



MATRIX

The Matrix – An Overview

Contextualising how the Matrix works, its impact at Leidos, what purpose it serves to provide management with the ability to create a supportive environment and finally how it fosters staff growth in their personal career pathways and the development of their opportunities.

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Executive summary

The primary purpose of a Matrix is to maximise resources, expertise, and efficiency while adapting to the complexities of modern business challenges. Unlike traditional hierarchical structures, a Matrix fosters a flexible and dynamic environment where employees can work across different functions and projects simultaneously. This environment can only be achieved if support is provided by all the organisations within Leidos and reciprocally the Matrix acknowledges the impacts and changes to staff. It is essential that in order for the Matrix to be successful the appropriate time is provided for staff to understand their role and allow them to apply their learned experience to balance and manage their workloads.

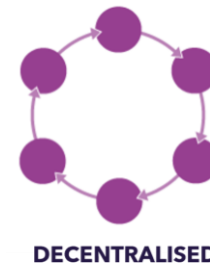
Introduction

To provide some context for how organisations can be structured, the first level is the decision making authority and this can be broadly categorised as centralised or decentralised.



Centralised organisation

An organisational structure is either centralised or decentralised. Traditionally, organisations have been structured with centralised leadership and a defined chain of command. The military is an organisation famous for its highly centralised structure, with a long and specific hierarchy of superiors and subordinates. In a centralised organisational system, there are very clear responsibilities for each role, with subordinate roles defaulting to the guidance of their superiors.



Decentralised organisation

Is an organisational structure in which top-level management has shifted some of the authority, roles and decision-making responsibilities to low-level managers. With such a structure, managers can make decisions that affect their departments without consulting top-level managers, as long as they align with the organisation's interests. Individual employees or teams even make some decisions. For instance, a seller can decide to give you a free shipment of items purchased without being questioned by top-level managers.

From this point we can look at the various types of organisational structures. Whilst there are many that exist with various adaptations, they all resolve down to three commonly used structures.

The next level defines the various types of organisations which can have quite a few names and variations, but for the purposes of this white paper shall be categorised into three arrangements flat, functional and matrix.

Flat structure

Flat, also known as a horizontal structure, is relatively newer, and is used among many startups. As the name alludes, it flattens the hierarchy and chain of command and gives its employees a lot of autonomy. Companies that use this type of structure have a high speed of implementation.



Functional structure

This breaks up a company based on the specialisation of its workforce. Most small-to-medium-sized businesses implement a functional structure. Dividing the firm into departments consisting of marketing, sales, and operations is the act of using a bureaucratic organisational structure.

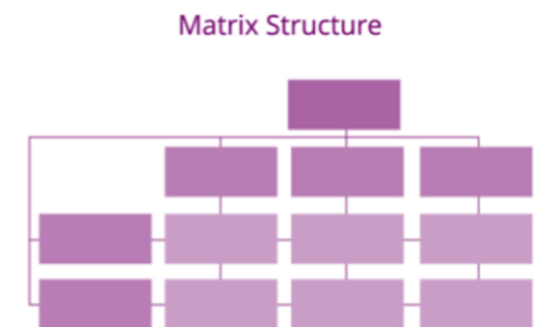


Matrix structure

Matrix organisations have two or more management reporting structures. While this may seem confusing at first, team members typically have a primary manager for their department.

Reporting to a department manager functions similarly to a traditional work structure. For example, team members working in IT report to the IT department head. The IT department head reports to the vice president of their division. Eventually, all reporting relationships lead to the CEO.

The difference in a matrix structure is that team members also report to project managers. Projects often require work from members of various departments like IT, marketing, and finance, which is why having a separate manager for individual projects makes sense.



Why choose a Matrix structured organisation?

A company may decide to utilise a matrix structure to engage resources and employees across multiple locations, lines of business or even organisations. It allows a company to maximise the skills, strengths and experience of their most valuable asset, their people. This organisational structure is also used to spread out skills and abilities among multiple departments or divisions when needed. This may be in response to possible fluctuations in work demands resulting from a new project starting or tapering off to close. Other reasons may be:

- Improve communication across the business.
- Allow staff to apply their skills in different roles.
- Help share best practice and ideas across teams and the wider business.
- Increase efficiencies due to sharing resources across departments.

Types of Matrix management

The three main types of Matrix management are 'Weak', 'Balanced' and 'Strong'. The following paragraphs outline their descriptions. It is important to understand that whilst these three are provided they are neither definitive nor fixed, and there is a lot of variation that can be applied when applying a management type. The key though for staff is not to create a confusing environment where different projects/programs/organisations employ different types, but to decide on one approach and consistently apply that to the business.

Weak Matrix management

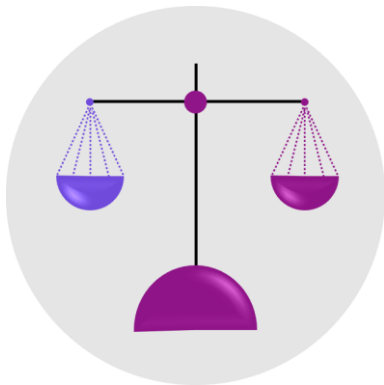


In a weak matrix, the project manager has the least amount of decision-making power compared to the other matrix management types. When the project manager has limited authority over the project, the matrix becomes weak because the project budget and timeline is in the hands of the capability head.

