

## Organization Structures Aligning Business Analytics

According to Isson and Harriott (2013, p. 124), to successfully implement business analytics (BA) within organizations, the BA in whatever organizational form it takes must be fully integrated throughout a firm. This requires BA resources to be aligned in a way that permits a view of customer information within and across all departments, access to customer information from multiple sources (internal and external to the organization), access to historical analytics from a central repository, and alignment of technology resources so they're accountable for analytic success. The commonality of these requirements is the desire for an alignment that maximizes the flow of information into and through the BA operation, which in turn processes and shares information to desired users throughout the organization. Accomplishing this information flow objective requires consideration of differing organizational structures and managerial issues that help align BA resources to best serve an organization.

### Organization Structures

“Why Is Business Analytics Important?” most organizations are hierarchical, with senior managers making the strategic planning decisions, middle-level managers making tactical planning decisions, and lower-level managers making operational planning decisions. Within the hierarchy, other organizational structures exist to support the development and existence of groupings of resources like those needed for BA. These additional structures include programs, projects, and teams. A program in this context is the process that seeks to create an outcome and usually involves managing several related projects with the intention of improving organizational performance. A program can also be a large project. A project tends to deliver outcomes and can be defined as having temporary rather than permanent social systems within or across organizations to accomplish particular and clearly defined tasks, usually under time constraints. Projects are often composed of teams. A team consists of a group of people with skills to achieve a common purpose. Teams are especially appropriate for conducting complex tasks that have many interdependent subtasks.

The relationship of programs, projects, and teams with a business hierarchy is presented in Figure 4.1. Within this hierarchy, the organization's senior managers establish a BA program initiative to mandate the creation of a BA grouping within the firm as a strategic goal. A BA program does not always have an end-time limit. Middle-level managers reorganize or break down the strategic BA program goals into doable BA project initiatives to be undertaken in a fixed period of time. Some firms have only one project (establish a BA grouping) and others, depending on the organization structure, have multiple BA projects requiring the creation of multiple BA groupings. Projects usually have an end-time date in which to judge the successfulness of the project. The projects in some cases are further reorganized into smaller assignments, called BA team initiatives, to operationalize the broader strategy of the BA program. BA teams may have a long-standing time limit (for example, to exist as the main source of analytics for an entire organization) or have a fixed period (for example, to work on a specific product quality problem and then end).

