

Restructuring Necessity

- The technology revolution (complexity and variety of products, new materials and processes, and the effects of massive research)
- Competition and the profit squeeze (saturated markets, inflation of wage and material costs, and production efficiency)
- The high cost of marketing
- The unpredictability of consumer demands (due to high income, wide range of choices available, and shifting tastes)

Traditional Weaknesses

- Management is satisfied with its technical skills, but projects are not meeting time, cost, and other project requirements.
- There is a high commitment to getting project work done, but great fluctuations in how well performance specifications are met
- Highly talented specialists involved in the project feel exploited and misused.



- Particular technical groups or individuals constantly blame each other for failure to meet specifications or delivery dates.
- Projects are on time and to specifications, but groups and individuals aren't satisfied with the achievement.



- To what extent does the task of organization call for close control if it is to be performed efficiently?
- What are the needs and attitudes of the people performing the tasks? What are the likely effects of control mechanisms on their motivation and performance?
- What are the natural social groupings with which people identify themselves? To what extent are satisfying social relationships important in relation to motivation and performance?

Questions (continued)

- * What aspect of the organization's activities needs to be closely integrated if the overall task is to be achieved?
- What organizational measures can be developed that will provide an appropriate measure of control and integration of work activities, while at the same time meeting the needs of people and providing adequate motivation?

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* What environmental changes are likely to affect the future trend of company operations? What organizational measures can be taken to insure that the enterprise responds to these effectively?

Classical Structure Advantages

- Easier budgeting and cost control are possible.
 Better technical control is possible.
- - Specialists can be grouped to share knowledge and responsibility.
 - Personnel can be used on many different
 - All projects will benefit from the most advanced technology (better utilization of scarce personnel).
- * It provides flexibility in the use of manpower.

Advantages (Continued)

- It provides a broad manpower base to work with.
- It provides continuity in the functional disciplines; policies, procedures, and lines of responsibility are easily defined and understandable.
- It readily admits mass production activities within established specifications.

Advantages (Continued)

- It provides good control over personnel, since each employee has one and only one person to report to.
- Communication channels are vertical and well established.
- Quick reaction capability exists, but may be dependent upon the priorities of the functional managers.

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Classical Structure Disadvantages

- No one individual is directly responsible for the total project (i.e., no formal authority; committee solutions).
- It does not provide the project-oriented emphasis necessary to accomplish the project tasks.
- Coordination becomes complex, and additional lead time is required for approval of decisions.

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Disadvantages (Continued)

- Decisions normally favor the strongest functional groups.
- * There is no customer focal point.
- * Response to customer needs is slow.
- There is difficulty in pinpointing responsibility; this is the result of little or no direct project reporting, very little project-oriented planning, and no project authority.

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- * Motivation and innovation are decreased.
- Ideas tend to be functionally oriented with little regard for ongoing projects.

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Functional Weaknesses

- Functional organizations tend to emphasize the separate functional elements at the expense of the whole organization.
- Under functional departmentation there is no group that effectively integrates the various functions of an organization and monitors them from the "big picture standpoint."
- Functional organizations do not tend to develop "general managers."

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Functional Weaknesses

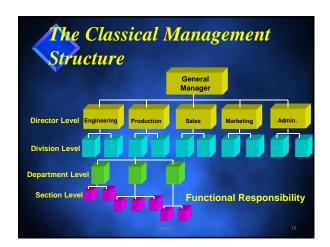
- Functional organizations emphasize functional relationships based on the vertical organizational hierarchy.
- Functional organizations tend to fragment other management processes.
- Functional organizations develop a strong resistance to change.

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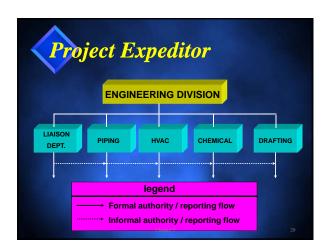


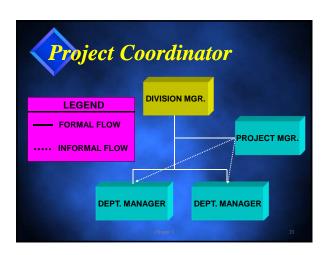
- Functional segregation through the formal organization process encourages conflict among the various functions.
- The emphasis on the various operation functions focuses attention on the internal aspects and relations of the company to the detriment of its external relations.
- Functional organizations tend to be closed systems.

Which Structure Is Best For Project Management?









Project Coordinator Weaknesses

- Upper-level management was not ready to cope with the problems arising from shared authority.
- Upper-level management was reluctant to relinquish any of its power and authority to project managers.
- Line-staff project managers who reported to a division head did not have any authority or control over those portions of a project in other divisions; that is, the project manager in the engineering division could not direct activities in the manufacturing division.

Pure Project Structure

General Manager

Project A
Manager

Project B
Manager

Project C
Manager

MFG. MFG. MFG. MFG.

Projectized Structure Advantages

- It provides complete line authority over the project (i.e., strong control through a single project authority).
- The project participants work directly for the project manager. Unprofitable product lines are easily identified and can be eliminated.
- * There are strong communications channels.
- Staffs can maintain expertise on a given project without sharing key personnel.
- Very rapid reaction time is provided.

Advantages (Continued)

- Personnel demonstrate loyalty to the project; better morale with product identification.
- A focal point develops for out-of-company customer relations.
- There is flexibility in determining time (schedule), cost, and performance trade-offs.
- Interface management becomes easier as unit size is decreased.
- Upper-level management maintains more free time for executive decision making.