A weak matrix structure is most similar to a traditional hierarchical structured workplace. A capability manager is the dominant decision-maker and oversees all aspects of a project. The project manager is in a position of authority but ultimately reports to the capability manager.

As an employee in this structure, you work under both the capability and project manager's guidance and direction. However, your main direction comes from your capability manager.

Balanced Matrix management



In a balanced matrix, the capability head and the project manager have equal authority and team members report to both of them. This keeps communication open between everyone in leadership roles and allows the project to move forward smoothly.

A balanced matrix structure gives more authority to the project manager than within a weak matrix structure. Both the capability and project managers hold authority.

As an employee in this structure, you work under the guidance and direction of both managers. Your capability manager is your primary contact, but you still report to the project manager.

Strong Matrix management



In a strong matrix, the project manager has most of the decision-making power over the project, while the department head has more limited authority. This creates a strong organisational structure because the project manager has full ownership over the project. The department head can oversee the project but doesn't make key decisions.

A strong matrix structure gives the project manager equal or greater authority than a capability manager. The project manager has primary control over resources and the distribution of tasks.

As an employee in this structure, your primary direction and guidance come from the project manager, with secondary direction coming from the capability manager.

The Matrix organisation in industry

General

A Matrix organisation is defined as one in which there is dual or multiple managerial accountability and responsibility. However, the term Matrix means quite different things to different people and in different industries. In a Matrix there are usually two chains of command, one along functional lines (capability lead) and the other along project, product, or client lines (project manager). Other chains of command such as geographic location are also possible.

The Matrix organisational form may vary from one in which the project manager holds a 'Strong' managerial position to one in which he plays only a coordinating role, 'Weak'. To illustrate the organisational principles, a Matrix will be considered first in which there is a 'Balanced' power between the project manager and the capability lead. It must be recognised that such a balanced situation, considered by some authorities to be ideal, probably seldom occurs in practice due to the competing nature of project requirements vs staff availability.

The intention of a Matrix

In a balanced Matrix organisation, refer Figure 1, various people in the organisation have two managers. This represents an abandonment of the age-old management concept, "Thou shalt have but one boss above thee." Solid- and dotted-line relationships have various interpretations depending upon local management custom. However, solid lines normally connect managers with their direct subordinates, the man above being the boss. Dotted lines are usually used to indicate staff relationships or reporting relationships of lesser importance. The project manager in the Matrix organisation is not a staff man nor does he normally have less authority than the capability lead reporting on the same level. Neither can the relationships shown be simply described by such terms as "he reports to the capability manager only for technical direction," or "he reports to the project office for budgetary and schedule control."

Such descriptions are inadequate to describe how the Matrix organisation really works because in reality, not just on paper, the project personnel do have two managers.

Implicit in the definition of the Matrix organisation is the recognition that the project is temporary whereas the functional departments are more permanent. Although all organisations are temporary in that they are constantly changing, the Matrix is designed to be temporary and a particular organisational structure lasts only for the finite life of the project.

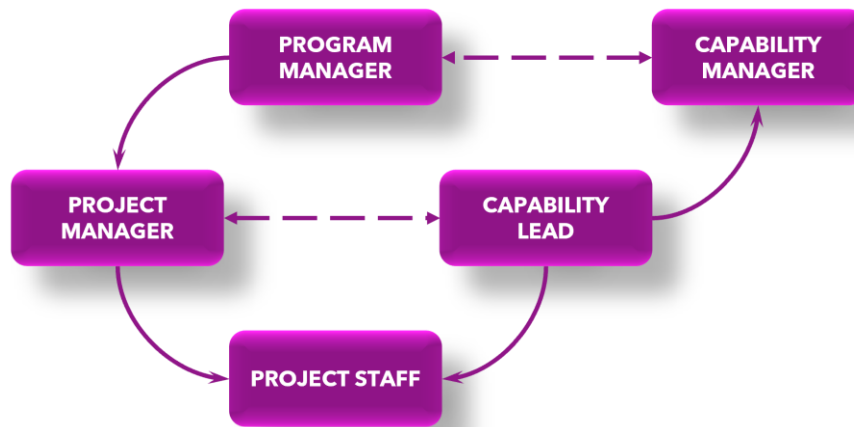


Figure 1. Simple management structure with Matrix organisation

Growth of the Matrix

As problems and projects have become more complex, the inadequacy of the hierarchical organisational structure became apparent. At the same time, the necessity for designing the organisation around the task to be performed was realised. Fortunately, varied but more complex organisational alternatives have become available. The present management philosophy is that there is no “one best way” for all projects to organise. Rather there are many alternatives from which to select a specific project. Among these alternatives are various forms of the Matrix.

