the practice of using measurements to support business decision making. There are numerous techniques and tools available on the market to support its use. However, regardless of the specific tools used by a particular organization's business intelligence practice, there are a number of commonalities.

Generally speaking, there are five key business intelligence activities: planning, measuring, analysis, communication, and action. Typically, these activities will be executed in the order listed. Individual organizations will tailor the naming, sequencing, and detailed tasks for these activities to meet their processes, culture, requirements, and tools.

Planning the Effort

The planning activity encompasses all of the definition tasks for the business intelligence effort, and seeks to provide answers to the following questions:

- What is the goal of the effort (the "Big Question")?
- What can be measured to support the achievement of this goal?
- How are measurements to be taken?
- How often are measurements to be taken?
- What range of values should be considered "normal"? What values are causes for concern?
- How are results to be communicated?
- What actions will result from measurements?

The completeness and level of detail of the answers to these questions will depend on how the business intelligence effort will be implemented by the organization. For example, an organization using an iterative approach and internal resources will need less detail than one using external resources and a "big bang" approach.

Collecting Measurements

From the planning activity, a number of measureable questions were identified. The answers to these questions at a specific point in time are the measurements for the business intelligence effort, and serve as the facts for decision making. The collection of these measurements may be done manually or through some form of automation, and the results captured on paper, in a spreadsheet, or in a database.

In some situations, the individual measurements must be combined in some way to be useful for decision making. These aggregate measurements should be captured in the same way as the component measurements.

There are a number of factors to consider while defining the business metrics. One is that measurement (real or imagined) changes the behavior of what is being measured. People will adjust their behavior, system resources will be consumed, etc. While some of these perturbations are beneficial toward the achievement of the goal, this will not always be the case. Awareness of this effect will aid in the analysis of the results of measurements.

Another consideration is that taking measurements consumes resources. Certain business processes may already have automated methods for metric collection. Those that do not and are selected for monitoring may require new development of automatic collection or manual human intervention. The selection of measurements should be balanced based on priority to the business and the feasibility of measuring such metrics.

Analyzing Results

Once collected, the measurements are examined based on the criteria previously identified. The goal of this analysis is to assign meaning to the measurements. At a minimum, measurement values should be categorized into two categories (good/bad, normal/warning, green/red). Organizations requiring additional classifications are free to do so.

In some organizations, the same set of measurements may be interpreted differently. Each of these business perspectives or decision making contexts will have their own set of analysis rules. For example, the finance organization may have a different perspective on the meaning of warehouse inventory numbers than the manufacturing organization, and the sales organization may have yet another perspective.

Communicating Findings

Once the measurements have been collected and analyzed, the results should be communicated to the appropriate audiences. Depending on the organization, this could be through email, investor calls, executive dashboards, or balanced scorecards.

It is important that all communication mechanisms include some indicator of the time periods for the measurements, as well as the analysis perspective if applicable. For example: "Financial analysis – third quarter 2009", or "System utilization – 10 October 2009".

It is also important to consider how the communication may be reused, and that enough information is present to ensure that the findings are not taken out of context. For example, screenshots may be taken of a dashboard for inclusion in a briefing slide deck.



Taking Action

Once the measurements have been collected, analyzed, and the results communicated, the business can take appropriate action: parts can be ordered, stocks sold, or additional analysis efforts started.

In Summary

Any organization, regardless of size and technology investment, can use business intelligence to provide a fact-based, repeatable framework for decision making. By defining their goals and supporting metrics, collecting measurements, and analyzing and communication results, an organization can act with confidence, based on the facts collected.