

## Chapter VII

# A Framework for Business Performance Management

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### ABSTRACT

*To manage their performance in a dynamic and complex environment, organizations need forward-looking intelligence. Forward-looking intelligence is the ability to make reliable predictions about where the business is going to and what is driving the business. To produce forward-looking intelligence, an organization should have an insight into its business drivers, an adequate management process, and skilled people able to collaborate and share knowledge. To support the production of forward-looking intelligence, the role of information technology is crucial. However, the existing decision-support infrastructures in companies often fail to support this production. In this chapter, a framework is*

*presented that can be used to structure and organize the production of forward-looking intelligence. This framework also serves as a background for the evaluation and implementation of a supportive ICT infrastructure.*

## INTRODUCTION

What do airlines and companies in the food industry have in common? An abrupt crisis (9/11 and the BSE crisis) in their respective industries forced them to change their strategy dramatically. For instance, the beef sales of Dutch company Royal Wessanen suddenly decreased to zero in Germany due to the BSE crisis and the media attention about this crisis<sup>1</sup>. Another recent crisis—the Enron and WorldCom affair - taught us that integrity, transparency in financial figures and accountability for these figures by top management is vital. As a result of this affair, the creditability of many companies was and still is at stake. Relevant questions are whether organizations could have foreseen such crises and how they should deal with them. The ability of organizations to anticipate events and developments in their business environment and to deal with these events is the main topic of this chapter.

When business volatility increases and market conditions become more aggressive and stakeholders more demanding, organizations should optimize their resources efficiently to meet changing goals and gain or maintain competitive advantage. To do this, relevant information about the business processes and the environment is imperative. Suppose a product manager of mobile phones is introducing a new range of mobile phones that should bring his/her company back into a market-leading role within six months. In order to provide a reliable estimate about the number of phones sold and their revenue, a lot of information is required. How much of the current range of phones has been sold and during which conditions, to whom and when? What is the estimated delivery time? What is in stock and what needs to be produced? Does this have an impact on the production and introduction of the new range? What is the impact of marketing activities for the current and new product range? What is the competition doing? What is the impact of the competitor's activities? What is the impact of introducing the new product range earlier or later? To make the right decisions, forward-looking intelligence is required. Forward-looking intelligence is the ability to make reliable predictions about where the business is going to and what is driving the business. Forward-looking intelligence entails having an insight into business drivers, a management process and skilled people able to collaborate and share knowledge with the systems and organization to support this.

The existing decision-support infrastructures in companies often inhibit, rather than enable, an organization from producing forward-looking intelligence. The underlying systems are departmental in scope, focus on single business functions, fail to integrate in any meaningful business sense, lack process support and are expensive to maintain and modify. In my daily practice I have noticed that the financial consolidation process is used to collect data from the last quarter for financial and management reporting about the past, with a forecast that has a limited outlook to the future. The data from the consolidation process are of limited use in anticipating the future. These figures are meant for the statutory and financial reporting for some internal and external stakeholders. These figures explain too little about what is really going on in the business itself. Therefore, a forecast is needed, but the currently used forecasting method consists of a limited set of metrics which only grasp at the developments in sales and expenses for the remainder of the year or, if you are lucky, some quarters ahead in a rolling forecast. Just like the yearly exercise of putting a budget together, the value of this forecast is limited, as it is often completed only by the financial department and not by the people who are involved in the business on a day-to-day basis such as account, product and production managers.

Over the last couple of years many companies have invested a lot of money in enterprise resource planning (ERP), supply chain management (SCM) and customer relationship management (CRM) systems to improve operational processes. However, many systems did not meet expectations and some even failed. Next, data warehouses were built to collect data from all these operational systems in order to use the data for management information. Most data warehouses are either not able or not designed to deliver forward-looking intelligence to managers. Information technology (IT) is a core component to produce forward-looking intelligence and to support collaboration between people. The important role of IT is extensively described in this chapter.

To plan and control their organization, managers need timely, accurate and relevant intelligence. To obtain this intelligence, the following questions should be answered:

1. What are the “business drivers” and how well does the organization perform based on these drivers?
2. What are the most important uniform metrics to measure the performance of the company?
3. What does the management process look like for the entire organization?
4. How do people collaborate across all functional areas in the organization and/or outside the organization whenever necessary?

5. Which intelligence systems are used to support the management process and collaboration?
6. Who is responsible for and how is the support of the management process and systems arranged?

These questions enable organizations to manage their business performance. In this chapter each question is described in a separate paragraph. There is also a separate paragraph with guidelines for their practical implementation. This chapter can also be used as a checklist for business performance management and intelligence projects, as the most important aspects are described for initiating and implementing these types of projects.

## **BUSINESS DRIVERS**

Southwest Airlines is the only airliner in the United States making a profit since 9/11. How is this possible? The reason for this is that Southwest Airlines knows exactly what the drivers in its industry are and knows what to do to remain profitable. For instance, the company knows exactly what the utilization is of each route by type of aircraft; which routes by type of aircraft are making or losing money; what the most important cost components are; what its customers' preferred service level is; what the level of customer satisfaction is, etc. The company also compares this information to the industry in general and its main competitors. Based on assumptions about developments in flight behavior and the number of passengers, Southwest Airlines was able to create reliable scenarios and predictions. These scenarios prompted immediate action to terminate routes, to decide which type of aircraft should be used to control expenses for a certain route and to determine what the effect of these actions is to the profitability of the company. Another reason why Southwest Airlines outperforms its competitors is that it was able to test assumptions, identify bottlenecks and constraints and to solve these using different "what-if" scenarios better than the competition.