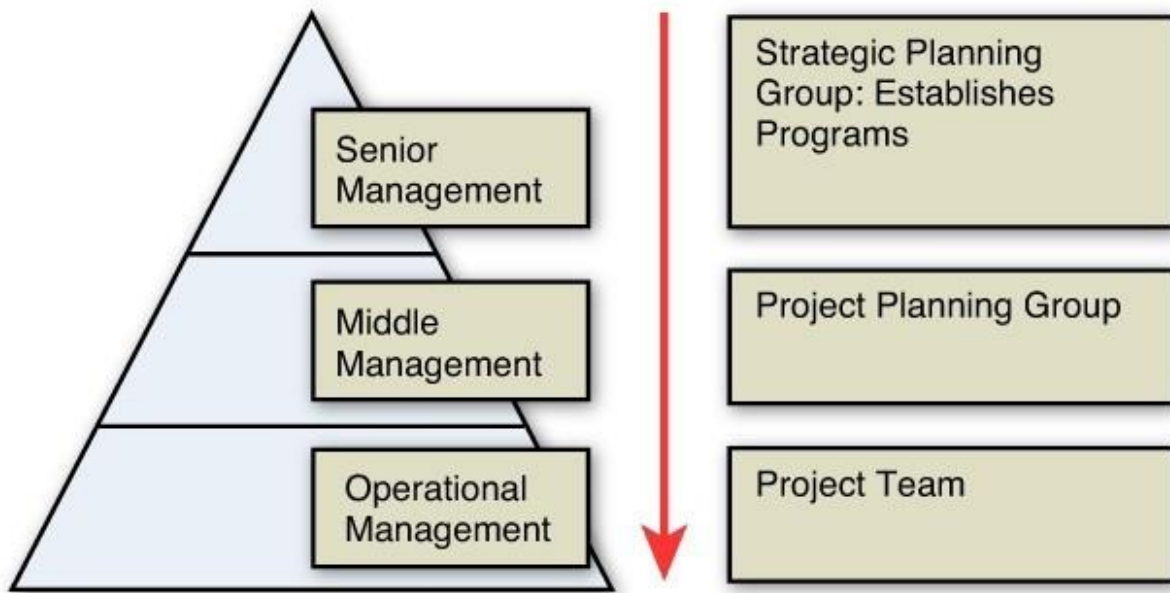


Figure 4.1 Hierarchical relationships program, project, and team planning

In summary, one way to look at the alignment of BA resources is to view it as a progression of assigned planning tasks from a BA program, to BA projects, and eventually to BA teams for implementation. As shown in Figure 4.1, this hierarchical relationship is a way to examine how firms align planning and decision-making workload to fit strategic needs and requirements.

BA organization structures usually begin with an initiative that recognizes the need to use and develop some kind of program in analytics. Fortunately, most firms today recognize this need. The question then becomes how to match the firm's needs within the organization to achieve its strategic, tactical, and operations objectives within resource limitations. Planning the BA resource allocation within the organizational structure of a firm is a starting place for the alignment of BA to best serve a firm's needs.

Aligning the BA resources requires a determination of the amount of resources a firm wants to invest. The outcome of the resource investment might identify only one individual to compute analytics for a firm. Because of the varied skill sets in information systems, statistics, and operations research methods, a more common beginning for a BA initiative is the creation of a BA team organization structure possessing a variety of analytical and management skills. (We will discuss BA teams in Section 4.1.2.) Another way of aligning BA resources within an organization is using a project structure. Most firms undertake projects, and some firms actually use a project structure for their entire organization. For example, consulting firms might view each client as a project (or product) and align their resources

around the particular needs of that client. A project structure often necessitates multiple BA teams to deal with a wider variety of analytic needs. Even larger investments in BA resources might be required by firms that decide to establish a whole BA department containing all the BA resources for a particular organization. Although some firms create BA departments, the departments don't have to be large. Whatever the organization structure that is used, the role of BA is a staff (not line management) role in their advisory and consulting mission for the firm.

In general, there are different ways to structure an organization to align its BA resources to serve strategic plans. In organizations in which functional departments are structured on a strict hierarchy, separate BA departments or teams have to be allocated to each functional area, as presented in Figure 4.2. This functional organization structure may have the benefit of stricter functional control by the VPs of an organization and greater efficiency in focusing on just the analytics within each specialized area. On the other hand, this structure does not promote the cross-department access that is suggested as a critical success factor for the implementation of a BA program.

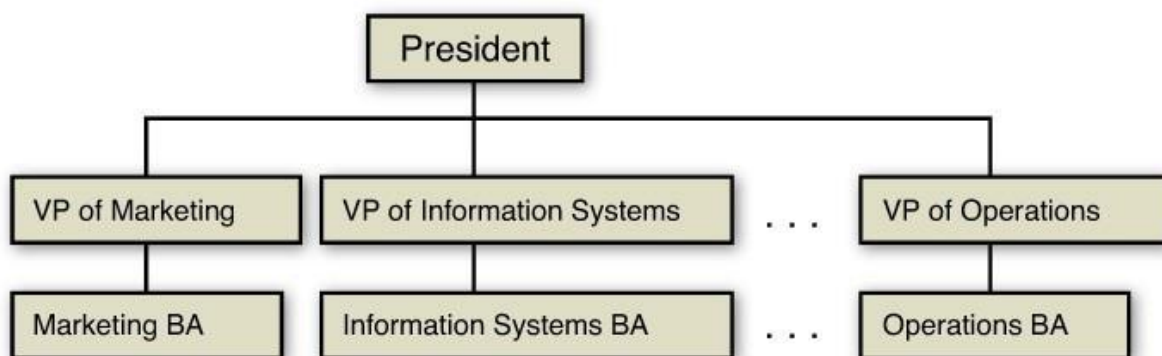


Figure 4.2 Functional organization structure with BA

The needs of each firm for BA sometimes dictate positioning BA within existing organization functional areas. Clearly, many alternative structures can house a BA grouping. For example, because BA provides information to users, BA could be included in the functional area of management information systems, with the chief information officer (CIO) acting as both the director of information systems (which includes database management) and the leader of the BA grouping.

An alternative organizational structure commonly found in large organizations aligns resources by project or product and is called a matrix organization. As illustrated in Figure 4.3, this structure allows the VPs some indirect control over their related specialists, which

would include the BA specialists but also allows direct control by the project or product manager. This, similar to the functional organizational structure, does not promote the cross-department access suggested for a successful implementation of a BA program.

