

# Theoretical Development of a Business Performance Management (BPM)

**Muhammad Muazzem Hossain**

University of North Texas, Denton, TX 76203, USA  
Tel: (940) 369-8715, Fax: (940) 565-4935  
Email: Muhammad.Hossain@unt.edu

**Victor R. Prybutok**

University of North Texas, Denton, TX 76203, USA  
Tel: (940) 565-4767, Fax: (940) 565-4935  
Email: Prybutok@unt.edu

## ABSTRACT

*The Business Performance Management (BPM) framework helps an organization continuously adjust and successfully execute its strategies. BPM helps increase flexibility by providing managers with a sense of uncertain changes earlier and allows faster response to such changes. It thus helps organizations address market opportunities. The purpose of this study is to develop a common general framework for the business performance management model by integrating the practitioner literature. Examination of the practitioner BPM models suggests that they have common constructs. All BPM models use integrated data and data analysis to (1) develop strategies, (2) devise action plans (e.g., definition of targets, models, projects, and initiatives) in terms of metrics and key performance indicators (KPIs)) to deploy these strategies, (3) define, measure, and manage performance against metrics and KPIs, and (4) adjust strategy and/or performance. Based on the literature review, a BPM model was proposed and presented at the 2007 Monfort Summit. The 2007 Monfort Summit was a gathering of Baldrige Award Recipient (BAR) members and a small group of selected researchers from across the United States. We present the revised BPM model based on the feedback provided by the 2007 Monfort Summit participants.*

## INTRODUCTION

The acronym BPM in this study stands for *Business Performance Management*, not to be confused with the term business process management. Synonymous with the concept of BPM are the concepts of corporate performance management (CPM) and enterprise performance management (EPM). These concepts provide a systems perspective for optimizing the execution of business strategy (Clark et al. 2007; Ballard et al. 2005). The concept of BPM was introduced

to business in the 1990s by information technology research firms and software vendors (Cokins 2007). BPM is misunderstood by many companies as being a new category to describe multiple applications including planning, budgeting, financial consolidation and reporting, forecasting and scenario modeling, scorecarding or dashboards, business intelligence, and key performance indicators (KPIs) reports. Eckerson (2004) argues that BPM is a common strategic and technical framework that pulls these applications together in a cohesive and concerted manner with a view to drive the whole organization toward achievement of strategic goals and objectives. Therefore, BPM is a broader concept than planning, budgeting, forecasting, reporting, scorecarding, or business intelligence. These latter concepts are all tools underlying the business performance management concept.

Cokins (2007) posits that business performance management existed decades ago and that organizations were doing performance management long before it was labeled such in the 1990s by information technology research firms and software vendors. There is little or no research in academia on business performance management. Several practitioner BPM frameworks exist but these are industry specific and vary from industry to industry (Eckerson 2004; BPMSG 2005; Cokins 2007). Therefore, the objective of this work is to create a common general framework for the business performance management model by integrating the practitioner literature.

## **THE BPM MODEL**

BPM defines and refines strategies, and manages them in order to enhance performance. It bridges the gap between strategy and execution by means of improved communication, collaboration, control, and coordination (Eckerson 2004; Ballard et al. 2005). Business performance management enables organizations to enhance the capabilities of business intelligence systems for better monitoring, measurement, and management of business performance (Clark et al. 2007). Eckerson posits that BPM improves (1) communication of strategy and expectations to all levels of the organization through planning models and performance metrics that are tied to strategic goals and objectives, (2) collaboration across an organization through a two-way exchange of ideas and information, (3) control in a manner that allows continuously adjusting plans and improving operations through dissemination of up-to-date information about market conditions and operational processes, and (4) coordination among business units and functional groups. Eckerson also suggests that BPM helps organizations better exploit opportunities as well as enhancing the ability to detect and rectify operational problems before they grow out of control.

Practitioners at various consulting firms such as Gartner, IBM and KPMG have used variants of the business performance management concept since the late nineteenth century (BPMCG, 2006). For instance, the concept of corporate performance management, a variant of business performance management, was introduced into the corporate world in 2001 by Gartner Research. However, there is little or no research in academia on business performance management. One of the objectives of this work is to examine the various practitioner versions of the business performance management model and develop a generic BPM framework that can provide both academicians and practitioners alike with a common frame of reference. In this vein, we

attempted to critically analyze each practitioner model and synthesize them based on their common, shared foundations. Table 1 provides a brief account of major BPM consulting firms and their BPM-related activities.