An example of a business driver for a company developing and selling software is license revenue. Based on this driver, the company can evaluate its performance compared to the market. License revenue also drives revenues from services to implement the software and maintenance fees for support to assure future investments in development. License revenue is also relevant for the evaluation conducted by shareholders, business partners and (potential) customers to judge whether it's worthwhile investing in this company. Together with the metric days sales outstanding, the business driver license revenue is

revealing something about customer satisfaction and the quality of the software. Customers will not pay their bills when the software is not working as expected.

## UNIFORM METRICS

Many organizations define and use indicators for monitoring their performance. However, several problems have been found with these indicators. For instance, a lot of companies use too many metrics. This results in an unclear and unrealistic view on what is going on in the business. In addition, when a set of indicators is used, some of them contradict others. An example of this is merged or acquired companies that combine different sets of metrics for performance measurement without closer attention to the metrics actually required. This can also be the case in companies that changed their strategies (e.g., from operational excellence to customer intimacy) and the metrics associated with the new strategy are not aligned, company-wide, with the new strategy.

To identify the most important metrics, the information matrix can be used. The information matrix is a tool to outline goals, business drivers (BD), critical success factors (CSF), key performance indicators (KPI) and other common metrics. It explains, for each metric, where the data is coming from and which information it provides to whom, how often and by which means. The information matrix is also a tool for collaboration between the business and the IT department. The business users define the metrics and how they want to use them, while the people in the IT department can ensure that the right data is used to calculate the metrics and the appropriate tools are used to present the metrics to the business users in a format they prefer.

The column headings are explained below:

**Metrics:** In this column, the name of the metric is stated. The name must be unambiguous, common and understandable for every user. For example, the company's goal is to increase license revenue growth by 10% each year. The business driver license revenue was described in the paragraph *Business Drivers*. A critical success factor is what must be accomplished to achieve 10% growth each year. A key performance indicator is the metric to measure performance of an activity to achieve 10% growth each year (Oakland, 1993).

**Definition:** How is the metric calculated and accounted, e.g., with a formula, a number or a percentage? For example, license revenue is the net sales of all software products in U.S. dollars (thus without discounts). With this definition the metrics are guaranteed to be clear, concise and therefore,

Table 1. The Information Matrix

| Metrics | Definition and Mapping | Dimensions | Level of Detail    | Domain   | Frequency | Means     | Scenario |
|---------|------------------------|------------|--------------------|----------|-----------|-----------|----------|
| Goal    |                        | Time       | Year/Quarter/Month | Function | Hour      | Paper     | Actual   |
| BD      |                        | Customer   | Customer Group     | Person   | Day       | Report    | Budget   |
| CSF     |                        | Country    | Customer           |          | Week      | Dashboard | Forecast |
| KPI     |                        | Product    | Product Group      |          | Month     | Intranet  | MTP      |
|         |                        | Supplier   | SKU                |          | Quarter   |           | What-if  |
|         |                        |            |                    |          | Year      |           |          |

can be interpreted by everyone throughout the entire organization and also by other stakeholders when used for benchmarking. The data source(s) from which the metric is calculated must also be defined. This is the so-called mapping of the data.

**Dimensions:** For which dimensions does the metric have to be calculated? This also defines which slices of the data must be calculated by the metric. A slice is, for example, license revenue by product, by customer, by country or by month.

**Level of Detail:** At which levels must the metric be calculated? This is also the drill-down path for the metric. For example, license revenue by geographical area drills down from Europe to The Netherlands, to North Holland, to Amsterdam.

**Domain:** In which functional areas will the metric be used and for whom is it important? As an example, is it important for the entire organization and all managers or just for the directors and account managers in the sales department?

**Frequency:** How often is the metric measured? This is relevant to the requirements set for the systems, especially when the frequency is higher (e.g., data delivery and calculation by hour).

**Means:** How do the users want the information to be delivered and presented? Do they want a reporting tool with figures and graphs in one view, accessible over the Internet or hard copies of the reports? This is also relevant to the requirements of the systems used.

**Scenario:** For which data categories does the metric have to be calculated and used for variance analysis? For the current (actual) year, this is derived from the operational systems. For budget and forecast, the calculation

may vary. For example, the budget is submitted bottom-up by a departmental manager based on top-down targets. Some of the costs such as the total IT costs are allocated to departments based on the number of computers in that department. The forecast is entered and modified over time by account, product or production managers based on their ongoing foresight in the business. Moreover, the budget data can be very specific for each product by customer, while the forecast is entered by customer group and product type. These differences set the requirements for the intelligence systems to use.

There are different methods to get the most important metrics, for example, with the help of a computerized brainstorm. With this method, different people can brainstorm anonymously using computers. Following this, the metrics are categorized into groups and duplicates are eliminated. Next, they can complete the information matrix together. The selection of the uniform metrics used in the corporation may consist of a combination of different methods used; for example, value-based management, balanced scorecard or activity-based management (Geishecker, 2002). The use of these methods for the company's strategy is described in the paragraph *Intelligence Systems*.

