Business Performance Management

Industry Framework Document

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STANDARDS GROUP

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I. Introduction

Business Performance Management (BPM) is a methodology to optimize the execution of business strategy that consists of a set of integrated, closed-loop, analytic processes, supported by technology, that address financial as well as operational data. BPM enables a business to define, measure and manage its performance against strategic goals. The core financial and operational processes of BPM include planning, consolidation and reporting, analysis and the deployment of linked key performance indicators (KPI's) throughout an organization.

BPM is a subset of a comprehensive corporate governance strategy. The term "corporate governance" often refers to efforts to handle regulatory compliance (e.g., SOX, Basel II). However, firms are beginning to adopt more holistic approaches to corporate governance including performance management, compliance management and risk management.

This BPM framework document is intended to provide general guidelines for organizations and individuals considering the start of a BPM initiative. This document is the second deliverable from the BPM Standards Group, following the March, 2004 publication of the definition of BPM.

This framework is intended to assist multiple audiences:
- Vendors trying to meet market requirements
- Customers evaluating vendors
- IT people trying to build a system
- Consultants providing assistance to clients

Note that other organizations use alternative acronyms for this same category. Specifically, CPM (Corporate Performance Management) and EPM (Enterprise Performance Management) are equivalent headings for this same category.

It should also be note that a separate, yet related, array of technologies and services falls under the Business Process Management category. Some organizations also use the acronym "BPM" to identify this separate category.

II. About the BPM Standards Group

The BPM Standards Group was formed in December, 2003 as an industry working group dedicated to the success of organizations adopting Business Performance Management solutions. The Group is committed to establishing BPM definitions, guidelines and recommended business practices. NOTE: Participant information and links updated 2018.

Founding participants of the BPM Standards Group include:

- Applix (now part of IBM)
- BPM Partners
- Hyperion Solutions (now part of Oracle)
- IBM
- IDC
- Meta Group (now part of Gartner)
- SAP
- The Data Warehousing Institute

Additional contributing participants to this framework include:

- Cartesis (now part of SAP)
- Cognos (now part of IBM)
- Deloitte
- Geac (now part of Infor)
- OutlookSoft (now part of SAP)
- PricewaterhouseCoopers
- Unisys

III. The Challenge

Global 2000 organizations are challenged with supplying performance feedback globally to managers, and often do not have the lead-time to respond to rapidly changing economic conditions. Many firms utilize postmortem financial and operational information to better understand the enterprise and respond to market conditions. Organizations can improve their overall performance by focusing efforts on reducing the time between an event's occurrence and the response to that event, unifying the corporate response to the event (through the use of both structured and unstructured data). This improvement will generally require a fundamental change in the way information is handled within the enterprise. To make matters worse, loose integration between business plans and actual results often exists, reducing performance accountability.

There are pockets of performance management (metrics, dashboards, reporting, planning) dispersed throughout the enterprise that are often disparate and not integrated back to the central enterprise plan. While these islands of BPM may be acceptable and meet tactical business requirements, an independent structure that does not support a single enterprise view will not optimize BPM, and actually may hinder performance increasing operational risk.

Many BPM projects will start out by improving the financial business plan, which in principle represents the enterprise strategic plan. Many of the drivers of financial information are actually non-financial (e.g., sales volumes, headcounts, number of customers, units of production). Linkage/integration of operational data is critical, however, firms must concern themselves with consistent periods and timing of versions of operational data.

Key drivers for adopting performance management initiatives include:

1) Closing the gap between strategy and execution
2) Identifying effective performance measures
3) Providing a framework to improve effective communication of business strategies to all stakeholders

BPM is an integrated solution approach consisting of Web-based analytical applications (based on financial and operational analytical applications) providing key performance indicators that are cascaded within the enterprise, business plans that are intended to achieve those metrics, and actual reporting and forecasting to ensure performance. Although most firms have not yet embraced BPM's full potential, many should consider a suite-based BPM paradigm (versus point solution) to minimize the redundancy of schema and metadata (and resulting disconnects) inherent in multiple solutions.

IV. Definitions

The definition of business performance management is based upon a three-part framework, where the first part is process support. Process support is defined as those functions that structure and automate a group of tasks pertaining to the review and optimization of business operations (i.e., control) or the discovery and development of new business (i.e., opportunity).

Applications that support BPM are typically used for process control, optimization, and other decision-making activities. BPM applications span both financial and operational processes including: finance/strategy management, customer relationship management, human resources, supply chain management, and product lifecycle management. For example, BPM may provide the tools to reduce operational risk, by closing the loop between sales and operational processes and financial processes (e.g., sales forecasting, supply chain/demand planning, revenue planning). And while BPM systems function independently of an organization's core transactional applications, they are still dependent on such applications for data and may send results back to these applications.