Projectized Structure Disadvantages

- Cost of maintaining this form in a multiproduct company would be prohibitive due to duplication of effort, facilities, and personnel; inefficient usage.
- There exists a tendency to retain personnel on a project long after they are needed. Upper-level management must balance workloads as projects start up and are phased out.

Disadvantages (Continued)

- Technology suffers because, without strong functional groups, outlook of the future to improve company's capabilities for new programs would be hampered (i.e., no perpetuation of technology).
- Control of functional (i.e., organizational) specialists requires top-level coordination.
- There is a lack of opportunities for technical interchange between projects.
- There is a lack of career continuity and opportunities for project personnel.

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Matrix Development

- Participants must spend full time on the project; this ensures a degree of loyalty.
- Horizontal as well as vertical channels must exist for making commitments.
- There must be quick and effective methods for conflict resolution.
- There must be good communication channels and free access between managers.

Matrix Development

- All managers must have input into the planning process.
- Both horizontally and vertically oriented managers must be willing to negotiate for resources.
- The horizontal line must be permitted to operate as a separate entity except for administrative purposes.

The Matrix Management Structure

General Manager

Engineering Operations Finance Others

Project Mgr.

Y

Project Mgr.

Y

Project Mgr.

Y

Project Mgr.

Z

Barrier

Project Mgr.

Barrier

Barrier

Project Mgr.

Barrier

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Matrix Structure Advantages

- The project manager maintains maximum project control (through the line managers) over all resources, including cost and personnel.
- Policies and procedures can be set up independently for each project, provided that they do not contradict company policies and procedures.

Matrix Structure Advantages (Continued)

- The project manager has the authority to commit company resources, provided that scheduling does not cause conflicts with other projects.
- Rapid responses are possible to change, conflict resolution, and project needs.
- The functional organization exists primarily as support for the project.

Matrix Structure Advantages (Continued)

- Each person has a "home" after project completion. People are susceptible to motivation and end-item identification.
 Each person can be shown a career path.
- Because key people can be shared, the program cost is minimized. People can work on a variety of problems: that is, better people control is possible.

Matrix Structure Advantages (Continued)

- A strong technical base can be developed, and much more time can be devoted to complex problem-solving.
 Knowledge is available for all projects on an equal basis.
- Conflicts are minimal, and those requiring hierarchical referral are more easily resolved
- There is a better balance between time, cost and performance.

Matrix Structure Advantages (Continued)

- Rapid development of specialists and generalists occurs.
- * Authority and responsibility are shared.
- * Stress is distributed among the team (and the functional managers).

Matrix Structure Disadvantages

- * Multidimensional information flow.
- Multidimensional work flow.
- Dual reporting.
- * Continuously changing priorities.
- Management goals different from project goals
- Potential for continuous conflict and conflict resolution.
- * Difficulty in monitoring and control.

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Matrix Structure Disadvantages (Continued)

- Company-wide, the organizational structure is not cost-effective because more people than necessary are required, especially administrative.
- Each project organization operates independently. Care must be taken that duplication of efforts does not occur.
- More effort and time are needed initially to define policies and procedures, compared to the traditional organizational form.

Matrix Structure Disadvantages (Continued)

- Functional managers may be biased according to their own set of priorities.
- The balance of power between the project and functional organizations must be watched
- The balance of time, cost and performance must be monitored.
- Although rapid response time is possible for individual problem resolution, the reaction time can become guite slow.

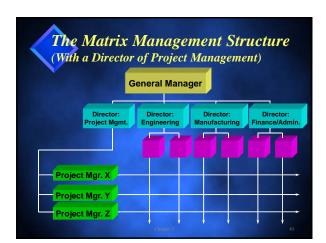
Matrix Structure Disadvantages (Continued)

- Employees and managers are more susceptible to role ambiguity than in the traditional organizational form.
- Conflicts and their resolution may be a continuous process (possibly requiring support of an organizational specialist).
- People do not feel they have any control over their own destiny when continuously reporting to multiple managers.

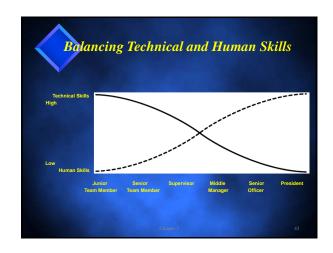
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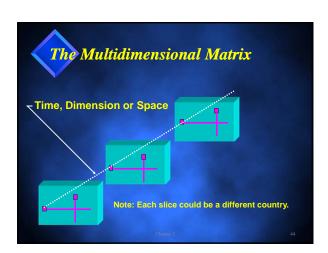
Matrix Structure Disadvantages (Continued)

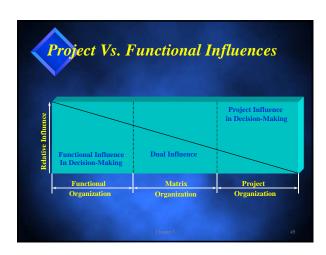
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When a matrix appears to be out of control executives tend to revert back to classical management. This results in: Reduced authority for the project manager. All project decision-making performed at executive levels. Increase in executive meddling in projects. Creation of endless job description manuals. This can often be prevented by asking for authority / responsibility clarification and using a responsibility assignment matrix (RAM).







Factors For Selecting An Organizational Form * Project size

- Project length
- ♦ Project management experience
- Philosophy and visibility of executives
- Project location
- Available resources
- Unique aspects of the project