To satisfy managers' constant need for intelligence, the information matrix can be used. It enables the definition of a set of uniform and common metrics and supports their utilization to measure the performance of the company over time. However, for this purpose, it is vital to keep the information matrix updated. The use of and the responsibility for the information matrix should be incorporated into the organization. This will be described in the paragraph *Responsibility* of this chapter.

## THE MANAGEMENT PROCESS

At any level in the organization—top-management, departments or teams—management processes are essentially the same, no matter what aspect of the organization is being addressed. Management can be seen as a cycle consisting of six sub-processes (see Figure 1) (Hyperion, 2002). This cycle is not necessarily unidirectional, since interaction and collaboration are required at every step of the process to ensure success. Common, consistent information (the “shared information” hub in the middle) is required to ensure that all decision makers are working with the same information. The six fundamental processes are:

**Goal-setting:** defining and confirming the criteria and measures for successful performance of the management process that bring together long-term business strategies and day-to-day business operations.

**Modeling:** identifying the business drivers and determining the relationship between drivers and predicted results.

**Planning:** establishing a set of actions or targets that are designed to meet the business goals.

**Monitoring:** acquiring and normalizing internal results, key performance indicators and external influencing factors (e.g., market or economic events), triggering alerts and responding to exceptions at any given point in time.

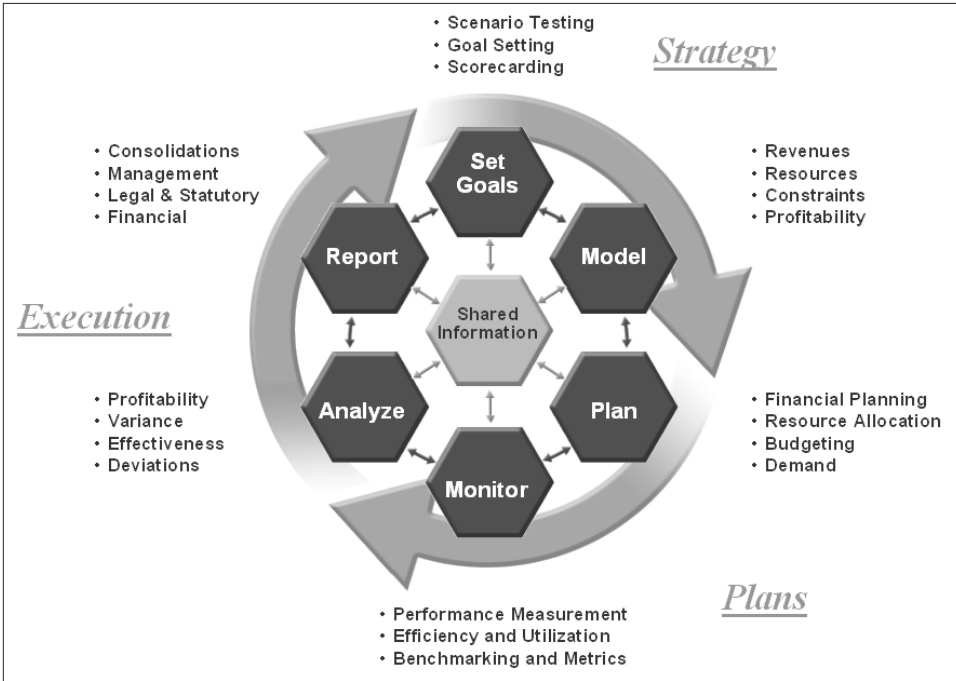
**Analysis:** gaining insight from results and variations in predicted outcomes and using this information to improve the process.

**Reporting:** providing information in an expected, predefined format.

It is critical that this approach of the business management process is fully supported by the intelligence systems, as described in that paragraph. It is important that realistic goals and objectives are set and that business models are used to test different scenarios and to validate plans. As plans are executed, it's necessary to constantly monitor the progress and not just the outcomes. If there are variances in the metrics used to measure performance, plans need to be adjusted to ensure that goals are met. End results need to be analyzed and compared to the original goals to discover deviations and variances. All information can be used to explain the reported results and to adjust models for future success. By using this approach, continuous business improvements can be applied to an organization. For example, based on the strategic target of 10% growth in license revenue, the marketing department has a goal for the number of leads to provide to the sales department. Based on the assumptions and constraints (budget, employees, etc.) modeling is conducted to determine how many campaigns by which media can be executed and what the potential results will be. After that, the best and most likely scenario is transformed into an operational plan. The outcome of the plan is monitored against the actual results. If differences are detected, they are analyzed to find out their causes and these are reported in order to make adjustments and improvements.

In the financial domain this process is known as the planning and control cycle (Mintzberg, 1994). Here it is called the management process, as this cycle applies to every manager in the entire organization. Managers secure the control aspect (monitor, analyze and report) through procedures and systems with internal checks from the financial domain and external checks from the

Figure 1. Management Process



auditor. The planning function is gaining importance, as previously mentioned, with the rolling forecast. Operational managers, who are close to the business, complete the rolling forecast. In this way, a more frequent and reliable picture of what is going on in the business and the company's own position in the marketplace can be provided. A change is expected from the annual budgeting process to a monthly or even more frequent rolling forecast process. Eventually, the creation and completion of the budget will be obsolete and completely replaced by the strategic planning process and the rolling forecast.