A formalised Matrix organisational configuration was first developed and documented in the United States aerospace industry where it evolved during the growth of the large, complex projects of the 1950s and 1960s. If a project was very large, it usually became a pure project organisation in which all of the functions and resources necessary to accomplish the objectives of the project were put in a single hierarchical organisation. This alternative worked very well if the project or program was very large, if the government customer was similarly organised, and if the customer not only insisted on such an organisation but was willing to pay for its added expense.

However, the aerospace industry found that it had many more projects which were not particularly large, but were exceedingly complex, and therefore not conveniently handled within a single discipline. Today, it is rare to find a real-world problem that is unidisciplinary. In addition, top management still felt a strong need to have a single source of information and a single point of responsibility for each project or program. Some form of project management was obviously needed, and not being willing to bear the expense of making each project a little empire of its own, the Matrix was a natural evolution in management thinking.

The term “Matrix” began to be applied to organisations at this time, and as indicated by Davis and Lawrence, “It probably seemed like a fitting term for mathematically trained engineers in that industry to apply to the gridlike structure that was evolving ...”.

Why the Matrix?

The Matrix developed as a natural evolution of organisational structures in answer to a very definite real-world need. The need was for an organisational form capable of managing the recent very large and very complex programs, projects, and problems, and for managing limited resources. The conventional hierarchical management organisation could not cope with the added complexity and the enormous amount of information that had to be processed, and conventional management theory was of little help in solving these new and unique problems.

Most management theorists predicted that the lack of any clear-cut single line of responsibility and authority would result in managerial ineptitude. There is no evidence to indicate that multiple authority and role conflict, lead to ineffectiveness.

The primary reason for adopting the Matrix in a large organisation can be pinpointed in the fact that functions and skills are fragmented throughout the organisational structure. Individual functional departments have great difficulty in solving very large problems because of a failure to view the total system and a tendency to sub-optimize or solve the problem within their particular discipline. According to an old aerospace cliché, “An engineer attacks every problem as if it had an engineering solution.” How few of today’s big civil and social problems have purely technical solutions?

Since it was found to be impractical to fragment the problem and have the various functional organisations work only on their portion of the problem, “microcompanies” were formed. This represented the development of the pure project organisation. It was very rapidly realised that this alternative was not only very unwieldy but had many disadvantages with respect to efficient functional operations. The Matrix was the next logical development.

The Matrix organisation

It has been recognised that the Matrix organisational structure has applications far beyond that of project (program or product) management. However, in this discussion the Matrix will only be considered from the viewpoint of its most highly developed application – that of project management.

The term “Matrix project organisation” refers to a multidisciplinary team whose members are drawn from various line or functional units of the hierarchical organisation. The organisation so developed is temporary in nature since it is built around the project or specific task to be done rather than on organisational functions. The Matrix is thus built up as a team of personnel drawn from both the project and the functional or disciplinary organisations. In other words a project organisation is superimposed on the conventional functional hierarchical organisation.

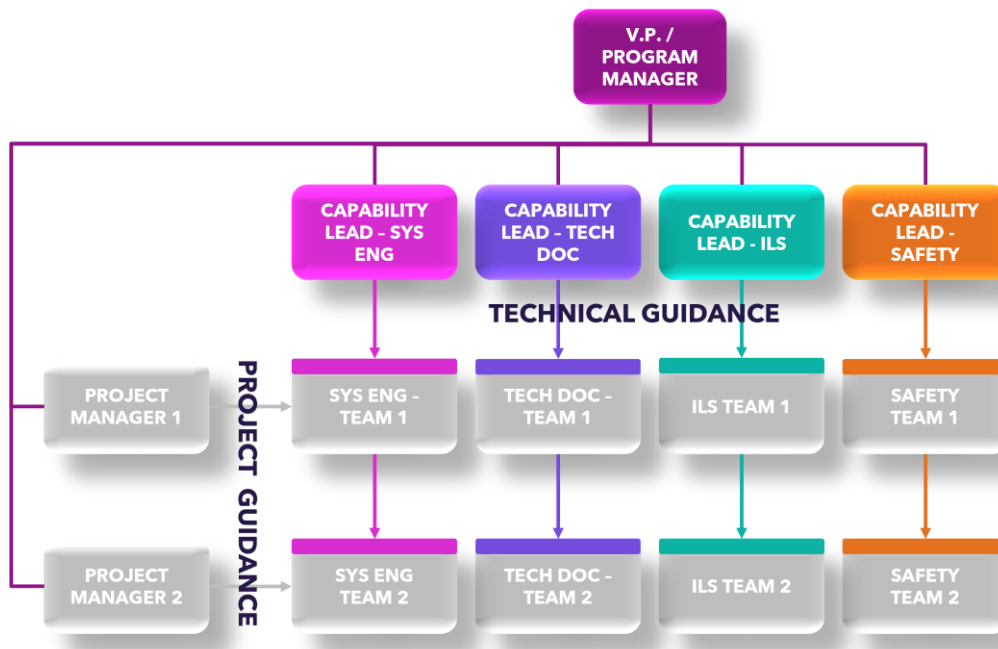


Figure 2. General Matrix organisational structure

The Matrix in its simplest form is shown diagrammatically in Figure 2, indicating how the Matrix received its name.