<i>BPM Consulting Firm</i>	<i>Brief Description</i>
Aster Group	Started in 2001. Specializes in implementing OutlookSoft BPM software. OutlookSoft BPM software uses a single, unified web-based application that enables companies to plan, understand and leverage their performance. It unifies strategic planning, budgeting, forecasting, consolidation, reporting, analysis, and scorecarding (BCG 2005; Astergroup.com).
BearingPoint Inc.	More than 100 years old. Focuses on business consulting, systems integration, and managed services. Serves Global 2000 and midsize companies, government agencies, and other organizations in the U.S. and around the world. Major services include customer relationship management, enterprise resource planning, KPI development, information management, performance management, enterprise strategy development and transformation, and IT strategy development and transformation, among others (BCG 2005).
BPM Partners Inc.	Established in 2002, BPM Partners Inc. is a vendor-neutral firm that advises its member partners on requirements definition, KPI development, IT assessment, vendor selection, and deployment (BCG 2005).
Breakaway Technologies Inc.	Founded in 1996, the Breakaway Technologies Inc. specializes in the development of the business performance management (BPM) and the business intelligence (BI) applications. These BPM and BI applications focus on how enterprises work and how they use information. Major applications include financial and sales reporting, EIS, consolidation systems, balanced scorecard, product costing, budgeting and forecasting systems, production planning, unit level forecasting, and customer product profitability systems (BCG 2005).
Cohn Consulting Group	Cohn Consulting Group was established in 1968 and provides strategic, financial, performance and organizational advisory services to private and public companies across a variety of industries (BCG 2005).
Creeth, Richman & Associates Inc.	Established in 1985, this firm specializes in developing financial analytics systems using OLAP, relational database, and Microsoft technologies for midsize to large corporations (BCG 2005).
Deloitte	Deloitte consulting was founded in 1996, is a multidisciplinary global consulting firm. However, its specialty is on the implementation of integrated performance management (BCG 2005).

**Table 1: Major BPM consulting firms and their activities.**

<i><b>BPM Consulting Firm</b></i>	<i><b>Brief Description</b></i>
Gartner, Inc.	Founded in 1979, Gartner, Inc. is the world’s leading information technology research and advisory company. It has four businesses – Gartner Research, Gartner Executive Programs, Gartner Consulting, and Gartner Events. Gartner Research introduced the term corporate performance management in 2001. The fact-based consulting services by Gartner Consulting helps organizations use and manage information technology to enable business performance.
MarketSphere Consulting	This consulting firm was established in 2002. Its BPM practice embodies strategy and process consulting with technical expertise (BCG 2005).
Pacific Science & Engineering	Started in 1984, Pacific Science & Engineering’s approach to BPM is delineated by a system called the “Strategic Process Management Model”. The primary focus of this system is to develop a complete process model that links the organization’s business objectives with its KPIs (BCG 2005).
PCS Consulting Inc.	Founded in 1997, this consulting firm specializes in activity-based costing and profitability analyses, and implements business performance management software from ALG Software, Hyperion, SAS, Business Objects, Cognos, and Microsoft (BCG 2005).
Pinnacle Group Worldwide	A global consulting firm established in 1995, Pinnacle Group Worldwide specializes in implementing Hyperion’s business analysis and financial systems solutions. It focuses on project management, implementation, application deployment, and transition management (BCG 2005).
Report Source	Report Source, a UK-based consulting company, was founded in 1999. It specializes in enterprise performance management and business intelligence solutions for planning, performance optimization, reporting and analysis (BCG 2005; Reportsource.com).
Revelwood Inc.	Established in 1995, Revelwood Inc. serves Fortune 1000 and mid-market companies. Its business performance management solutions enable organizations to strategize, plan, execute and take corrective action enterprisewide on a continual basis (BCG 2005; Revelwood.com).