The need for an increase in speed within the management process is an additional issue. The entire management process needs to be performed faster, especially when certain events happen and thus render the current budget and forecast irrelevant. Corrective actions must be taken quickly to avoid the company from being outperformed by the competition. This means that the planning function should be closer to the business and outside the financial domain where it often is today. The financial domain facilitates the planning process with models and systems, at most.

## COLLABORATION FOR ALIGNMENT

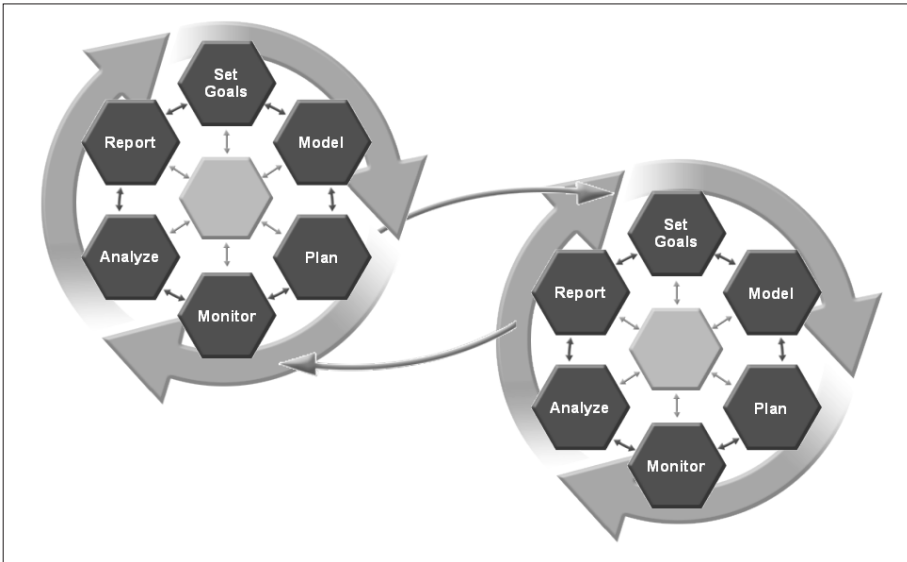
The definition, testing and translation of strategic goals into daily operations usually start with mid-term planning for several years. In today's business environment, looking forward several years is hardly possible, with the exception of scenario analyses (Vijverberg, 1993), and has even been mentioned in press releases detailing the financial results of various companies. Moreover, increasing numbers of managers are becoming involved in the whole process at the same level and also in other levels of the organization (see Figure 2). In the planning process the output of the operational plan from one unit is the strategic plan for another unit. The same applies for control. The reporting from one unit is part of the monitoring of another. Information must be shared in the whole process and between processes to anticipate and take actions whenever events happen. This means that the process must be faster, more iterative and more interactive to ensure better collaboration between managers. The targets of the sales department mean that marketing has to supply them with enough leads. When this doesn't happen, the sales department needs to act in order to still realize its sales target. The sooner the sales department knows something is not going as planned, the faster it can act accordingly.

Shared information for collaboration is the reason why the use of uniform definitions for metrics is essential; for example, what is the definition of a lead and do sales and marketing use the same definition. Otherwise it is very difficult to share information and experiences. Subsequently, process management is also important. When hundreds or thousands of managers are involved in the rolling forecast and managers depend on the outcome of another unit, then the workflow of the process must be supported and managed. This sets requirements for the systems used.

Any business manager has five fundamental responsibilities which make up the management environment:

- Strategy setting and leadership (goals, targets, direction);
- Finances (budgets, expenses, capital requests);
- The people who make up a business (teams, business units);
- Products and services that are provided to customers;
- Customers.

The top management (leaders) of the company establishes the goals and objectives. Divisional and local management teams need to work together to make sure those goals and objectives are realistic and obtainable. Enterprise-wide collaboration is required to optimize all aspects of the business for

*Figure 2. Collaboration is Essential*

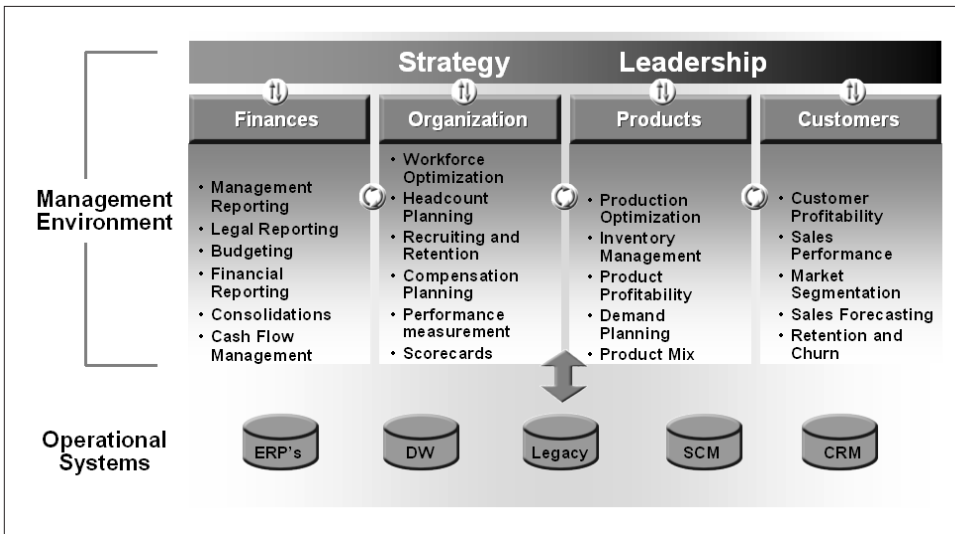
success. This means that managers must work across domains and alignment is essential, both between domains and from top to bottom and vice versa (see Figure 3). For instance, the sales forecast from the commercial domain determines the demand planning for production in the production domain. Consequently, the production determines headcount planning and/or recruitment and the budget for hiring new employees or investments in equipment when the workload becomes too high. Obtaining insight into business issues across domains sets requirements for the systems used and for the use of uniform definitions of common metrics (Oakland, 1993).