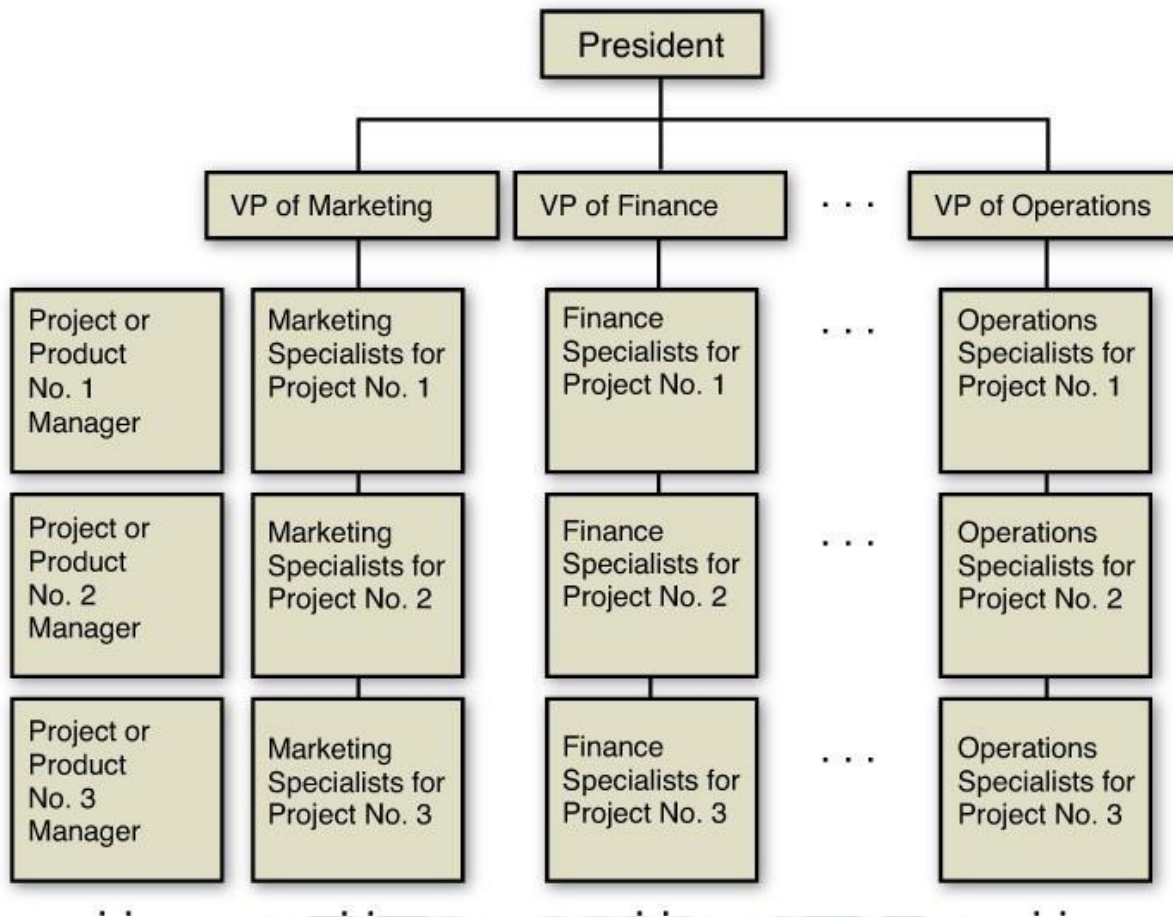


Figure 4.3 Matrix organization structure

The literature suggests that the organizational structure that best aligns BA resources is one in which a department, project, or team is formed in a staff structure where access to and from the BA grouping of resources permits access to all areas within a firm, as illustrated in Figure 4.4. The dashed line indicates a staff (not line management) relationship. This centralized BA organization structure minimizes investment costs by avoiding duplications found in both the functional and the matrix styles of organization structures. At the same time, it maximizes information flow between and across functional areas in the organization. This is a logical structure for a BA group in its advisory role to the organization. Bartlett (2013, pp. 109–110) suggests other advantages of a centralized structure like the one in Figure 4.4. These include a reduction in the filtering of information traveling upward through the organization, insulation from political interests, breakdown of the soloed functional area communication barriers, a more central platform for reviewing important analyses that require a broader field of

Specialists, analytics-based group decision-making efforts, separation of the line management leadership from potential clients (for example, the VP of marketing would not necessarily come between the BA group working on customer service issues for a department within marketing), and better connectivity between BA and all personnel within the area of problem solving.