The Matrix shown in Figure 1 represents a general organisational structure. Other examples with a more specific structure, engineering and IT, are shown in Figure 3 and Figure 4 respectively.

The Matrix is thus a multi-dimensional structure that tries to maximise the strengths and minimize the weaknesses of both the project and the capability structures.

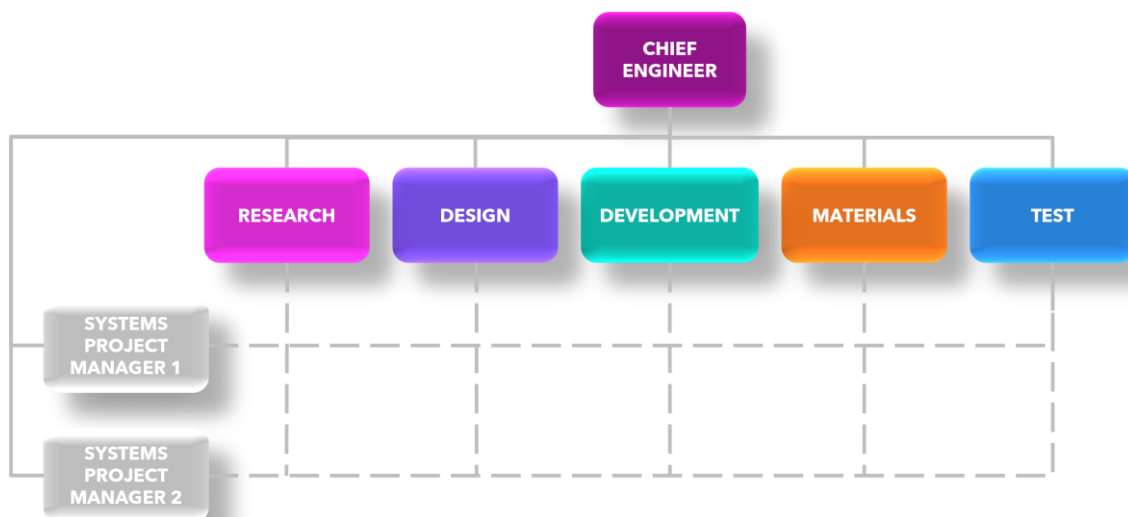


Figure 3. Engineering Matrix management structure

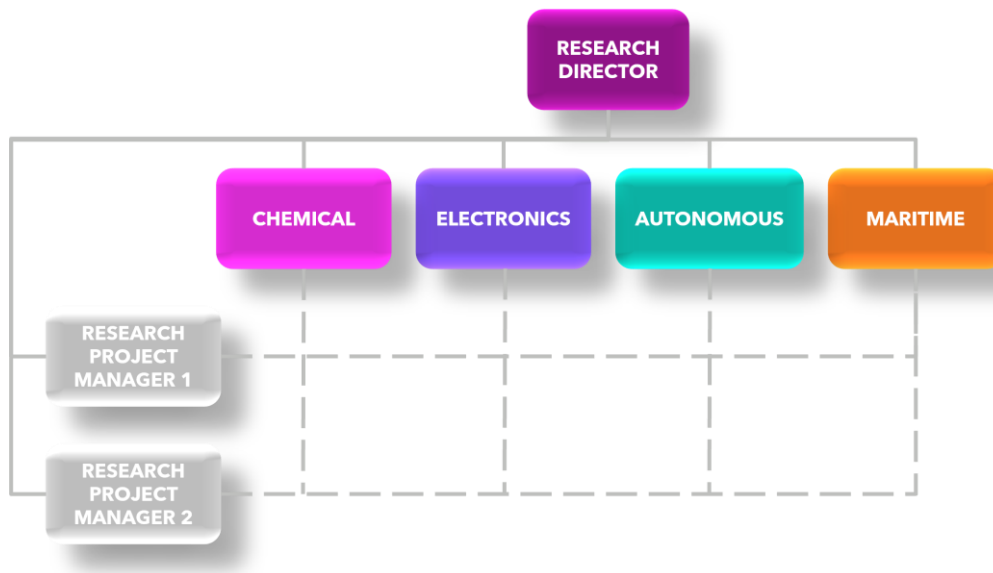


Figure 4. Research Matrix management structure

Does the Matrix work?

No specific organisational form can be guaranteed to work at all times, or to improve productive output. However, it can be said that some organisational forms have a better chance of working than others, particularly if they are designed to meet the needs of project work. As previously indicated, the Matrix meets a number of well-defined needs. The principal need is for an organisational structure that can handle the great complexity of a multidisciplinary effort.

If the multidisciplinary need is really there, and if project management is necessary, then the Matrix is a viable organisational solution. However, the Matrix is a complex organisational form and will not automatically work. The number of things that can go wrong is endless, but the most usual reason for failure of the Matrix results from either foot-dragging or downright sabotage on the part of either capability or project management and even by lower level supervision. As indicated in the previous discussion of project management, it is necessary to assure that the Matrix will work by thoroughly detailing the concept to top management and to all involved capability management. If everyone involved in the Matrix is “a believer,” and every effort is expended to make it work, the Matrix will work and will result in outstanding project accomplishment. As indicated previously, if only takes one uncooperative manager dragging his or her feet to make the whole project fail. However, active, enthusiastic, and focussed support by top management will counteract even the most recalcitrant manager.