V. BPM Processes and Technologies

Introduction

BPM is supported by a variety of technologies. There is no single technology or application that constitutes BPM. What ties these technologies together is their use in planning organizational goals, monitoring key performance indicators, and enabling the appropriate organizational response to unplanned variances.

This document identifies core technologies associated with each of four key BPM processes and additional technologies that provide a common foundation for many aspects of BPM as well as other types of analytical applications. As with many software market segments, these technologies are available as pre-built application suites and/or as customized component-based solutions.

The core technologies support four processes of BPM applications:

1. Strategize
2. Plan
3. Monitor and analyze
4. Take corrective action

Two broad categories of technologies are included in this section:
1. Analytic infrastructure, such as data warehousing
2. Related analytic and operational applications

Many analytic applications are linked to BPM to analyze specific aspects of a business operation or transaction. For example, a logistics routing system may be used to plan shipments and routing of shipments in order to minimize costs. In another example, lower than normal inventory may cause a warehouse manager to issue a purchase order for more merchandise using a procurement system that examines vendor performance. In effect these systems are being used to plan transaction performance but not to manage overall organizational performance.

Core BPM Processes and Supporting Technologies

1. Strategize

Summary: Technologies that enable executives to develop and communicate business strategies, identify value drivers, and build metrics and thresholds to measure the performance of the business over time.

Examples/components:

- Applications that enable the building of metrics
  - metrics builders and metric libraries
  - dashboard tools & technologies
- Applications that enable strategic collaboration, communication and distribution of performance related information

- o Portal technologies.
- o Collaboration technologies
- Applications that collect and maintain objectives and goals
- Applications that automate development and linkage of corporate strategy to the underlying KPI's
  - o Strategy Mappers and Scorecarding Tools

2. Plan

Summary: Planning technologies allow managers in divisions and departments throughout the organization to set goals, devise and model planning scenarios, develop programs, and define budgets to support the business strategy. It also allows managers to build a set of goals for base level accounts over various time periods. For example, enterprise-wide operational planning as distinguished from strategic planning (which are included in the "Strategize" section) includes:

Examples/components:

- Applications that enable the creation, collection, consolidation, reporting and process management of planning data. Plans may consist of:
  - o Budgets (financial plans)
  - o Capacity plans
  - o Human resource plans
  - o Manufacturing and supply chain plans
- Applications that allow you to communicate adjustments to plans while incorporating actual data
  - o Forecasting applications
  - o Project and Process Planning applications
- Applications that incorporate assumptions, business rules and logic to derive results from a set of inputs.
  - o Process Modeling

3. Monitor & Analyze

Summary: Technologies that present individual and group performance against relevant KPIs to users at all levels of an organization and enable users to get additional information so they can take appropriate action.

- Applications that consolidate and combine data from multiple transactional systems, perform data and currency conversions, eliminate inter-company transactions and allow for journal entries for financial reporting
- Applications that enable multidimensional analysis of summarized transactional data with the ability to compare to plans
- Technologies that enable creation of actual and planned data marts (central repository)
- Applications that present dashboards that enable building, tracking and displaying metrics as well as allowing commentary regarding performance.
  - o Scorecard displays that incorporate context or acceptable ranges.
- Technologies that enable the design, creation, editing and distribution of performance reports
- Applications that can be used to query and report from the scorecard level to

transactional details (drill down often requires a change in context to display detail data)

4. Alerting and Corrective actions

Summary: Technologies that automate the reaction to issues or variances and improve the timeliness of corrective actions.

Examples/components:

- Applications for creating and managing alerts
  - Specify and change thresholds and alert conditions
  - Specify the type of alert
  - Specify the delivery vehicle
  - Specify the display vehicle, such as dashboards
- Dashboard applications that provide visual cues when an alert is received
- Automated self-management services that can take corrective action, such as kicking off processes, send messages or initiate new activities in response to exceeding some threshold.
- Technologies that enable creation of new targets and/or changes to values of existing targets

