

THE ROLE OF BUSINESS INTELLIGENCE IN BUSINESS PERFORMANCE MANAGEMENT

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Business performance management (BPM) is a key business initiative that enables companies to align strategic and operational objectives with business activities in order to fully manage performance through better informed decision making and action. Effective business performance requires an organization to model and monitor not only its tactics but also its strategies and the assumption on which these strategies are built.

The aim of this paper is to examine the processes, methodologies and technologies underlying BPM, the relation between BPM and business intelligence, and to propose a framework for integrating corporate performance management and business intelligence in a holistic approach of managing business performance.

Keywords: *Business Performance Management (BPM), Business Intelligence (BI), business processes, strategy, integration*

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Introduction

During the last years, companies have understood the importance of enforcing achievement of the goals defined by their strategy through metrics-driven management.

Finance organizations have vast technology assets to assist them with day-to-day operations, regulatory compliance, and financial reporting. Such systems record transactions and manage operational processes, automate compliance and controls, and roll up financial performance data. To varying degrees, these systems populate data warehouses (DW) that are exploited by advanced business intelligence (BI) systems. The DW process, though supporting bottom-up extraction of information from data, fails in top-down enforcing the company strategy. The missing element — one that finance and IT teams are now pursuing — is the integration of these systems into a unified source of performance information and analysis capability.

Early adopters of business performance management have focused on making the finance function more strategic — mainly because people have tended to trust data coming out of a financial system more than other corporate systems, such as ERP or CRM. Almost every major business function has a performance management element that can be realized. To enable this requires organizations to put in place the right data platform and source data and ensure that strategic thinking is driven by the wider needs of the business. Nowadays, organizations of all shapes, sizes and markets are under pressure to conform to increased regulatory compliance pressures and have a need to link corporate performance to the decision-making process. BPM can be the right answer — leveraging what you already have and aligning the various aspects to move in the same direction. It helps organizations translate their strategies and objectives into plans, monitor performance against those plans, analyze variations between actual results and planned results, and adjust their objectives and actions in response to this analysis.

In the business literature, performance management has a number of names, including BPM, corporate performance management (CPM), enterprise performance management (EPM), and strategic enterprise management (SEM). Although different terms are used, they all mean essentially the same thing. The BPM Standards Group (2005) has defined BPM as “*a framework for organizing, automating, and analyzing business methodologies, metrics, processes, and systems to drive the overall performance of the enterprise. It helps organizations translate a unified set of objectives into plans, monitor execution, and deliver critical insight to improve financial and operational performance*”.

1. Business information technologies

Business Information Technologies are seen as cutting edge Information Technologies made on purpose to support business information engineering. Management methods, techniques and support tools could be seamless integrated with Business Intelligence components in special tailored or customized Performances Management systems. The main functions of these systems are:

-To gather and store different measures of the business on a regular basis (current state indicators of the business performances).

- To gather and store benchmarks and targets (threshold values) and business rules (interpretations of comparison results between current performance's indicators and etalon values).
- To facilitate roll-ups and drill-downs of analyzed indicators along hierarchical aggregation criteria (structured Performance Measurements).
- To keep the ongoing analysis alert - allowing decision makers to quickly evaluate which business processes are successful, and which need their attention.

To summarize, an effective Business Performance Information System is built and maintained by business users to support the decision-making process especially at strategic level, making use of various indicators – quantitative and qualitative, lagging and leading – balanced against targeted objectives and/or industry benchmarks. Lately, with performance measurement periods becoming shorter, management must have the capability to more proactively influence the outcome. That requires monitoring and tracking capabilities that can generate current, complete and accurate information upon which they can act in real time. Business information technologies must respond to that need of proactively managing business performance.

2. Business intelligence and business performance management

Business performance management (BPM) can be considered as being the final component of business intelligence – the next phase in the evolution of decision support systems, enterprise information systems and business intelligence. If BPM is an outgrowth of BI and incorporates many of its technologies, applications and techniques, than why BI itself can't deliver the insight needed to improve overall business performance? From a theoretical viewpoint, it can. From a practical standpoint, it hasn't (table 1).

Like decision support, BPM is more than a technology. It involves the processes, methodologies, metrics and technology used to monitor, measure and manage a business. Once selected the business process that has to be improved, and the business methodology to be implemented, there are the metrics (to monitor, measure and change) to be established. These metrics (key performance indicators) are defined and selected by the business and not by the IT. The final step is to choose the business performance measurement technology. We can say that business intelligence it is just business measurement and not business performance management.

