

Why Introduce a BPMS with Analytic Functionality?

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Let's start with the scenario that you already have a continuous improvement (CI) program in place. Now you are asking, "What would be a good next step?" Would a Business Process Management Software (BPMS) solution be the way to go? If you are evaluating a BPMS, you may want to consider a BPMS with analytical functionality. Why? Because analytic functionality provides the ability to support quantitative decision making and to facilitate the qualitative definition and logic of the business processes.

This Article examines the benefits of bringing a BPMS with analytic functionality into your CI program and focuses on how to think about the data you can use to measure how the processes are working; giving you the ability to determine when additional improvements are required.

With your CI approach you certainly want to deliver consistent, repeatable and more efficient outcomes from your improvement projects. Adding a BPMS with analytics means that you will be able to identify, monitor and correlate DYNAMICALLY and CONTINUOUSLY occurrences of events that can be traced in time literally anywhere. This would be virtually impossible to do manually, but with the aid of technology, becomes feasible.

A BPMS analytic combines technology and CI methods to address the most sophisticated problems of companies. But it is not only about technology. It is also about using measures to serve peoples' needs and to make their lives easier and their work more effective by giving them the tools and information they need to improve.

With the combination of CI and BPMS analytic approaches, you will support the ongoing realization of Business Value, Process Transformation and Management Enablement. This is possible because BPMS analytics support an improved decision making process, thus enabling the ability to look at options more quickly, more efficiently and, from a financial point of view, more knowledgeably.

BPMS analytics:

- Extend the creation of improved processes that can be quantified, thus helping to maximize economic returns by minimizing time expended. This is done by segmenting available data from a diversity of internal/external sources to allocate it in structured gates--for identification, prioritization and analysis.

For example, let's say that you have improved the Sales process and need to know if the implemented processes are going to improve your performance. Would seeing the data identified, prioritized, and analyzed in real-time dashboards showing Forecast Revenues, the percent of Deals Closed, percent of deals Lost and percent of Quota Length of Sales Cycle information help you?

- Maximizes the utilization of resources and reduces waste to an absolute minimum. By implementing a BPMS, you have visibility and accessibility across functional areas to already identified core information assets providing ready to use information types for business solution centers.

For example, a bank credit department could analyze, not only the number or credit card applications over a quarter, but how these figures will impact other areas like customer service, training or finance by identifying patterns of behavior and accurately allocating staff levels to avoid potential problems.

- Provides management with the big picture at all times and with different perspectives on the same information, relevant to their functional activity (e.g. HR, SCM, FI) by

providing visual monitoring dashboards displaying process performance gauges to verify the execution of strategic objectives. This can be generated dynamically at predefined times or at the occurrence of relevant events, triggering alerts in real-time for immediate corrective actions.

For example, a visual management dashboard could present the KPI (key Performance Indicators) ratios related to production department productivity, e.g. the number of manufactured parts or non-compliant quality inspections. Or the human resources department could have a graphical depiction of their ratios related to staff recruitment, retention, open positions and the average number of days for successful recruitment for open positions.

To take full advantage of BPMS analytics, there are required capabilities. These capabilities relate to the following three states of time.

Descriptive Analytics (Past)

Descriptive analytics entail the use of historic and current views of business process data to provide decision support to personnel and IT. Some examples could be:

Current State Data--primary structured information describing transactional views of data extracted from the BPMS tool for basic analysis.

Tailored Reporting--a comprehensive range of reports tailored to the form and content required. For example, Finance may require daily performance reporting, compliance monitoring, trading efficiency analysis, performance risk analysis, performance measurement and attribution, and real-time access to cash transactions.

Intelligent Reporting--a fine-tuned interpretation of data, providing alternative solution scenarios. For example, these reports might reveal which of your products or services are more profitable by region or identify customer buying patterns or trends.

BPMS analytics provide a single centralized database storing all of the organizations' data of what occurred in the past based in previously agreed concurrent approaches enabling you to focus on the present.

Predictive Analytics (Present)

This type of analysis has nothing to do with prediction in the strict sense of the word. It is in effect a forecast, a mathematical interpretation of future scenarios, based on past data, base-lined by detected patterns of behavior and projected into future behaviors.

You may discover new insights into your data that can be used to create alternative solution models representing the relationships between process inputs and outputs. For example, you may want to predict consumers' behavior or trends in probability terms.

Typical models that can be used are:

Upper & Lower Control Levels Run Charts--graphical time series, characterizing variability and shaping data behavioral trends such as seasonality. For example, you may be looking to analyze the fill level of bottles in a soda company or the temperature in a hairdryer each time it is used.

Predictive Modeling/Simulation - testing the models under different stress scenarios to evaluate their response to different algorithms before they go live, thus preventing implementation errors. For example, the holidays are coming and you are expecting a 50% surge in on-line customers. This functionality provides the ability to replicate the external factors and conditions with the internal factors and conditions with which the process interacts. The scenarios and events are replicated with sufficient reality to ensure conformity as predicted.

Hypothesis Testing/Validation-data can be analyzed from different perspectives, but at every perspective there is data that is decomposed in specific elements, which we'll call components. The trick here is to determine the different relationships of these components with other subcomponents and try to define the combination that will trigger decision- making event, such as a purchase or a claim. For example, an insurance company wants to review its currency policy rates by analyzing the average claim amount of 1,700 USD. They're concerned that the true amount is actually higher. A series of calculations are completed to see if there is reason for concern.

Prescriptive Analytics (Future)

Once past outcomes are understood and forecasts of best-to-occur scenarios have been defined, you can then define specifications that will affect your processes, personnel and technology.

Prescriptive analysis is a step beyond predictive analysis in that it enables you to define specific actions by benefiting from previous forecasts to anticipate an outcome in terms of quantity, quality, time and logic. Putting in place preventive sensors or controls to mitigate or eliminate risks and increase the accuracy of results, gives you a CI edge.

For example, in healthcare prescriptive analytics can help to leverage internal operational data and external factors such as demographics, health trends and economic data to plan future capital investments for new facilities and equipment as well as improved personnel allocation by more accurately predicting utilization.

Best of Class BPMS with Analytics

The best of class BPMS integrate analytical methods with technology to support quantitative decision making to facilitate the qualitative definition and logic of business processes.

But not all software houses can offer a real solution that will be able to undertake the different types of analysis mentioned in this article. Some will only limit their functionality to model process maps and warehouse the created assets in a centralized database and the 'analytical capability' will be a poor insertion of metrics overlaid in the process maps. Others will provide a limited number of Descriptive Analytics with the need of other software tools to run the calculations and simulations in the background. This may become a big disappointment as well as a big investment with additional non planned expenditure, becoming more an IT lock up rather than a solution. My advice is to revise in detail what are the exact capabilities of the BPMS tool and test the full capacity of it, with in house specific business cases.

In summary, by having a best of class BPMS analytic capability, we can create a collaborative environment between strategic CI and tactical improvement through capabilities in data analysis, scenarios simulation, and monitoring and control of the processes performance. It all adds up to a support system for effective and agile decision making.

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This Article was written in collaboration with Christine Dicken.

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