Appendix A includes a helpful compilation of methodologies and metrics for these core BPM processes. This Appendix can be used for further clarification of breadth of BPM methodologies, and also includes sample detailed metrics for both enterprise wide and departmental implementation.
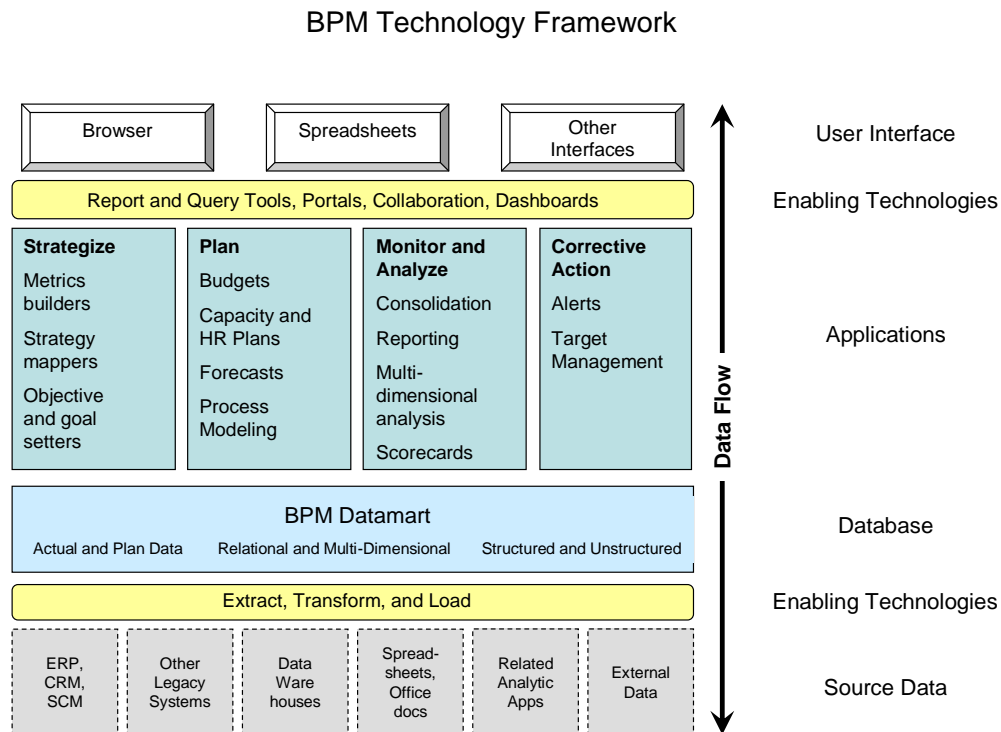
Recommended Technology Architecture

The architecture of a BPM system must recognize the need for information to flow between different portions of the organization. Information must flow from operational systems to planning systems and it must also flow between functions within the organization. In addition, the system must support action as a result of the performance management process leading to revised plans, revised targets, and revised operational activity.

The core technologies support four processes of BPM applications.

1. Strategize – set goals & metrics
2. Plan – planning & budgeting, both financial and operational
3. Monitor & analyze – pull in actuals & compare to plan
4. Take Corrective Action or Adjust

In describing the core technologies below, the term application represent purpose built software in support of the specific business processes and activities mentioned.

BPM Technology Framework

Browser Spreadsheets Other Interfaces	User Interface
Report and Query Tools, Portals, Collaboration, Dashboards	Enabling Technologies
Strategize Metrics builders, Strategy mappers, Objective and goal setters — **Plan** Budgets, Capacity and HR Plans, Forecasts, Process Modeling — **Monitor and Analyze** Consolidation, Reporting, Multi-dimensional analysis, Scorecards — **Corrective Action** Alerts, Target Management	Applications
BPM Datamart Actual and Plan Data Relational and Multi-Dimensional Structured and Unstructured	Database
Extract, Transform, and Load	Enabling Technologies
ERP, CRM, SCM — Other Legacy Systems — Data Ware houses — Spread-sheets, Office docs — Related Analytic Apps — External Data	Source Data

Data Flow

Figure 1 - The BPM Technology Architecture provides a logical link between transactional source data, key BPM processes and customizable user interfaces.

Additional Technologies

A BPM solution is not an island unto itself. To be effective, it needs to work with other applications, run on a technology infrastructure, and embrace one or more methodologies for managing and documenting business processes.

1. Related Applications

A BPM solution needs to interact with many other applications that support critical processes that drive the business. These applications support core business processes. They can be either transactional in nature (i.e. ordering, shipping, customer service) or analytical in nature (i.e. sales analysis, shipping analysis, customer analysis) or a combination of both (i.e. customer relationship management, or supply chain management.)

To execute strategy and keep the organization on course, the BPM solution needs to update or revise assumptions or models driving these related applications on a timely basis. On the other hand, metrics from these applications and processes need to feed into the BPM solution when they have an impact on the overall performance of the business. This closed loop process enables the organization to adjust its behavior to fix problems before they escalate out of control. In addition, it facilitates and organization's ability to capitalize on new but fleeting opportunities.

Types of Related Applications:
* Logistics
* Fraud detection
* Credit scoring
* Operational applications (i.e. manufacturing, finance, human resources, etc.)
* Value chain applications (i.e. CRM, SCM)
* Systems management applications

See **Appendix A** for a listing of business process areas and for each area the type of information that can be utilized from the downstream applications.