BPM is not a single technology, but rather a combination of elements – BI, scorecarding, profiling. BI looks at and analyses the past and what has happened up until today – this is useful, as planning requires knowledge and you can set planning goals based on the past. Scorecarding enables you measure how you are performing against those planned goals. Every organization has processes in place that feed back to the overall plan. What's new with BPM is the integration of these processes, methodologies, metrics and systems – an enterprise wide strategy that seeks to prevent organizations from optimizing local business at the expense of overall corporate performance.

| Factor | Traditional BI | BI for BPM |
|---------------|------------------------|-------------------------------------|
| Scale | Departmental | Enterprise-wide |
| Focus | Historical | Timely |
| Decisions | Strategic and tactical | Strategic, tactical and operational |
| Users | Analysts | Everyone |
| Orientation | Reactive | Proactive |
| Process | Open-ended | Closed-loop |
| Measures | Metrics | Key performance indicators |
| Views | Generic | Personalized |
| Visuals | Tables / charts | Dashboards / scorecards |
| Collaboration | Informal | Built-in |
| Interaction | Pull (ad hoc queries) | Push (alerts) |
| Analysis | Trends | Exceptions |
| Data | Numeric only | Numeric, text, etc. |

Table1. Differences between traditional BI and BI for BPM

Source:Ballard, C, Business performance management meets Business Intelligence (2006), <http://www.ibm.com/redbooks>

Any BI implementation is aimed at turning available data into information and delivering it to the decision makers. BPM is focused on a subset of the information delivered by a BI system – the information that shows business performance and indicates business success or failure and enables organizations to focus on optimizing business performance. BPM involves a closed-loop set of processes that link strategy to execution in order to respond to that task. Optimum performance is achieved by:

- Setting goals and objectives – **strategize**
- Establishing initiatives and plans to achieve these goals – **plan**
- Monitoring actual performance against the goals and objectives – **monitor**
- Taking corrective action – **act and adjust**

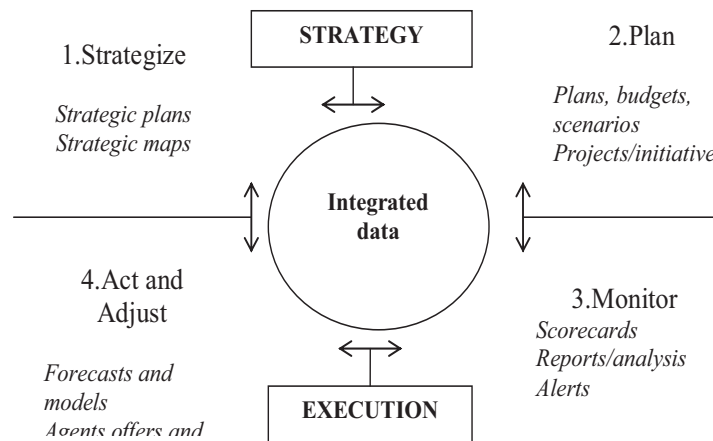


Figure 1. BPM processes

Source: Turban, E. & Aronson, J.E. & Liang, T.P. & Sharda, R. (2007), *Decision Support and Business Intelligence Systems*, New Jersey, Pearson Prentice Hall

The key to effective BPM is tying performance metrics to business strategy, and that means a melding of two areas of technological functionality: *strategic management systems* and *performance metrics*. The first are systems that manage the key business processes that affect strategy execution, including objective management, initiative management, resource management, risk management and incentive management. The second is essentially a business intelligence platform for automated data exchange, reporting and analysis.

BPM should produce three core deliverables:

- Information delivery to enable managers to understand the business.
- Performance oversight to enable them to manage the business.
- Performance effectiveness to enable them to improve the business.

Business performance management must be an enterprise-wide strategy that seeks to prevent organizations from optimizing local business at the expense of overall corporate performance

3. Integrating performance management and business intelligence

Most organizations already have a mix of packages and custom built business intelligence applications, including: strategic performance management (on top of front office), enterprise analytics for tactical analysis, operational reports and analytics used to support operational decisions. The problem is that these three decision levels are separated (in terms of applications, users, data sources) when what is really needed is for them to be integrated. Strategic planning is based on stand-alone scorecard, budgeting and planning applications that use scorecard databases that hold only summarized data. There is no detail to allow executives to drill down and find out why a problem occurred in a key performance indicator. Tactical analysis is based on analytic applications, reporting and OLAP tools delivering analytics based on summary and detailed data stored in data marts and data warehouses. Operational reports that support operational decisions are based on detailed databases.