## INTELLIGENCE SYSTEMS

Information technology plays a very important role in today's business and in managing the business. The first part of this section describes the developments in IT for supporting the management process. In the second part, the components of a framework for business performance management are described.

As shown in Figure 3, applications in the management environment use data coming from operational systems. These systems are used to store transactions such as sales orders, flight reservations, payments, etc. In many

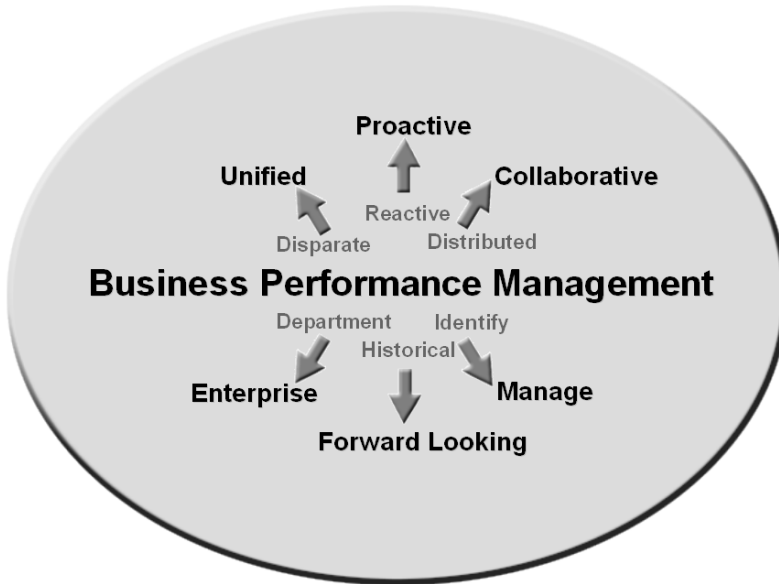
Figure 3. Collaboration Supports Management Responsibility and Alignment



companies these transactions are also stored in a data warehouse to be used by managers to make informed decisions and set actions. Often external data about market shares, competitors, the weather, etc., are added. Managers need this information to do a better job, achieve unprecedented, better results and to surpass the competition (Porter, 1985).

Business changes every day. Managers need information to anticipate changes no matter where this information comes from, as long as it is reliable. This information must support the management process and collaboration (Vijverberg, 1993). Today, in many companies, data are stored in separate systems for each domain or even in totally different and unintegrated applications in a specific domain. Spreadsheets and PowerPoint presentations are also widely used to store strategic information used in the management process. This software is not designed to assure uniformity in metrics (formulas can easily be changed) or to be used simultaneously with other users. When data warehouses and/or OLAP tools (OnLine Analytical Processing) are used, these systems are often only used in a specific domain or in a certain unit, consisting of historic data to report and analyze what happened. Companies such as Southwest Airlines and Royal Wessanen are transforming from business intelligence to business performance management. Business performance management<sup>2</sup> describes the methods, metrics, processes and systems used in organizations to translate strategies into plans, monitor execution, and provide insight to improve financial

Figure 4. *The Evolution to Business Performance Management*



and operational performance. It represents the strategic, integrated evolution of business intelligence (BI) to support the management process. To support management decisions there must be (see Figure 4):

- A proactive approach to decision-making;
- Collaboration between peers;
- The use of information to support management decisions;
- General use for all decisions;
- An enterprise-wide approach for managing a business;
- A unified approach to the business and its information.

Business performance management is beyond historical data delivery; it is about managing the business with information. It automates and supports the workflow and decision-making involved in management. This is marrying intelligence and the management process in order to measure performance and drive profitability. The goal of business performance management is to drive business performance by supporting organizational goals to:

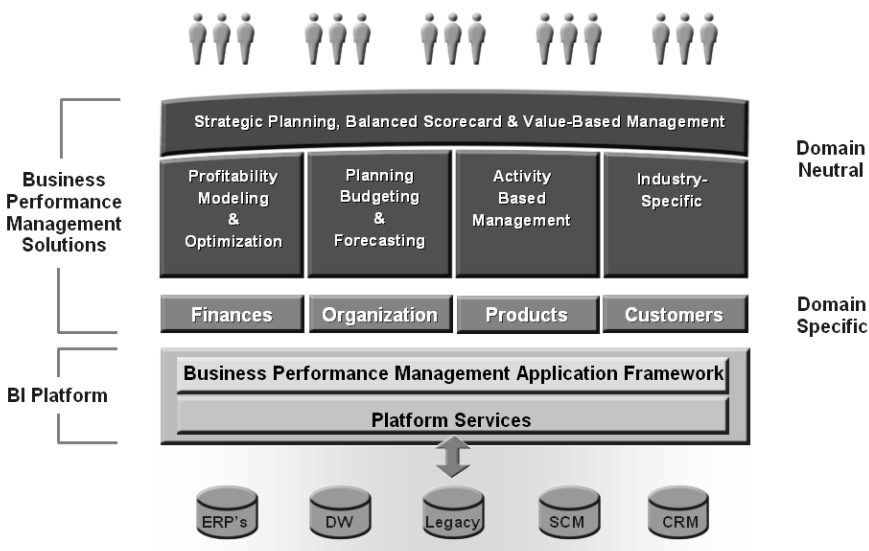
- Identify and exploit opportunities for investment, growth and profitability;
- Optimize deployment of organizational resources for maximum impact on the bottom line;
- Simplify the execution challenges of organizational strategy.