2. BPM Infrastructure

A. Data Infrastructure – data integration and data warehousing tools
* Data warehouses
* Relational Databases (RDBMS)
* OLAP/Multidimensional technology
* ETL tools
* Data quality tools
* Data modeling tools

B. Analytic infrastructure
* Reporting tools
* Analysis tools
* Integration with spreadsheets and other personal productivity tools
* Data mining tools
* Dashboards

- Real time activity monitoring

C. IT infrastructure
- Servers, storage, networks, operating systems, middleware
- Systems management software – e.g.Unicenter / OpenView / Tivoli
- Capacity planning and performance analysis software
- Availability modeling
- Event monitoring and analysis

VI. Implementation Considerations

Most firms have multiple planning processes within the enterprise that are typically disconnected and do not utilize common data, metadata and planning assumptions. Business performance management is not necessarily new to the enterprise business applications market. However, there is an increased interest in leveraging, repositioning and multi-purposing planning and reporting applications across the enterprise to ultimately ensure connectivity and commonality with planning across multiple business areas.

For an enterprise-wide BPM implementation, organization alignment with a strongly-communicated mission and understood contribution (individual goals and objectives meet enterprise objectives) is critical. Therefore, the implementation of BPM often goes beyond mere solution configuration but is also accompanied by some type of transformation exercise (e.g., finance transformation, performance transformation.) BPM projects typically require a blend of technical systems integration and process-centric management consulting capabilities required to help create organizational alignment and effect change management; these skills are normally sourced through a "finance transformation" initiative.

For a successful project, firms must ensure the following linkages:

- Develop objectives for each part of BPM cycle – create phased plans for implementation
- Develop an active/dynamic performance management mentality
- Create a balanced "financial management mindset" within the firm
- Communicate BPM goals and objectives
- Plan for multiple business scenarios/changing economy – enable business modeling
- Align incentives with performance
- Plan on business events/drivers, not financial compliance and codes
- Engage all relevant business areas – cascade metrics throughout the enterprise
- Assign planning responsibility where financial levers are in place
- Align strategic goals/plans with operational objectives/budgets

VII. BPM Resources (updated 2018)

Organizations

Beyond Budgeting Roundtable
FP&A Trends

Vendor Listings

Performance Place
Vendor Search

Useful Links

BPM Whitepapers

BPM Articles

VIII. Acronym Definitions

ABC – Activity Based Costing
ABM – Activity Based Management
API – Application Programming Interface
BCG – Boston Consulting Group
CRM – Customer Relationship Management
ERP – Enterprise Resource Planning
EFQM – European Foundation for Quality Management
ETL – Extract, transform and load (data)
EVA – Economic Value Added
GAAP – Generally Accepted Accounting Principles
KPI – Key Performance Indicators
OLAP – Online Analytical Processing
ROI – Return on Investment
SarBox or **SOX** – Sarbanes Oxley Act of 2002

IX. Appendix A – Process and Content Framework Examples

As mentioned in the Core Process and Technologies section, further detail has been provided as examples of BPM initiatives that are deployed in leading enterprises. This Appendix includes a series of tables that are segmented under the business process areas identified in the figure below. Note that for each area, examples have been provided for methodologies/best practices, metrics (strategic, management, operational), inputs and outputs and respective business benefits. This appendix is not intended to be complete, but is provided as part of the framework building upon best practices deployed in other organizations.
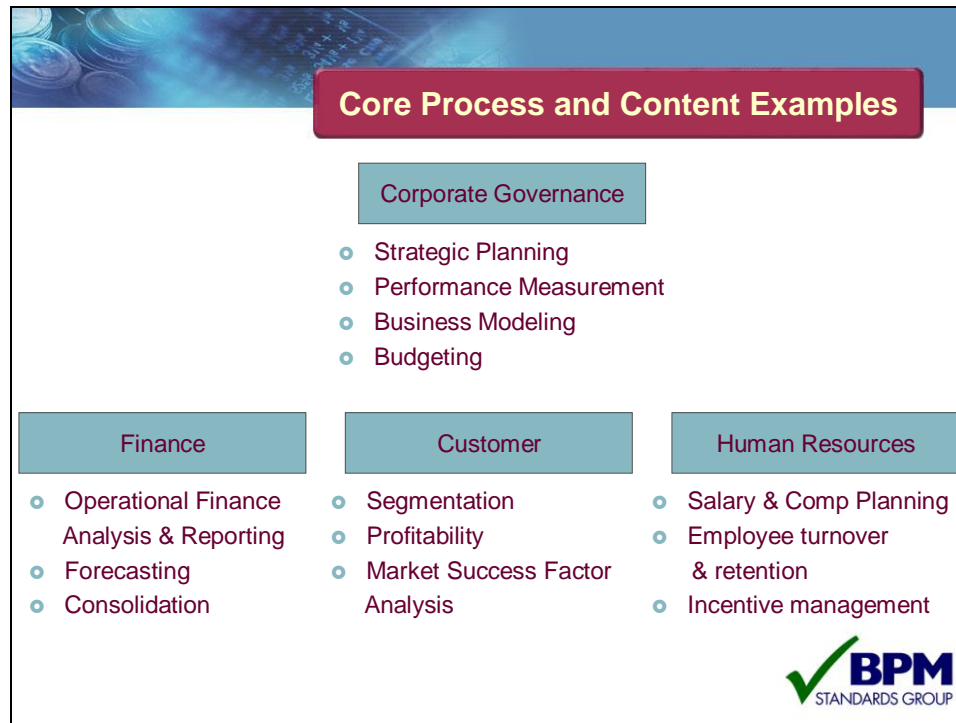
Business Process Area: Corporate Governance