Advantages of the Matrix

The Matrix organisation has many advantages which far outweigh its principal disadvantage of complexity. Among the more universally accepted advantages of the Matrix which go beyond the advantages of project management in general are the following:

- **Project objectives clear** – Project objectives will not only be highly visible through the project office but will also be balanced with the objectives of the capability organisation.

- **Project integration** – There is a clear and workable mechanism for achieving project integration of subsystems and work packages across functional departmental lines. Coordination across functional lines can easily be achieved.
- **Efficient use of resources** – The maximum efficient utilisation can be made of scarce company resources. It is the most efficient use of manpower since personnel can be used only part-time if desired and can be shared between projects. It is the most efficient use of facilities, machinery, equipment, and other resources since these resources can be shared between or among projects. Allocation of scarce resources can be negotiated between project and capability management, or corporate priorities may be established. The Matrix is therefore less expensive than an equivalent pure project organisation.
- **Information flow** – Information dissemination should be very effective since there is provision for both horizontal and vertical flow. Horizontal flow provides for project systems information to flow from functional unit to functional unit. Vertical flow provides for detailed disciplinary information to flow from project to project, and to various levels of management. Information of use to other projects is not locked up within a single project.
- **Retention of disciplinary teams** – Teams of capability experts and specialists are kept together even though projects come and go. Therefore technology and know-how is not lost when a project is completed. Specialists like to work with other specialists in the same discipline, and they will be better able to continually exchange ideas and information. As a result, when teams of capability specialists work together, a synergistic effect occurs, resulting in increased innovation and productive output, even though individually they may be working on different projects.
- **High morale** – Morale problems occur less frequently since the worker in the Matrix responds first to the morale-building experience of working on a successful project resulting in visible achievements. This will be true whether the achievement is a ballistic missile, an aircraft, a power plant, or the introduction of a new soap into the marketplace. Secondly, worker morale is normally higher when they can work with their fellow specialists. Thirdly, by retaining his capability “home,” the specialist may have a clearer career progression up the capability ladder. On the other hand, if he finds that his talents and interests are multidisciplinary, he can set his career objectives toward the project office.
- **Development of project managers** – The Matrix is an excellent training ground for prospective project managers since promising candidates can easily be spotted in the multidisciplinary project environment. A common occurrence would be the transfer of a person who had demonstrated the ability to work across functional departmental lines to the project office as an assistant project manager. His career progression would then be to project manager, which is an excellent path leading to top management.
- **Project shutdown** – In a Matrix organisation project termination is not the traumatic and painful event that it can be in a pure project organisation. It is not uncommon for a large aerospace or construction project to have several thousand people working in a pure project organisation. What do you do with several thousand people when the project is completed? Large layoffs are almost unavoidable since only a relatively few people can be relocated unless major buildups in another project are occurring. Matrix projects are normally smaller with fewer people overall involved. In addition, the people are spread across a whole functional organisation and each department has only a few people to relocate.

Problems with the Matrix

The Matrix organisation does have some disadvantages and problems, but they need not be considered insurmountable. Knowing what problems may occur is "half the battle" in overcoming them. The following disadvantages are inherent in the Matrix organisation:

- **Two bosses** – The major disadvantage is that the personnel on the project are working for two bosses. In any type of conflict situation a person could easily become "the man in the middle." Further problems of conflict can be caused by project personnel playing one boss against the other.
- **Complexity** – The Matrix organisation is inherently more complex than either a functional or a pure project organisation since it is the superimposition of one on the other. This complexity shows itself in the following problems:
 - **Difficulties in monitoring and controlling** – Complexity results from the number of managers and personnel involved and from the number of people that must be kept informed. Fortunately, modern computer techniques have helped to keep this problem under control, but basically, it's still a "people" problem.
 - **Complex Information flow** – This is a problem only because there are so many people and organisational units involved. Both the project and capability managers must be certain that they have touched bases with each other for any major decisions in their areas of responsibility.
 - **Fast reaction difficult** – The project manager is sometimes faced with a problem of achieving fast reaction times, primarily since there are so many people to be consulted. The project manager in the Matrix usually does not have strong vested authority, therefore considerable negotiation is necessary. Project management was primarily conceived to prevent this problem, but it can be a problem if the management system keeps the project manager from making any decisions without consultation with capability and top management. If the Matrix is working, the problem won't occur.
 - **Conflicting guidance** – The more complex organisation with two lines of authority always increases the possibility of conflicting instructions and guidance.
 - **Priorities** – A Matrix organisation with a number of projects faces real problems with project priorities and resource allocation. Each project manager will obviously consider his project to have the highest priority. Similarly, each capability manager will consider that the allocation of resources and priorities within his department is his own business. As a result, the decisions involving project priorities and often the allocation of resources must be made at a high level. This often puts an undue and unwelcome load on the top executive officer in the Matrix. This problem has led to the use of a manager of projects, or a super project manager in some organisations. His principal functions would be to consult with higher levels of management to assure equitable allocation of resources and to periodically reassess project priorities. This effort can be extremely valuable in reducing conflict and anxiety within the Matrix.
 - **Management goals** – There is a constant, although often unperceived, struggle in balancing the goals and objectives of project and capability management. A strong project manager may place undue emphasis on time and cost constraints, while a capability manager may concentrate on technical excellence at the expense of schedules. Top management must assure that a careful balance of the goals of both project and capability management is maintained.

