

# Matrix structure



Matrix Structure BY startl 23456 Matrix management is a technique of managing an organization (or, more commonly, part of an organization) through a series of dual-reporting relationships instead of a more traditional linear management structure. In contrast to most other organizational structures, which arrange managers and employees by function or product, matrix management combines functional and product departments in a dual authority system.

In its simplest form, a matrix configuration may be known as a cross-functional work team, which brings together individuals who report to different parts of the company in order to complete a particular project or task. The term "matrix" is derived from the representative diagram of a matrix management system, which resembles a rectangular array or grid of functions and product/project groups. The practice is most associated with highly collaborative and complex projects, such as building aircraft, but is also widely used in many product/project management situations.

Even when a company does not label its structure a matrix system or represent it as such on an organization chart, there may be an implicit matrix structure any time employees are grouped into work teams (this does not normally include committees, task forces, and the like) that are headed by someone other than their primary supervisor.

**NEW ORGANIZATIONAL MODELS** In the late 1800s and early 1900s, during the U. S. industrial revolution, a need emerged for more formalized structures in large business organizations. The earliest models emphasized efficiency of process through managerial control.

Described as "mechanistic," those systems were characterized by extensive rules and procedures, centralized authority, and an acute division of labor. They sought to create organizations that mimicked machines, and usually departmentalized workers by function, such as finance and production. Important theories during that era included German sociologist Max Weber's (1881-1961) ideal bureaucracy, which was based on absolute authority, logic, and order. During the 1920s and 1930s, new ideas about the structure and nature of organizations began to surface.

Inspired by the work of thinkers and behaviorists such as Harvard researcher Elton Mayo, who conducted the famed Hawthorne Experiments, theories about management structure began to incorporate a more humanistic view. Those theoretical organizational structures were classified as "organic," and recognized the importance of human behavior and cultural influences in organizations. While the mechanistic school of thought stressed efficiency and production through control, organic models emphasized flexibility and adaptability through employee empowerment.

From a structural standpoint, mechanistic organizations tended to be vertical or hierarchical with decisions flowing down through several channels.

Organic models, on the other hand, were comparatively Many proponents of organic organizational theory believed it was the solution to the drawbacks of mechanistic organizations. Indeed, mechanistic organizations often stifled human creativity and motivation and were generally insensitive to external influences, such as shifting markets or consumer needs.

In contrast, companies that used organic management structures tended to be more responsive and creative. However, many organizations that adopted the organic approach also discovered that, among other drawbacks, it sometimes lacked efficiency and personal accountability and failed to make the most productive use of some workers' expertise. As an alternative to basic organic structures, many companies during the mid-1900s embraced a model that minimized the faults and maximized the benefits of different organic management structures, as discussed below.

Possibly the first application of what would later be referred to as the "matrix" structure was employed in 1947 by General Chemicals in its engineering department. In the early 1960s a more formalized matrix method called "unit management" was implemented by a large number of U. S. hospitals. Not until 1965, however, was matrix management formally recognized. The first organization to design and implement a formal matrix structure was the National Aeronautics and Space Administration (NASA).

NASA developed a matrix management system for its space program because it needed to simultaneously emphasize several different functions and projects, none of which could be stressed at the expense of another. It found that traditional management structures were too bureaucratic, hierarchical, slow-moving, and inflexible. Likewise, basic organic structures were too departmentalized (i. e. myopic), thus failing to productively use the far-reaching expertise NASA had at its disposal.

NASA's matrix solution overcame those problems by synthesizing projects, such as designing a rocket booster, with organizational functions, such as

staffing and finance. Despite doubts about its effectiveness in many applications, matrix management gained broad acceptance in the corporate world during the 1970s, eventually achieving fad status. Its popularity continued during the 1980s as a result of economic changes in the United States, which included slowing domestic market growth and increasing foreign competition. Those changes forced many companies to seek the benefits offered by the matrix model.