What is needed to manage a business is the combination of strategic and near real time operational analytics- the integration of objectives driven business management using scorecards and dashboards at the strategic level with the business intelligence tools and analytic applications that support business measurement at tactical and operational levels (figure 2).

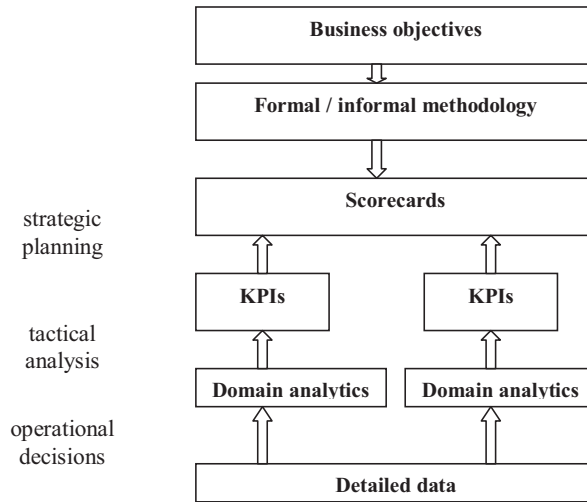


Figure 2. BI integration

Business intelligence projects must be related to strategic, tactical and operational business objectives and BPM, enterprise analytics and operational BI must be integrated into an overall BI framework in order to effectively manage business performance.

4. BPM framework

The integration of business and IT process management and BI is a key enabler for BPM. It provides the ability to effectively manage the business and achieving business goals. The BPM framework presented below is based on the integration of business and IT processes at all decision levels (strategic, tactical and operational).

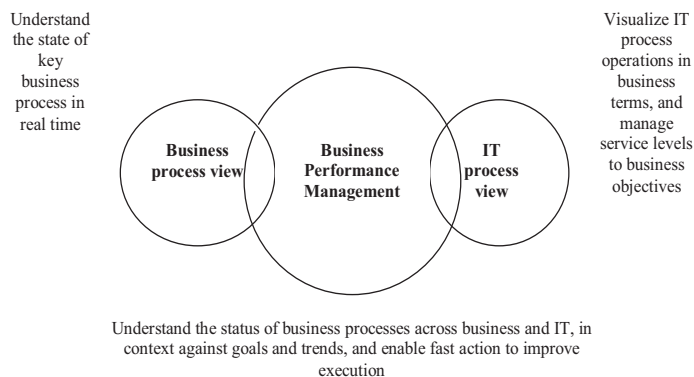


Figure 3. BPM framework

Business flexibility and agility require continuous monitoring of the business processes and support of an appropriate BI environment. An environment that provides information sufficiently current (near real time) to support the requirements for both operational and strategic decision making. BI technologies and products are evolving in order to provide such an environment, and we can list only some of the new trends:

- linking business process data to operational activity data for a complete for a complete view of the enterprise;
- implementation of business rules and Key Performance Indicators to enable consistent management of the business activities;
- automatic alert generation for proactive problem avoidance rather than reactive problem impact minimization;
- real time data flow to enable monitoring and proactive management of business processes.

A BI environment that include these capabilities enables companies to proactively manage their businesses, rather than just react and adjust to business situations as they arise.

The main objective of BPM is to help companies improve and optimize their operations across all aspects of their business. But implementing BPM is much more than just about choosing new technology – it suppose a constant analyze of business environment to determine if changes are required to existing business processes. To be successful with BPM, a company must fully understand it's own business processes and activities that support each area of business.

CONCLUSIONS

Managing and optimizing business performance is a critical requirement not only for maximizing business profitability but even for remaining viable in today's fast moving and competitive business environment. Effective business performance management will blend business intelligence with elements of planning, budgeting and real time monitoring as well as providing a window on performance. The integration of business and IT process management and Business Intelligence is the first step in managing business performance. Finally, BPM is all about taking a *holistic approach* for managing business performance. The holistic approach enables the integration and use of *business intelligence, process management, business service management, activity monitoring* and *corporate performance management* to achieve a single and complete view of the enterprise.

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