**Table 1: Major BPM consulting firms and their activities (cont.)**

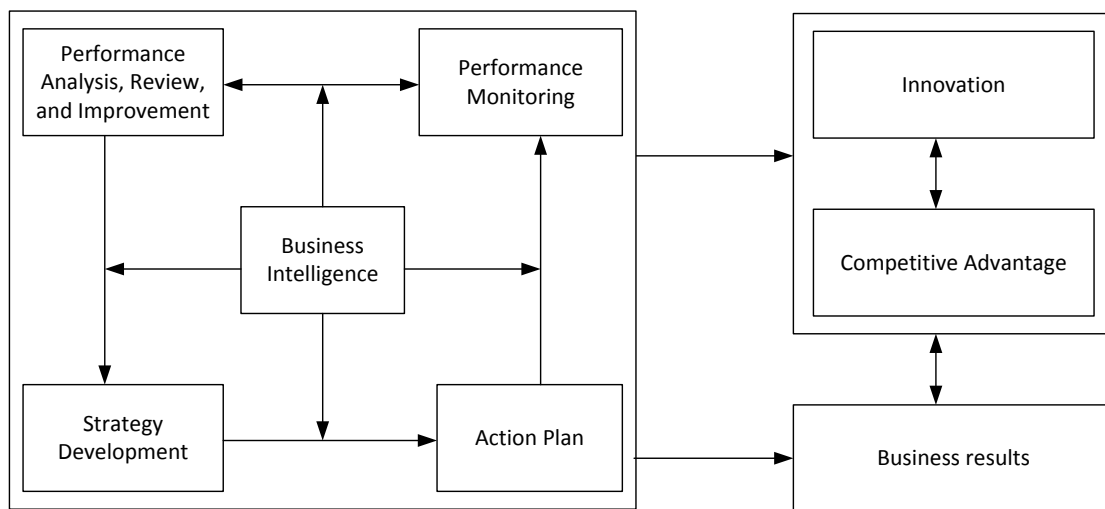
<i>BPM Consulting Firm</i>	<i>Brief Description</i>
Stratature	Stratature was established in 2001 and offers its services globally. It has developed its own solution called +EDM. +EDM is used for management of dimensions, master data, and reporting hierarchies enterprisewide (BCG 2005).
The Buttonwood Group	Established in 1998, the Buttonwood Group specializes in custom programming, requirements definition, KPI development, business case development, vendor selection, strategic road mapping, etc. (BCG 2005)
TNT-Technologies	Since its inception in 1986, TNT-Technologies has been an implementer of business performance management and business intelligence software from MicroStrategy, Business Objects, and OutlookSoft (BCG 2005).
WhittmanHart	WhittmanHart was established in 1984. WhittmanHart Performance Management specializes in implementing BPM and business intelligence software from Cognos, Business Objects, MicroStrategy, OutlookSoft, etc. (BCG 2005; Whittmanhart.com).

**Table 1: Major BPM consulting firms and their activities (cont.)**

Examination of practitioner BPM models suggests that practitioners were using various concepts such as budgeting, planning, forecasting, scorecarding and dashboarding, reporting, financial consolidation, and operational analytics to encompass business performance management. However, these concepts are narrower than the concept of BPM and, in fact, are all parts of the latter (BCG 2005). Practitioners also used various methodologies such as balanced scorecard and technologies such as business intelligence tools and business process management in implementing their business performance frameworks (BCG 2005).

While practitioner BPM frameworks vary in their terminology and implementation steps they possess many of the same and overlapping constructs. All BPM models use integrated data and data analysis to (1) develop strategies, (2) devise action plans (e.g., definition of targets, models, projects, and initiatives) in terms of metrics and key performance indicators (KPIs)) to deploy these strategies, (3) define, measure, and manage performance against these metrics and KPIs, and (4) adjust strategy and/or performance. Integration of the core concepts identified from the various models in the practitioner literature resulted in the BPM model that was proposed and presented to the 2007 Monfort Summit. The 2007 Monfort Summit was a gathering of Baldrige Award Recipient (BAR) members and a small group of selected researchers from across the United States. The summit had a total of 25 attendees. Twenty of those were from Baldrige Award winning organizations and 5 were academicians from different universities. The BPM model was then revised based on the feedback provided by the 2007 Monfort Summit

participants. Figure 1 illustrates the final BPM model, and Table 2 presents a brief description of the BPM model constructs.



**Figure 1: The proposed BPM model.**

Construct	Description
Strategy Development	The formulation and refinement of strategy and strategic objectives by weighing strategic challenges and advantages (i.e., strengths, weaknesses, opportunities, and threats) (NIST 2008; Ariyachandra and Florick 2008).
Action Plan	Break-down of strategic objectives into discrete targets and operating models, and creation of projects and initiatives to meet these targets (Eckerson 2004; Ariyachandra and Florick 2008).
Performance Monitoring	Continuous gauging and monitoring of performance against the measures (i.e., the right metrics called the Key Performance Indicators, KPIs) defined in action plan process (Eckerson 2004; Ariyachandra and Florick 2008).
Performance Analysis, Review and Improvement	Effective selection and use of financial and non-financial data and information to analyze, review, and adjust strategy and/or performance measurement with a view to achieve strategic objectives and to prepare for unexpected organizational or external changes (NIST 2008).
Business Intelligence	A collection of integrated operational and decision-support applications and databases that provide the business community easy access to

business data (Moss and Atre 2003) and thus support sophisticated decision making aimed at improving business performance (Buchanan & O'Connell 2006).