This means that a question such as: “How to increase profitability by 10% every year?” has huge consequences for almost every manager’s business. The impact of such a question is enormous. Answers to such questions do not come from operational systems or data warehouses. To fulfill managers’ ever-changing demand for information, requirements are set for the intelligence systems to be used.

As mentioned earlier, requirements are set for the intelligence systems to be used. These requirements are determined by the use of forward-looking intelligence based on uniform metrics in order to fulfill the ever-changing demand for management information, to have access to data and information no matter where it comes from, to provide all stakeholders such as customers, suppliers and partners with access to required areas of the system, to support the management process with workflow and to support and manage the collaboration between people. The net result of this is to stay ahead of the competition in a very dynamic market. To achieve this, a business performance management framework must be in place to support strategic and operational decision-making (see Figure 5).

How can systems help to dominate the business instead of being dominated by others in the marketplace and to understand what really drives the business? Also, how can they help test scenarios based on trends and business drivers in order to be prepared and to adjust the company’s strategy when

Figure 5. Framework for Business Performance Management



unexpected events happen? As previously stated, it all starts with the need for forward-looking intelligence. This intelligence is not available in operational systems and data warehouses. That explains the need for an additional business intelligence platform (BI platform), in which values are calculated based on assumptions, bottlenecks, constraints and the collective experience available in present and historic data.

The business performance management framework consists of different layers and these are described below.

## **Platform Services**

These consist of a number of components for the integration of data from operational systems, the administration of users, applications (dimensions and metrics), distribution of information and enterprise-wide collaboration of the company's internal and external users. In brief, this is the technical fundament of the platform. The most important services are explained below.

### *Interoperability Services*

Interoperability services are the most critical part of the framework in order to apply business performance management enterprise-wide. These services enable the collaboration between the different applications used for the sharing and mapping of uniform definitions (metadata). They offer version control: who changed what, when and why? Furthermore, these services enable the promotion of changes to applications from development to testing and production.

Applications do not have to be from the same supplier for collaboration to work between them. Open standards, such as XML (eXtended Markup Language), XMLA (for Analysis) and XBRL<sup>3</sup> (eXtensible Business Reporting Language) are used to exchange metadata and data. Therefore, it is important that the applications can support these open standards to ensure the use of uniform definitions, metrics and information enterprise-wide.

### *Analytic Services*

This component deals with the analytic power and the applied technique to offer an enterprise-wide scalable solution. Analytic power is required for calculations and business rules to calculate the derived values used as management information, which is not available in operational systems; for instance, derived values such as market shares for individual products or services by group of customers, profitability by customer and product or complex statis-

tical calculations for scenario testing. Therefore, it is essential to enter assumptions into the BI platform to calculate results quickly. To have write-back capabilities to the BI platform is also important for the rolling forecast. The rolling forecast is often entered on a different level of detail than the data in the operational systems or for top-down targets, or other amounts are allocated based on predefined drivers. It is even better to automatically process data from reports of industry analysts, news agencies or even competitors for a new forecast to see what the impact on the business will be, and in addition to that with proposed actions to take in different what-if scenarios with the impact of these proposed actions. In this case managers can decide very quickly about what to do and communicate with the people involved.

The applied technique is relevant for the storage of mass data. Is the data stored in the OLAP environment or can this be done in combination with relational database technology (Hybrid OLAP)? This is of great importance for analyzing millions of customers. The storage of data also has an impact on the platform to be used. Next to Windows, are Unix, Linux or a mainframe computer also viable options to store and calculate data and metadata? Is the use of multi-processors supported in order to achieve acceptable performance of complex calculations? Any failure resulting from the use of software and systems is often caused by the lack of using them. If users have to wait too long for answers to questions then they look for other ways to get answers.

### *Query and Reporting Services*

End-users do not care where their information is coming from. They want acceptable performance and the software must be easy to use. Therefore, the use of Internet technology is crucial, as information must be disseminated worldwide in a reliable, secure way, internally in the company and also externally to stakeholders such as shareholders, customers, suppliers or business partners. In addition to all types of graphical features for presentation purposes, three things are critical to the end-user:

1. The information must be provided proactively based on triggers such as an alert on the screen or by e-mail. Users have access to Internet or e-mail everywhere, even with their mobile phone. An example of a trigger is when net working capital increases due to the submitted forecasts and exceeds the acceptable bandwidth;
2. The information must, preferably, be presented in a single and central place for the end-user via a so-called "portal." In this way, the developments in the manager's area of responsibility are instantly clear. From

there on, quick and easy drill-down should be performed to find the cause of the increase of net working capital. After that, actions must be taken to solve the issue before it actually occurs;

3. Both quantitative and qualitative information must be available. When the net working capital indicator increases due to the introduction of a competitive product and damages the sales of your products, then, for example, the press release information from the competitor is also available as an explanation. The beauty of Internet technology is that different types of information are easy to present together, regardless of where the information is stored.