- **Potential for conflict** – As discussed in a later section of this chapter, whenever there are two project managers competing for resources, there is potential for conflict. This conflict may evidence itself primarily as a struggle for power. However, it also may evidence itself by backbiting, foot-dragging and project sabotage. Conflict and competition may also be constructive as an aid to achieving high performance; however, it cannot be allowed to degenerate to personal antagonism and discord. In project work conflict is inevitable; keeping it constructive is the problem in Matrix management.
- **Effects of conflict on management** – Since conflict and stress are inherent in the Matrix organisation, considerable attention must be given to the individuals who will function as both project and capability managers. Individuals vary greatly in their ability to function effectively under stress. Conflict, particularly the role conflict typical of the two-boss situation, can produce stress, anxiety, and reduced job satisfaction. Considerable attention must be directed toward assuring that prospective managers have a high tolerance for conflict situations.

Making the Matrix work

After examining the disadvantages and problems of working in a Matrix organisation, one may view the problems as insurmountable. How then does a company get this complex organisational form to function? Its successful operation, like that of any management organisation, depends almost entirely on actions and activities of the various people involved. First, senior management must give real and immediate support to the Matrix, including a clear charter. This charter should state the purpose of the Matrix and spell out the responsibilities and authority of the project manager and capability manager. In addition it should indicate to the fullest extent possible their relationship with the capability leads involved in the project.

Capability leads must modify much of their managerial thinking and their usual operational procedures and activities in order to make the Matrix work. This may mean a considerable change in the way they determine their priorities. It may be a considerable shock to a capability lead to find that their priorities must change, and that the project comes first. Project management must realise that they get their job accomplished primarily through the process of negotiation, and that they should become negotiation experts. If all major decisions are made with the concurrence of the involved capability leads, the project manager finds himself in a very strong position in insisting that the decision be carried out and that the desired goals be accomplished. In addition, the project staff must be able to adapt to the two-boss situation which can be a traumatic experience when first encountered.

Matrix facilitator responsibilities

At the heart of the operation of the Matrix is the balance of power. Theoretically, it should be possible to divide the authority and responsibility more or less equally between the project and capability leads, however, to do so is difficult and seldom occurs. It has been attempted to clearly delineate the authority and responsibilities of both project manager and capability lead so as to assure a balance of power.

Table 1 provides Leidos' current delineation of responsibilities between the project manager and capability lead.

Project Manager's Responsibilities
What is to be done?
When will the task be done?
Why will the task be done?
Cost code provision
How well has the total project been done?
Capability Lead's Responsibilities
How will the task be done?
Where will the task be done?
Who will do the task?
How well has the functional input been integrated into the project?
Timesheet management
Career development

Table 1. Facilitator Responsibilities

Another way of stating the roles is: the project manager is responsible for the overall integration of the total project system and the capability lead is responsible for technical direction in his discipline.

The so-called Responsible, Accountable, Consulted and Informed (RACI) chart has been proposed as a useful tool in defining jurisdictional areas of management. A simplified example of a responsibility chart is show in Figure 5. Such a chart is probably more meaningful than organisation charts or job descriptions, particularly as it is filled in during a meeting of all concerned managers resulting in agreement on the job responsibilities. This process results in potential conflicts being confronted early before specific problems arise.

	PROGRAM MANAGER	PROJECT MANAGER	CAPABILITY MANAGER	TECH DOC CAPABILITY LEAD
CHANGE IN BUDGET	A	R	C	I
ALLOCATE MANPOWER	A	C	R	I
COST CODE PROVISION	A	R	C	I
TASK PRIORITY PLANNING	I	C	A	R
TIMESHEET MANAGEMENT	I	C	A	R
STAFF DEVELOPMENT	A	I	C	R

Figure 5. Matrix Roles RACI Table

Certainly such a delineation indicates where the major responsibilities lie, but it cannot guarantee a balance of power. In fact, there are many reasons why it is almost impossible to have a truly “equal” balance of power between capability and project management. Not the least of these reasons is the fact that we are dealing with people, and all people, including managers, are different. Managers have differing personalities and differing management styles. Some management styles depend on the persuasive abilities of the manager while others depend on or tend to fall back on strong support from top management. In addition, power is a fluctuating and constantly changing condition that cannot be static even if one so desired.

The breakdown of responsibilities shown in Table 1 and Figure 5, although useful in planning and decision making, is highly simplistic. What conscientious, knowledgeable project manager would not get personally involved in a more hands on approach. The project does not allow him the luxury of sitting back and waiting for the capability management to make every technical decision. He must ensure that technical decisions are made on schedule. He then must review the key technical decisions and challenge them if necessary. As project integrator, he has the overriding responsibility for evaluating every key project decision to determine how it interfaces with the other project tasks, and with his schedule and budget. The project manager therefore must get involved and influence every project action and as a last resort he always has appeal rights or veto power – for the good of the project. After all, the highest achievers and most innovative personnel in the Matrix organisations will be highly sought after, and the project managers will seek to obtain only the very best people for their projects.