Corporate Governance is the overarching link of tying strategy to execution at the executive level of an organization. Corporate Governance processes must highlight strategic metrics and assure that they tie to the mission and vision of the enterprise. For effective organizational management and performance optimization, these processes should be meaningful across the organization – and not in any particular department. More tactical governance issues include legal compliance and financials validation, but governance must be considered broader than compliance initiatives.

Business Process	Examples	Methodologies/Best Practices	Metrics	Inputs and Outputs	Business Benefits
Strategic / Operational Planning/Modeling	Product divestiture What-if/scenario playing M&A Analysis Cash Flow Forecasting Operational modeling	Stern Stewart's EVA Monte Carlo Simulations Goal-Seeking ABC/ABM	**Strategic** • Return on Equity • Return on Assets • Earnings Per Share • Operating Margin % • Free Cash Flow • CFROI **Management** • Cost of Goods Sold % • AR/AP Aging • Inventory Turns • Gross Margin % • Revenue Growth • Division Margin % • % to Revenue • Revenue per head • Sales volume • Sale mix • Top/bottom • Win/Loss % (customer, sales, etc…)	**Data** • ERP • CRM • SFM • AR • AP • FA • GL • Excel **Deliverables** • Board pack • Mgmt book • Reports – online, printed, PDF • Alerts/alarms • Dashboards/score cards • XBRL output • Web post for shareholder information • Analytical "views"	• Improved business performance • Improved profitability • Better performance to plans/targets • Better M&A decisions • Optimized customer/product investment decisions • Improved Risk management • Increase shareholder value • Better, more accurate and timely communications • Trust and shareholder confidence • Full disclosure • Auditability and traceability • Competitive advantage
Planning	Long-range Planning Financial • Salary Planning • Sales Planning • Capital Planning • Tax Planning Operational Demand Capacity Target setting	Quarterly or Monthly planning			
Budgeting	Annual Budget Monthly Re-budget	Zero-based Budgeting Driver-based Budgeting Seeded Budgets			
Performance Measurement and Management	KPI's Benchmarks Profitability analysis by customer, region, product… Trend analysis Variance analysis Ad-hoc analysis Cash management and optimization	The Balanced Scorecard Six Sigma Malcolm Baldridge EFQM BCG Matrix McKinsey Waterfall			

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Business Process Area: Finance

Financial processes and the inputs and resulting outputs are the key backbone for comprehensive BPM. These financial business processes must expose actionable information covering the complete spectrum of strategic metrics through to specific operational activities. For effective organizational management and performance optimization which is the goal of any BPM implementation, these processes and the necessary data/metrics must touch not only the finance departments but must also extend out into the operational units of an organization and the systems used to support their business activities.

Business Process	Examples	Methodologies/Best Practices	Metrics	Inputs and Outputs	Business Benefits
Forecasting	Rolling Forecast Continuous Forecasting	Beyond Budgeting	**Sample Operational** • Days to report • Planning Cycle Time • Days Sales Outstanding (DSO) • Daily Cash Collections • Reporting errors • FX Exposure • Close rate • COSO/IAS compliance metrics • Customer churn • Average age of open invoices • % of overdue AR • % of AR above credit limit • Unresolved debit memos % of AR • Number of unapplied payments • Invoice to approval • Receipt to invoice • Acknowledgement to receipt • Purchase order to acknowledgement • Purchase requisition to order	**Data** • ERP • CRM • SFM • AR • AP • FA • GL • Excel **Deliverables** • Board pack • Mgmt book • Reports – online, printed, PDF • Alerts/alarms • Dashboards/scorecards • XBRL output • Web post for shareholder information • Analytical "views"	• Improved business performance • Optimized operations • Better resource allocation • Improved profitability • Better performance to plans/targets • Improved cash flow and mgmt. • Improved Productivity • Optimized customer/product investment decisions • Better, more accurate and timely communications • Auditability and traceability • Competitive advantage
Financial Consolidation & Reporting	Statutory Reporting Actuals/Variance Reporting Management Reporting Intercompany reconciliation 10-K 10-Q Annual Report (P&L,B/S, C/F, etc…)	The Virtual Close US GAAP IAS/IFRS etc. SOX XBRL			
Operational Finance Analysis & Reporting	Accounts Payable • Optimize Cash and Discounts Accounts Receivable • Customer & Bad Debt Management • DSO monitoring and improvement • Discount Optimization • Customer Payment Performance Cash flow	• Outsourcing • Factoring Receivables • Cash Concentration • Lockbox • Currency Hedging			