The information matrix can be used to determine which users need which information delivered and presented and in what way. This should be taken into consideration when disseminating the information.

### *Integration Services*

In the case of huge amounts of data, it is common, for integration purposes, to load this data from operational systems to data warehouses and between applications automatically. When a data warehouse and an ETL tool (Extraction, Transformation and Load) are used it is an advantage to incorporate this into the BI platform. Before data is loaded into a data warehouse it is cleansed, unduplicated and validated to improve and assure the quality of the data. For example, in the case of a mobile telecommunications company all connections must be unique and all data must be associated correctly with each connection, such as personal, billing, payment and contract data. Part of this data will be used in the BI platform and domain-specific applications. This data has to be integrated easily and maintained from the source system or from a central repository. Additionally, if more detail is required in the BI platform this must be readily available to the end-user. For instance, when a number of customers withdraw and defect to the competition: what are their demographic characteristics and in what way are they the same? Action has to be taken before other customers with similar characteristics defect as well.

The openness and integration facilities of the BI platform are very important for setting up new applications. A lot of data is stored in all types of different systems, from “small” databases and spreadsheets to massive, inaccessible (proprietary) databases of ERP systems. As data from different source systems becomes easier to load automatically, the shorter the time for implementation will be and results will be shown quickly to the end-users.

### *Administrative Services*

Maintenance of the BI platform and applications is another relevant component in order to run a complex system used worldwide. Here too, open standards are recommended, as these standards are already being used a lot in the company. The advantage of this is that knowledge is available and it is fairly easy to acquire new employees to assure continuity. Administrative services also include the workflow and control of the management process. This needs to be aligned with the current working method of the organization and not the other way around (i.e., business process redesign in the 80s and 90s in order to use certain ERP systems).

## **Application Framework**

The application framework offers the option to develop applications based on building blocks so that rapid development is possible. These building blocks contain preprogrammed intelligence necessary for an analytic environment. In this way, developing applications from scratch is prevented and applications can be delivered on time and not when the original specifications have become obsolete. Critical business information must easily be available. Examples of applications are mentioned in Figure 4; however, some other examples are: inventory turnover analysis, route profitability, product sales analysis and employee compensation analysis. An application framework is useful for company or industry-specific applications which are not ready-made available or which require a very large investment.

On top of the application framework, different, ready-made applications are available. These can be divided into domain-specific and domain neutral applications.

## **Domain-Specific**

There are, for every domain, applications available in the market such as the ones for financial consolidation or churn analysis. The major advantage of a domain-specific application is the ready-made availability of the accumulated knowledge and experience in it. This shortens the implementation of these applications considerably. Consequently, the danger of separate domain-specific applications is that each has its own definitions; for example, the marketing and sales departments use a different definition of net sales than the people in the finance domain. These applications must be aligned and integrated within the whole framework in order to make management decisions and to set actions. As mentioned earlier, the result of the sales forecast has an impact on the demand planning for the production process, etc.

## **Domain Neutral**

The strategic management of the organization involves the methods used and the management process (Geishecker, 2002). Value-based management has an impact on the entire organization, as all activities must add value to the company. Companies are increasingly focused on profitability by customer and product or service. That is one of the reasons why activity-based management is also used in marketing and supply chain management. As stated earlier, the forecasting process has an impact on all managers with revenue and expenses responsibilities. The readily available, relevant information from people who are close to the business is crucial in order to act fast and stay ahead of the competition. These aspects and automating them are the responsibility of top management, so they increase transparency and their accountability for their activities to all stakeholders.

## **RESPONSIBILITY**

Previous paragraphs have described the use of uniform metrics, a management process and the intelligence systems within a framework. To ensure that users are enabled to work with this framework a company requires organization and procedures to accommodate this. Furthermore, one person should be given ownership and responsibility for the framework. Where that role fits into the company is difficult to answer, as every company is different. From my experience at a number of multinational companies in The Netherlands I saw that the domain neutral applications were initiated and facilitated functionally by the finance domain. Employees from the IT department were available or even added for technical support. The advantage of the financial domain is its broad experience with automation of financial management information and that most applications in the management environment are financially driven. Also, a lot of the methods used, such as value-based management and balanced scorecard, originate from the financial area. The finance domain consists of an internal network within the organization, with local controllers and accountants who are accustomed to working together in the financial reporting process. However, this could not succeed without the support of the IT department. Firstly, this is because current standards (technical and procedural) applied in the organization must be used as much as possible to assure continuity. Secondly, the use of Internet technology and the related security issues is work for specialists. Thirdly, technical people are needed for the development of domain-specific applications, together with people from the domain concerned, based on the company's framework.