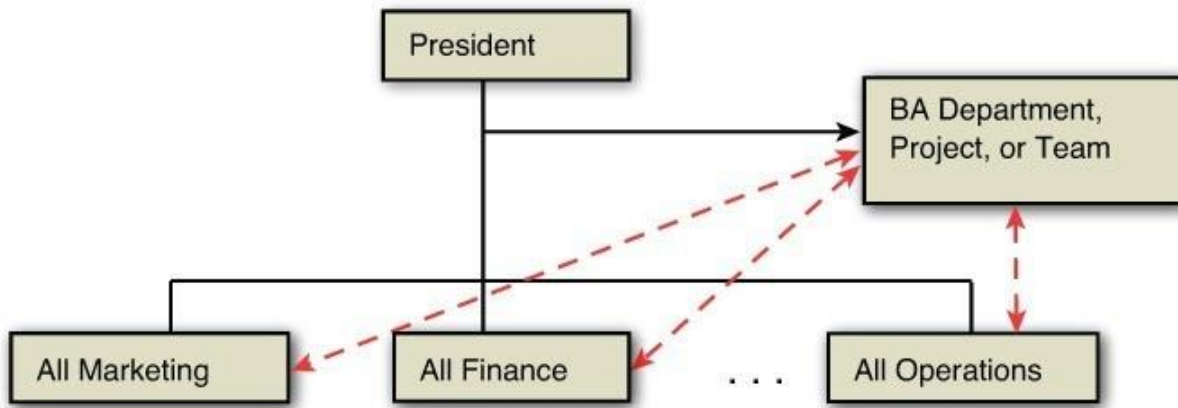


Figure 4.4 Centralized BA department, project, or team organization structure

Given the advocacy and logic recommending a centralized BA grouping, there are reasons for all BA groupings to be centralized. These reasons help explain why BA initiatives that seek to integrate and align BA resources into any type of BA group within the organization sometimes fail. The listing in Table 4.1 is not exhaustive, but it provides some of the important issues to consider in the process of structuring a BA group.

<b>Reason</b>	<b>Description</b>
Lack of Executive Sponsorship	Senior executive failure to recognize the value of BA eventually leads to a reduction in resources and eventual failure.
Limited Context Perception	There is an incorrect perception that analytics must be applied within a particular functional area in order to have the necessary validity to be applied to that area. Example: Financial regression analysis can only be applied correctly in the context of the finance area.
Belief of Physical Proximity	There is misperception that it takes physical proximity of the BA grouping in the business application area to be valid.
Lack of Leadership in BA Groupings	Without an advocate leader in the organization, as well as leaders in BA projects and teams to move the analysis to achieve desired goals, the entire BA effort will lead to eventual failure.
Lack of Support	Without support for needed personnel, collecting data and technology to process the data will lead to failure.
Lack of Collaboration Across All Organizational Groups	Analytics that solve problems across multiple, functional areas are more likely to be accepted and successful than those that lack the cross-over into multiple organizational groups.
Lack of Skilled and Human Resources	BA departments, projects, or teams that don't have the skilled personnel to deal with the execution of analysis will eventually cause the failure of BA.
Inability to Delegate Responsibility	There is a desire to delegate responsibility to solve problems locally (a matter of trusting your own) rather than seeking help throughout the organization. This impedes the flow of problem-solving efforts by an external BA department and impedes communication of information needed to successfully apply BA.
Lack of Integrated Processes	Information that is stored in silos and not shared makes it more difficult for BA analysis to succeed.

Table 4.1 Reasons for BA Initiative and Organization Failure

In summary, the organizational structure that a firm may select for the positioning of its BA grouping can either be aligned within an existing organizational structure, or the BA grouping can be separate, requiring full integration within all areas of an organization. While some firms may start with a number of small teams to begin their BA program, other firms may choose to start with a full-sized BA department. Regardless of the size of the investment in BA resources, it must be aligned to allow maximum information flow between and across functional areas to achieve the most benefits BA can deliver.