Business Process Area: Customer – Segmentation

Customer processes are at the heart of any organization, whether commercial, governmental or not-for-profit. The identification of customers and how they should be approached is one of the most important decisions a company will make – it is often harder to say yes than no when determining with whom to trade.

Segmentation in its broadest sense refers to how a company plans to approach a market – it examines your existing business and your potential markets in 2 ways: firstly by looking at customer characteristics and secondly at customer behaviour/response. Key to success is the understanding of the customers that it generates – the only way that companies will be able to move from "sales push" to "demand pull" and to retain customers is by understanding the buying criteria and by implementing strategies that meet these criteria.

The first questions to be asked are what is the company's strategy, what are the growth and profitability targets? Where will they be delivered? At some point, these targets are found in each customer or segment. Thus it is imperative to develop strategies at the customer and segment level.

Examples	Methodologies/Best Practices	Metrics	Inputs and Outputs	Business Benefits
Customer segmentation	Customer characteristics Customer behaviour/response	**Strategic** • Revenue per segment • Profitability per segment • Potential per segment • Performance gap per segment **Management** • No. customers per segment • Growth per segment **Operational** • No. segments • No. customers per segment • % of customers profiled	**Data** • External unstructured data - Analyst reports, surveys. • External structured data – benchmark exchanges, retailer data, data provider databases • Internal marketing database, Customer master files, Customer profiles, sales transaction history, web logs **Deliverables** • Defined segments carrying targets to close the perf gap • Organizational alignment behind key segments • Segmentation schemes $ rationale stored **People impacted** • Sales & marketing function (involves planning all levels in customer/segment hierarchy) • First point in demand planning, thus Production planners will receive customer-driven plans • Finance & planning will receive customer driven targets for the budget process	• Marketing management – segmentation facilitates the development of specific plans and programmes to meet the profitability targets within the segments • Focus investment on the most promising segments • Understand where the potential for closing the performance gap is the greatest • Greater understanding will fuel new product development ahead of the competitors.

		Strategic / Management / Operational	Data / Deliverables / People impacted	Benefits
Customer and product profitability	Activity Based Management	**Strategic** • Profitability per customer • Profitability per product **Management** • Cost per process area • Cost of acquisition of new customers • Cost to serve customers • Full product costs **Operational** • % non-value-add processed	**Data** • General Ledger data used for cost base • Cost model built to understand how costs are used by processes. This alone will spawn many data sources, depending on the organisation **Deliverables** • Analysis of non value added processes • Profitability reporting by customer, segment, product • Capability analysis for demand planning – e.g. to calculate how much resource is required to hit target **People impacted** • Sales & marketing function to understand which are the most profitable areas of the business • Finance to use the model for different scenarios around revenues	• Increased profits through focus on most profitable customers • Decreased cost through removal of non value adding processes
Market success factor (MSF) analysis	Buyer behaviour analysis Customer needs analysis Unarticulated needs analysis Value driver analysis	**Strategic** • Benchmark rating vs top 2 competitors per MSF • Competitor gap **Management** • MSF rating to revenue ratio • Confidence level per MSF **Operational** • Cost per period of data acquisition • % proportion of data missing	**Data** • External unstructured data - Analyst reports, surveys, mystery shopping • External structured data – benchmark exchanges, retailer data, data provider databases, consulting firm research, mystery shopping • Internal marketing database, Customer profiles, sales transaction history, web logs • Internal customer response databases and call sheets from sales execs to provide qualitative, intuitive input **Deliverables** • Market Success Factors provide the customer	• Ability to understand strengths and weaknesses compared to the competition to increase market share • Mechanisms to keep the data alive to maintain position and deliver growth • Coherent, customer-driven strategies typically deliver increased revenues and profits

<table>
<tr><td></td><td></td><td></td><td>dimension for value drivers

• Validated competitive position per segment/customer, with clear assumptions

• Actions / programmes to improve competitive position

People impacted

• Sales & marketing function (all as involves planning at all levels in the customer/segment hierarchy)</td><td></td></tr>
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Business Process Area: Customer – Sales

The customer sales process covers qualification and planning, sales cycle management through to closing the sale. This cannot be divorced from the segmentation process which sets out criteria for the "ideal" customer types. Customer account plans should identify the potential within each account (or group of consumers), and revenue targets amalgamate to form the bottom-up target for the company. Consequently, the techniques used for planning the overall company strategy should also be used to develop customer strategies, regional strategies, divisional strategies and so on. Whereas the customer "touch points" will differ from business to business – some will use leading edge web-based constant marketing and CRM, whilst others will employ a field force – the sales dynamics remain the same. All businesses need to improve e one or all of the dynamics which are: average order size, number of propositions and conversion rate.