**Table 2: Brief description of the business performance management (BPM) model constructs**

<b>Construct</b>	<b>Description</b>
Innovation	An idea, practice, or product that is that is perceived as new by an individual or other unit of adoption (Rogers 1976). Innovation transforms a new idea or concept into a socially usable product or service (Khilji et al. 2006), brings about changes in organizational processes, and requires conversion of an idea into a product or service that is designed, produced, and adopted by users (Verloop 2006).
Competitive Advantage	The ability of a firm to design, produce, and/or market products or services that are superior in terms of both price and non-price qualities to those offered by competitors (Ambastha and Momaya 2004).
Product and Service Outcomes	Measures of products and service performance such as internal quality measurements, field performance of products, defect levels, service errors, response time, etc. (NIST 2008).
Customer-Focused Outcomes	Measures of customer-related performance such as customer satisfaction and dissatisfaction; retention, gains, and losses of customers; customer complaints, complaint management, effective complaint resolution, and warranty claims; customer-perceived value based on quality and price; customer assessment of access and ease of use; awards, ratings and recognition from customers and independent rating agencies (NIST 2008).
Financial and Market Outcomes	Measures of financial and market performance such as revenues, profits or losses, budgets, cash position, net assets, debt leverage, earnings per share, financial operations efficiency, financial returns, business growth, donations and grants received, percentage of revenues derived from new products, programs or services, etc. (NIST 2008).
Workforce-Focused Outcomes	Measures of workforce-related performance such as increased workforce retention, leader development, workforce training, workforce safety, employee absenteeism, employee turnover, employee satisfaction, employee complaints, etc. (NIST 2008).
Process Effectiveness Outcomes	Measures of organizational and operational performance including measure and indicators of process effectiveness and efficiency (e.g., cost savings, higher productivity, reduced emission levels, etc.), internal responsiveness

indicators (e.g., cycle times, production flexibility, lead times, setup times, etc.), improved performance of administrative and other support functions, business-specific indicators (e.g., innovation rates, Six Sigma initiative results, etc.), and supply chain indicators (e.g., reduction in supply chain management costs, reductions in inventory and incoming inspections, improvements in electronic data exchange, etc.) (NIST 2008).

**Table 2: Brief description of the business performance management (BPM) model constructs (cont.)**

Construct	Description
Leadership Outcomes	Measures of performance in the areas of leadership and governance, achievement of strategic objectives, and societal responsibilities such as environmental, legal and regulatory compliance; results of oversight audits by government or other agencies; indicators of support for key communities and other public purposes; etc. (NIST 2008).

**Table 2: Brief description of the business performance management (BPM) model constructs (cont.)**

Figure 1 above shows the BPM model. This proposed BPM model encompasses a closed-loop process called the BPM Process. Within the loop, several sequential multi-variable mediatory effects are possible. Moreover, Business Intelligence moderates the relationships between any two variables for the closed-loop process. One of the dependent constructs labeled “Business Results” is a multidimensional construct. Business Results is comprised of six performance outcomes. These are (1) product and service outcomes, (2) customer-focused outcomes, (3) financial and market outcomes, (4) workforce-focused outcome, (5) process effectiveness outcomes, and (6) leadership outcomes.

Business intelligence (BI) is an enabler of BPM (Eckerson 2004; Clark et al. 2007). For a successful implementation of the BPM framework, organizations must integrate BI with BPM because such integration allows them to compare, manage, and align business performance with the business strategies, goals, and objectives (Ballard et al. 2005). BI turns available data into information and puts it into the hands of decision makers. Ballard et al. (2005) posit that, by so doing, BI helps BPM in two ways. First, strategic business intelligence helps BPM with strategic issues such as increasing revenues, reducing costs, and introducing new products and services by providing executives with relevant information. Second, tactical and operational business intelligence helps BPM improve business execution in two ways: (1) monitoring workflow and reporting operational results, and (2) monitoring workflow with the objective of improving and managing the overall operational business process.