The capability manager has a strong personal interest in all the details identified, since his organisation has to perform the tasks spelled out in the project schedules and budgets. He must assure that the task is realistically priced and technically feasible. The responsibilities listed in Figure 5 can therefore only be used as indicators as to where the major responsibilities lie.

The project/capability interface

The secret of the successfully functioning Matrix can thus be seen to be not just a pure balance of power, but more a function of the type of interface relationships between the project and individual capability managers. Every project decision and action must be negotiated across this interface. This interface is a natural conflict situation since many of the goals and objectives of project and capability management are different. Depending on the personality and dedication of the respective managers, this interface relationship can be one of smooth-working cooperation or bitter conflict. A domineering personality or power play is not the answer. The overpowering manager may win the local skirmish, but usually manages sooner or later to alienate everyone working on the project. Cooperation and negotiation are the keys to successful decision making across the project/capability interface. Arbitrary and one-sided decisions by either the project or capability manager can only lead to or intensify the potential for conflict. Unfortunately for the project manager, he can accomplish little by himself, and must depend on the cooperation and support of the capability managers. A definition of successful management – “one who gets things done by collaborating with others” – is essential for successful project management in the Matrix organisation.

The project manager in a Matrix organisation has two very important interfaces – with top management and with capability management. A good working relationship with and ready access to top management is essential for resolving big problems and removing obstacles. A good working relationship with capability management will ensure that most problems are resolved at their level and will not have to go to top management.

A balanced Matrix

Achieving a balance of power between project and capability management may in many cases be a desirable goal. Certainly it should be a way of minimising potential power struggles and unnecessary conflicts. There is no certain way to assure that there is a balance of power, and it is probably seldom really achieved. However, it can be approached by assuming that the project manager has the full support of top management and that he reports at a high enough level in the management hierarchy.

Strong versus weak Matrix

In many situations it may not be desirable to have a balance of power. For instance, a project may be so important to the company, or the budget and schedule so tight that top management feels that the project manager must be in a very strong position. Or perhaps the project manager feels that he must tilt the organisational balance of power in his favor to obtain better project performance. For instance, construction management has found from experience that a strong project office is often necessary to achieve good project performance (3). On the other hand, top management may feel that capability management needs more backing. In either case, the balance of power can be tilted in either direction by changing any one or any combination of the following three factors:

- The administrative relationship. – The levels at which the project and involved capability managers report, and the backing which they receive from top management.
- The physical relationship. – The physical distances between the various people involved in the project
- The time spent on the project. – The amount of time spent on the project by the respective managers

It is easy to see how the administrative relationships can be used to create a strong Matrix. The higher the project manager reports in the hierarchical organisation, and the more visible support he gets from top management, the more likely it is that the Matrix will be strong. The physical relationship would involve actually splitting the project personnel away from their physical reporting relationship with their capability managers. One approach would be to put the entire project team together in the same room, away from their capability bosses. This would seem to be very desirable on the part of most project managers but would have some disadvantages in regard to utilisation of functional facilities and interaction with other functional personnel. The approach of putting all the project personnel together has been described as a tight Matrix, whereas the situation of widely-separated project personnel has been described as a loose Matrix.

The organisational alternatives have also been described in terms of the percentage of the organisational personnel who are full-time members of the project team. In this manner, the various organisational structures can be described as a continuum where the three organisational forms (capability, project, and Matrix) are a continuum ranging from functional on one end and pure project on the other. In a functional organisation, there is no one on the project team, and in a pure project organisation, essentially everybody is on the project team.

The Matrix falls in between and includes a variety of organisational alternatives ranging from a weak to a strong Matrix. A weak Matrix is described as having only a part-time coordinator whereas a strong Matrix has a project office containing such project functions as systems engineering, cost analysis, scheduling, and planning.

The personnel journey

How to navigate and flourish in a Matrix environment

As the modern work landscape continues to evolve, Matrix organisational structures have become increasingly popular. In a Matrix work environment, employees report to multiple managers and work across capability teams, promoting collaboration and flexibility. However, adapting to this complex structure can be challenging for those accustomed to traditional hierarchies. The following four key strategies can be discussed, studied and practically applied to help you thrive in a Matrix work environment.

At the bottom of each strategy is a short list of potential courses that may help with your personal development. The courses are found in [Percipio](#) and are located on Prism AU. On the Percipio site is also books and other reference materials on the topics in question.

Develop strong communication skills

Effective communication is crucial in a Matrix organisation, as it enables collaboration, fosters trust, and prevents misunderstandings. To excel in this environment focus on the following areas:

- Be clear and concise in your communication.
- Utilise different channels (email, instant messaging, video calls, etc.) to reach out to team members and managers.
- Encourage open dialogue by asking for feedback, opinions, and ideas.
- Listen actively, humble and empathetically to others' perspectives.