Examples	Methodologies/Best Practices	Metrics • Strategic • Management • Operational	Inputs and Outputs • Data • Deliverables • People Impacted	Business Benefits
Qualification	Account profiling • Customer positioning – customer attractiveness vs competitive position • Many qualification templates, eg MANACT (Money Authority Need Ability Competition Timescale), SPIN (Situation, Problem, Implication Need).	**Strategic** • Revenue potential per prospect account (or group of consumers). • Growth target per prospect account. **Management** • Competitive position vs top 2 competitors per account. • Overall competitive position for the territory/region/etc • Ratio existing accounts:new accounts • Numbers of accounts **Operational** • No. accounts • % prospects profiled • No contacts per account per period	**Data** • CRM applications • Internal marketing databases • Sales history database **Deliverables** • Sales focused on revenue potential for each account • **People impacted** • Sales function. • Marketing • Finance (management accounting for pipeline reporting)	• Better sales propositions. • Greater number of sales propositions. • Increased conversion rates

| Sales cycle management | Strategic selling

Relationship selling

Customer touch-point analysis | **Strategic**
• Average order size
• No. propositions
• Conversion rate.
Management
• No. prospects by sales stage (suspect, prospect)
• Weighted forecast pipeline revenue – by time, by sales stage, by region etc
• Reasons for loss
• Sales cycle time
Operational
• Lead wastage
• Follow-up rates
• No. contacts per customer
• Loss rates at each point in the cycle
• | **Data**
• CRM application (contact management, pipeline)
Deliverables
• Improvement in sales pipeline
• Better understanding of customer profiles and behaviour
People impacted
• Direct sales
• Sales management
• Finance | • Reduced inventory costs
• Reduced sales cycle times
• Increased conversion rates.
• Lower cost of sales |

Business Process Area: Supply Chain - Overview

Any company can be broken down into four major overarching, business processes: product development, sales and marketing, supply chain, and general business support (finance, accounting, HT, IT). The supply chain can be defined as a company's linked set of resources, processes, and business relationships that begins with the sourcing of resources (materials, ideas, information) and extends through to delivery of products or services to the end customer. Also known as the value chain, it includes vendors, manufacturing facilities, logistics providers, internal distribution centers, distributors, wholesalers and all other entities that contribute to delivering the product or service to the final customer for acceptance and purchase. The extended supply chain for any given product or service for a company most likely would involve resources, relationships, and processes from a complex interaction among secondary vendors. A supply chain can stretch from a supplier's supplier to a customer's customer. Functionally, supply chain management (SCM) encompasses both supply chain analytics and transactional execution systems, e.g., enterprise resource planning (ERP), warehouse management systems (WMS), manufacturing execution system (MES), transportation management systems (TMS), and international trade systems (ITS). Capturing and analyzing supply chain data helps the business make informed decisions, mitigates risks, and improves processes. Supply chain visibility must be panoramic, actionable, and goal-oriented.

Primary Supply Chain Management Process	Business Process	Methodologies/Best Practices	Metrics	Inputs and Outputs	Business Benefits
Plan	Optimal appropriation of supply chain resources to meet supply chain requirements	**Prioritize and Aggregate Supply Chain Requirements** • Supply/demand process is highly integrated from customer data gathering to order receipt, through production to supplier request **Balance Supply Chain Resources with Supply Chain Requirements** • Re-balancing of full-stream supply/demand on a daily basis, including Source-Make-Deliver resources and requirements from "customers' customer to suppliers' supplier	**Strategic** • Forecast Accuracy • Return on Assets **Management** • Delivery Performance to Customer request date • Capacity Utilization **Operational** • Cumulative Source/Make Cycle Times • Intra-Mfg - Replan Cycle Time	**Data** • Planning Data • Sourcing Plans **Deliverables** • Planning Data **People Impacted** • Supply Chain Planners • Customer	**Supply Chain Optimization** • Reduced inventory carrying costs • Minimize supply chain response time