BI enables organizations to consolidate and leverage vast masses of data to improve decision making and provides IT infrastructure and applications to implement BPM (Ariyachandra and Florick 2008). BI helps implement BPM because it enables identifying business strategies and developing action plans to monitor performance results against benchmark metrics and such comparisons allow the pursuit of corrective action (Ballard et al. 2005; Ariyachandra and Florick



2008). Thus BI affects the relationships between the constructs comprising the BPM closed-loop process.

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## EXPECTED CONTRIBUTION AND OUTCOME

The key to ever increasing competitive advantage is to continuously improve the fit between a dynamic and changing business environment and organizational strategy and doing so requires responsiveness and flexible strategies (Porter 1980). Business performance management (BPM) provides a structure for enhancing responsiveness and flexibility because it embodies the process of managing an organization's strategy (Cokins 2007). BPM integrates business improvement and analytic methods – including strategy mapping, balanced scorecards, costing, budgeting, forecasting, and resource capacity requirements planning. These tools help organizations formulate strategies in changing business environments and provide managers and employees with the capability to move toward defined strategies (Cokins 2007). The BPM framework helps an organization continuously adjust and successfully execute its strategies (Cokins 2007). We posit that the proposed BPM model will help managers create an agile organization that is capable of developing and increasing competitive advantage.

The BPM framework developed in this paper is a generic performance management model that can be implemented across industries, boundaries, and cultures. It can provide organizations with more common language to bridge the sector-specific gaps. Since the BPM process embodies a closed-loop process with the objective of continuously adjusting business strategies, it helps organizations enhance their agility. Therefore, with the implementation of the BPM framework, organizations can quickly adapt to changes.

## REFERENCES

- Ambastha, A., and Momaya, K. (2004), "Competitiveness of firms: review of theory, frameworks, and models," *Singapore Management Review*, 26(1), 45-61.
- Ariyachandra, T.R., and Florick, M.N. (2008). "Critical success factors in Business Performance Management – Striving for success," *Information Systems Management*, 25(3), 113-120.
- Ballard, C., White, C., McDonald, S., Myllymaki, J., McDowell, S., Goerlich, O., and Neroda, A. (2005). *Business Performance Management Meets Business Intelligence*. IBM Redbooks, available online at <http://www.redbooks.ibm.com/redbooks/pdfs/sg246340.pdf>.
- BCG (2005). *BPM Consulting Guide 2005*. Retrieved from [http://bpmmag.net/images/archive/magazine\\_issues\\_2005\\_september\\_2005consultingguide.pdf](http://bpmmag.net/images/archive/magazine_issues_2005_september_2005consultingguide.pdf) on August 1, 2007.

- BPMCG. (2006). BPM Consulting Guide 2006, BPM Magazine, November 2006.
- BPMSG (2005). Business Performance Management Industry Framework Document, Final Version 5.0, BPM Standards Group, September 9, 2005. Retrieved from [http://www.bpmstandardsgroup.org/documents/BPMIndustryFramework-V5.0090905\\_000.pdf](http://www.bpmstandardsgroup.org/documents/BPMIndustryFramework-V5.0090905_000.pdf) on August 5, 2007.
- Buchanan, L., and O'Connell. (2006). "A brief history of decision making," *Harvard Business Review*, January, pp. 33-41.
- Clark, Jr., T.D., Jones, M.C., and Armstrong, C.P. (2007). "The dynamic structure of management support systems: Theory development, research focus, and direction," *MIS Quarterly*, 31(2), 1-37.
- Cokins, G. (2007). "Performance management: Creating economic value," *Industrial Management*, 49(2), 14-20.
- Eckerson, W. (2004). "Best practices in business performance management: Business and technical strategies," *TDWI The Data Warehousing Institute Report Series*, March, pp. 1-31.
- NIST (2008). National Institute of Standards And Technology, Malcolm Baldrige National Quality Awards Criteria for Performance Excellence, 2008. Retrieved from [http://www.baldrige.nist.gov/PDF\\_files/2008\\_Business\\_Nonprofit\\_Criteria.pdf](http://www.baldrige.nist.gov/PDF_files/2008_Business_Nonprofit_Criteria.pdf) on May 15, 2008.
- Verloop, J. (2006). "The Shell way to innovate," *International Journal of Technology Management*, 34(3/4), 243-259.