Ideally, a separate, organized group of people in a department should be available for the following activities:

- Control of the framework's content based on the information matrix (not to determine the content, as this is done in cooperation with the business users and senior management);
- And to translate this into improvements for current and new solutions;
- To monitor the alignment of the systems used with the management process;
- To accelerate and facilitate the use of applications;
- To take charge with new initiatives;
- To deploy and test scenarios and to conduct complex ad hoc analyses for strategic planning;
- To manage the technical realization and technical control of the BI platform and applications based on company standards;
- To monitor the quality of the metadata, data and performance of the systems used;
- To have a liaison role between business users and the IT department for the management environment.

The following rule of thumb can be applied to this department's reporting within the organization and in the following order: in a business driven commercial company, to the Marketing and Sales Director. If another domain is very important for the business, like manufacturing, and there is a collaborative environment then place it there. In a financially managed company with also a focus on management reporting it is wise to report to the Chief Financial Officer. If IT is the only department with an overview in the whole organization then place it there with a reporting line to the Chief Information Officer (Buytendijk, 2001).

## GUIDELINES

From experience and research, I have discovered some useful guidelines on how to start and implement a business performance management framework. These guidelines are as follows:

1. Bring together a limited number (eight to 12) of key users of management information in a workshop and use the described management process to make the following clear:
  - How well is the current process compared to the process described in the paragraph *The Management Process*?

- Which reports and analyses are used in the different steps of the management process?
- What is the content of these reports and analyses and how relevant are they? This is used to gain insight into business drivers and metrics.
- Which methods are used enterprise-wide and per domain? Check these according to relevance for business drivers and the most critical metrics.
- Which forward-looking information and metrics are missing?
- How are reports and analyses made and with which systems?
- How is information shared and how do managers collaborate?
- How are the metadata, definitions and data integrated?
- Who is responsible for which systems and which activities are associated?
- What are the company's standards for business intelligence and which of them meet the requirements for the business performance management framework?

It is important to have people participating who are able to look further than their own domain and to realize that the impact of their daily business activities also has an impact on others within the company. If participants are only focused on their own needs then a company-wide view and the creation of alignment is hardly possible. It is advisable to facilitate this workshop with experts in order to prevent people from going into too much detail. By staying focused on the main topics the company's current position becomes clear very quickly. Document this carefully and use this document to find a sponsor from top management: someone who believes in forward-looking intelligence and wants to be able to respond faster in case of events (and feels that this is lacking). This step is also necessary for financing the program and supporting an enterprise-wide implementation.

2. Determine the ultimate goal of the program and then determine the gap with the current situation from Step 1. Construct, with the help of experienced people, the roadmap to execute the program. Divide the program into separately manageable projects and prioritize based on the biggest problems in the organization. For instance, by missing the forecast due to myopia, insufficient insight into the company's own market position and market trends, a lot of companies are afraid to make announcements regarding future results. Therefore, companies themselves do not know how to proceed and are punished by the stock market. This causes problems for financing future growth to sustain or improve their competitive positioning.

3. Ensure the provision of quick and visible results. Start with the 10 to 15 most important metrics for the company. Make sure that the source data is available and use cleansed data so there is no doubt about the quality of the data. Present the metrics to a larger group of key users with a professional tool. Then broaden the scope by number of metrics, end-users and further into all domains. Make use of external experts wherever necessary to acquire knowledge and experience for future projects. I was the external expert for a company due to the people in the company having hardly any experience with a BI platform and business performance management applications. By using a framework and a roadmap it was clear for them (business users, IT department and the external software implementation partner) on how to proceed step-by-step with minimal risks.
4. Have guts and perseverance. The management process is more flexible than the primary process. It is a challenge to support the management process with systems. Operational systems are strict because of the unambiguous primary process, whereas intelligence systems must be very flexible. It is unknown, beforehand, to which questions answers must be given. Use this as a fact when exploring the management process, developing applications and implementing systems. The support of the IT department is key for the technical infrastructure of the framework. The more the framework fits into the current standards and procedures of the IT department the better it is. Nevertheless, flexibility from the IT department is also important because the needs of managers change every day. It is better to be equipped for that than to fight change every day. So make sure that the IT department is aligned as well.
5. Establish a separate department within the organization to secure the maintenance and the use of the framework, as stated in the previous paragraph *Responsibility*.

## CONCLUSION

How bright is an organization in anticipating and specifically responding to events which have an immediate impact on profitability and competitive positioning? In this chapter, an approach to this issue is formulated: a business performance management framework. This framework contains methods to derive real insight into the business (drivers) and to get a grip on giant and complex organizations by means of a specific management process. In this

process, it is imperative to use uniformly defined metrics and IT systems to supply forward-looking intelligence so people can collaborate for the success of the company. It is essential to root this firmly within the organization in terms of people and procedures to assure alignment and to gain and maintain the required knowledge. There are guidelines provided to start and implement a business performance management framework. With these guidelines, it is possible to start smart and provide results.

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## ENDNOTES

- <sup>1</sup> Mr. K. Kramer (2002), CFO Royal Wessanen NV at the Dutch Hyperion user conference.
- <sup>2</sup> Industry analysts are using similar definitions in the same context, e.g., Corporate performance management is the umbrella term that describes the methods, metrics, processes and systems used to monitor and manage business performance from Gartner.
- <sup>3</sup> XBRL is a XML extension and provides a common platform for critical business reporting processes and improves the reliability and ease of communicating financial data among users internal and external to the reporting enterprise (see [www.xbrl.org](http://www.xbrl.org)).