				Data	
Source	Optimal appropriation of material resources to meet supply chain requirements	Integrated Supplier resource information between strategic partners in supply chain	**Strategic** • Source Flexibility **Management** • On Time Delivery Performance **Operational** • Cumulative Source Cycle Times	**Data** • Production Plans • Inventory Availability **Deliverables** • Sourcing Plans **People Impacted** • Key participants in Supply Chain	Capacity and supply constraints are balanced against demand during the planning cycle
Make	Optimal appropriation of production resources to meet supply chain requirements	Disruptions and opportunities in production are quickly and accurately communicated and responses made	**Strategic** • Forecast Accuracy • Return on Assets **Management** • Cumulative make cycle time **Operational** • Production Plan Adherence	**Data** • Production Schedule • Inventory Availability • **Deliverables** • Reserve Resources and Determine Delivery Dates **People Impacted** • Production planners • Plant floor • Inventory managers	• Flexibility in inventory management, lower carrying costs • Optimal product delivery plans

Deliver	Order to Cash	Working Capital Management 1. Decreased inventory carrying costs 2. Decrease receivables through standardization and collection discipline 3. Increase payables by managing terms on non-production payables Customer Management • Understand and manage customer/channel specific costs • Clearly defined customer service requirements Production Management • Decrease variability in production processes • Increase first-pass quality, decrease inspections and rework	**Strategic** • Customer Satisfaction Index • Days Working Capital – DWC (average of A/R + inventory – A/P) / (annual sales/365) **Management** • % Order fill rate • Order lead time performance - to customer requested date • Accounts receivable (accounts Receivable less Customer Deductions and Contra Assets) **Operational** • Time to quote delivery date • % On-time ship • % Product availability (% Customer Pickup (CPU) Orders Filled at Customer-Requested DC, **%** Orders Shipped from • % Order and Invoice Accuracy (% Order Accuracy, % Invoice Accuracy, % Remittance Match, % Returns) <u>Costs:</u> • Logistics costs (order processing cost, distribution cost, transportation cost) • Customer invoicing/accounting costs (invoicing cost, collection cost, invoice adjustment cost)	**Data** • Order entry systems • Sales order forecasts • Inventory systems • Vendor inventory and performance data • Order tracking systems **Deliverables** • See examples listed **People Impacted** • Customers/channels • Consumers • Vendors (including raw material and logistics) • LOB managers • CEO/CFO	• Increased customer satisfaction, leading to customer retention and increased sales • Increased working capital efficiency

Business Process Area: Human Resources

Human Resources (HR) analytics represent probably the most underutilized category of analytical applications. However, when you consider the long-term nature and relative expense of human resources compared to other operational categories, it becomes quite apparent that organizations must consider the role of analytics in measuring and managing HR business performance. HR analytics can broadly be segmented into four categories: 1) Employee Lifecycle Management (e.g., from hiring to firing/retirement, recruiting analysis, turnover analysis, etc.), 2) Workforce Management (e.g., workforce planning/budgeting, compensation management, etc.) 3) Employee Relationship Management (e.g., resource allocation, employee self-service, manager self-service reporting, etc.), and 4) Transaction Management (e.g., time and expense analysis, payroll analysis, etc.). With a new focus on HR analytics, organizations can expect to correlate the success of the business to the success of the employees through more effective employee acquisition, deployment, development, retention, motivation, and empowerment.

Examples	Methodologies/Best Practices	Metrics	Inputs and Outputs	Business Benefits
Enterprise Resource Management Salary & Compensation Planning Employee Turnover & Retention Analysis HR Benchmarking & Scorecarding Employee Incentive Management Employee Performance Management	**Employee Lifecycle Management** • Reduce the cost and improve the effectiveness of the "hiring to firing cycle" **Workforce Management** • Align workforce operations with business needs **Employee Relationship Management** • Increase the Contribution of Human Capital to Business **Transaction Management** • Increase Transactional Efficiency & Control	**Strategic** • Headcount • Skills Inventory • Employee Retention • Employee Satisfaction • Revenue per head • Costs per head **Management** • Costs per hire • Diversity • Salary benchmarking • Revenue per head • Costs per head • Avg. Sales per Rep. **Operational** • Training Costs % of revenue • Compensation % of revenue/costs • Overtime % of salary • Hiring costs • Staff skill set	**Inputs** • Payroll systems • Personnel systems • External HR/compensation data • Time tracking systems • Self-service systems for benefits enrollment, employee surveys, etc. **Deliverables** • See examples listed **People Impacted** • HR managers/executives • LOB managers • CEO/CFO	• Reduced cost of employee turnover • Improved employee and team productivity • Alignment of human resources with business priorities through enhanced planning and management • Higher employee retention • Lower SG&A costs via greater visibility of travel, HR, and employee expenses • Better deployment of skills across the organization • Understanding of critical characteristics in the recruiting cycle • Reduced HR transactional cost