The following is a list of Percipio courses:

- a. [Enhancing Communication through Listening](#)
- b. [Expanding Your Communication Skill Set](#)

Cultivate a collaborative mindset:

Collaboration is the backbone of a Matrix work environment. To foster a collaborative mindset focus on the following areas:

- Embrace teamwork and the sharing of ideas and resources.
- Be open to learning from others and recognise the value of diverse perspectives.
- Develop strong interpersonal skills, such as active listening and empathy, to build rapport with colleagues.
- Foster a positive attitude and demonstrate a willingness to support others in achieving shared goals.

The following is a list of Percipio courses:

- a. [Developing and Supporting an Agile Mindset](#)
- b. [Developing a Mindset of Growth and Learning](#)

Prioritise time management and organisation:

Matrix organisations require employees to manage multiple projects and tasks simultaneously. To excel in this environment focus on the following areas:

- Establish clear priorities and goals for your work.
- Utilise project management tools and techniques to stay organised and track progress.
- Break tasks into smaller, manageable steps and set deadlines to stay focused.
- Be proactive in managing your workload and seeking assistance or resources when needed.

The following is a list of Percipio courses:

- a. [Managing Your Time So It Doesn't Manage You](#)
- b. [Aligning Goals and Priorities To Manage Time](#)

Adapt and embrace change:

Matrix environments are characterised by constant change and evolution. To thrive, it is essential to focus on the following areas:

- Be flexible and adaptable to shifting priorities and tasks.
- Continuously develop new skills and knowledge proactively and stay up to speed with relevant technology.
- Embrace a growth mindset, viewing challenges as opportunities for learning and growth.
- Stay open to feedback and constructive criticism to help identify areas for improvement.

The following is a list of Percipio courses:

- a. [Embracing Change at Work](#)
- b. [Making the Most of an Organisational Change](#)
- c. Mindset - Changing the way you think to fulfil your potential by Carol S Dweck - good read

Career skills in a Matrix environment

In a Matrix environment, where employees report to multiple managers or work on multiple teams simultaneously, there are several career skills that can emerge. Here are some examples:

- **Project Management:** With projects often being the focal point of a Matrix environment, there's a need for skilled project managers who can navigate complex organisational structures, manage cross-capability teams, and coordinate resources effectively.

- **Cross-Functional Collaboration Roles:** Roles that involve working closely with various departments or teams to ensure alignment, communication, and collaboration can thrive in a Matrix environment. These roles might include business analysts, product managers, or process improvement specialists.
- **Matrix Leadership Positions:** Leadership roles that involve overseeing teams across different functions or business units are essential in a Matrix environment. Leaders in these positions need strong communication, negotiation, and conflict resolution skills to manage competing priorities and interests.
- **Specialised Expertise:** Individuals with specialised expertise in a particular area can play a valuable role in a Matrix environment. Whether it's technical expertise, subject matter knowledge, or industry-specific skills, these individuals can act as valuable resources that are shared across different projects or teams.
- **Change Management and Organisational Development:** With the dynamic nature of Matrix environments, there's often a need for professionals who specialise in change management, organisational development, and culture transformation. These individuals help facilitate smooth transitions, build cohesive teams, and foster a collaborative working environment.
- **Internal Consulting:** In a Matrix environment, internal consulting roles can emerge to help departments or teams address specific challenges, optimise processes, and improve performance. Consultants in these roles need strong analytical skills, problem-solving abilities, and the ability to influence stakeholders across the organisation.
- **Training and Development:** As employees navigate the complexities of a Matrix environment, there's a need for training and development programs to enhance skills such as communication, teamwork, and adaptability. Roles focused on designing, implementing, and delivering training initiatives can be highly valuable in this context.
- **Relationship Management:** Building and maintaining strong relationships across different teams, departments, and stakeholders is crucial in a Matrix environment. Roles that focus on relationship management, stakeholder engagement, and fostering a collaborative culture can thrive in this setting.

Overall, career opportunities in a Matrix environment are diverse and multifaceted, offering avenues for individuals with various skills, expertise, and interests to contribute to organisational success. Adaptability, strong interpersonal skills, and the ability to navigate complex relationships are key attributes for success in this dynamic work environment.

Summary

The Matrix organisational structure has had a great influence on project management. The Matrix evolved to fill a need for an organisation capable of dealing with great project size and complexity. The result was increased organisational complexity. However, it has greatly added to the versatility and effectiveness of project management. The Matrix has permitted project management to be effective not only for very large projects but small projects as well and has been extremely valuable for solving multidisciplinary problems.

The Matrix organisational form is only desirable if there is a real need for its added complexity. Not only is it not for everyone, but it cannot be guaranteed to work. It will only work if the entire organisation, from top management to the project personnel, are thoroughly “sold” on the Matrix concept. There are many reasons why the Matrix will not work, but failure to lay the groundwork and fully prepare the organisation is the principal reason for failure.

The Matrix will function and result in very improved project productivity if top management gives its unwavering support and if capability management and the project personnel accept the Matrix as a “way of life” which can only be of great advantage to the company in improving output and profit.

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