1

The Growth of Global Project Management Challenges

1.1 Introduction

During the past several decades, there has been remarkable growth in the use of project management practices worldwide for executing a strategic plan and running a business. However, with the acceptance of the new practices come challenges that must be addressed. Many of the global companies now implementing project management practices are facing the same challenges that mature project management organizations endured decades ago.

All projects are plagued with challenges sooner or later. Some challenges are easily resolved, whereas others can result in project failure. In order to understand the project management challenges and issues, one must begin with the definition of a project because each of the components of the definition can create challenges. A project can be any series of activities and tasks that:

- Have a specific objective, with a focus on the creation of business value, to be completed within certain specifications
- Have defined start and end dates
- Have funding limits (if applicable)
- Consume human and nonhuman resources (i.e., money, people, equipment)
- Are multifunctional (i.e., cut across several functional lines and/or continents using diverse global project teams)

The result or outcome of the project can be unique or repetitive and must be achieved within a finite period. Because companies have very limited resources, care must be taken that the right mix of projects is approved. As such, another outcome of a project is that it provides business value to the company as opposed to being a "pet" project for the personal whims of one person.

Project management is the application of knowledge, skills, and tools necessary to achieve the project's requirements. Since most projects are unique rather than repetitive, new challenges continuously appear.

Project management has evolved from a set of processes that were once considered "nice to have" to one or more methodologies that are now considered mandatory for the growth and even the survival of

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most companies worldwide. Companies are now realizing that their entire business, including most of the routine activities, can be regarded as a series of projects. Simply stated, we are managing our business by projects.

Project management is now regarded as both a project management process and a business process. Therefore, project managers are expected to make business as well as project decisions. The necessity for achieving project management excellence is now readily apparent to almost all businesses.

As the relative importance of project management permeates each facet of the business, new project management challenges keep appearing. The decision as to when and how to resolve some of the challenges may be delayed, whereas other challenges may need resolution quickly so that the impact on the project's expected outcome will be minimized.

Companies are now performing strategic planning for project management because of the benefits and contribution to sustainable business value. One of the benefits of performing strategic planning for project management is that it usually promotes the necessity to identify the need for a good understanding of the global challenges and issues before a significant financial investment occurs. Unfortunately, this is easier said than done. One of the reasons for this difficulty, as will be seen later in the book, is that many companies today, as well as employees at all levels, may not agree with the definition of a project management challenge, nor do they fully understand the impact that a challenge or issue may have on their business and other ongoing or future projects.

Project managers, as well as project team members, are now active participants in resolving the challenges, whereas in the past, there was a tendency to find others responsible for the remedies. Project management, strategic planning, and problem resolution are no longer separate activities.

Project management is now regarded as the vehicle that provides the deliverables that create business benefits and business value. In the last few years, there has been tremendous global growth in the need for a better understanding of identifying and resolving project management challenges.

Some organizations have set up a Project Management Centre of Excellence (PMCoE) or a Project Management Office (PMO) that has the responsibility (among other duties) to identify and evaluate lessons learned and best practices that can help minimize the damage from challenges or prevent them from reoccurring.

1.2 Defining a Project Challenge

There are several things that can go wrong on projects. Authors of project management papers use words such as problems, barriers, obstacles, issues, difficulties, limitations, uncertainties, complexities, and challenges. In a project environment, they all tend to imply a situation that arises that can potentially negatively impact the project's timeline, budget, scope, or quality, requiring proactive management and problem-solving to overcome the situation and achieve project goals successfully.

Unfortunately, the same words can be interpreted differently by each person using them. The meaning of these words used to identify things that have gone wrong can range from a minor inconvenience to a significant disruption that can lead to project failure. Minor inconveniences are not managed the same way as situations that could result in complete project failure.

In this book, the focus will be on project "challenges," with the implication that a failure in overcoming a challenge might lead to complete project failure. Unlike minor inconveniences, resolving challenges can involve:

- The impact of possibly multiple competing constraints, rather than just one constraint
- The decision-making process to overcome the challenge will possibly involve coordination and participation from all the stakeholders, senior management, and possibly contractors
- Politics and hidden agendas by decision-makers are likely
- The challenging situation must be clearly understood by all participants and more than one meeting may be required to evaluate possible outcomes
- The situation is most likely new to the organization and previous history may not be available on recovery tactics

By knowing what types of challenges can occur, the project team is in a better position to resolve the challenges and mitigate potential damage.

1.3 Project Management Challenges: 1945–1960

Students often ask, "Why are we discussing project management history?" The reason is that not all companies worldwide become reasonably good or excellent at project management at the same rate and must overcome the same challenges. Many countries have strong political and cultural factors that, for years, have prevented the growth of project management. Many of these countries are now beginning to accept project management and are making some of the same mistakes that were made in the United States and other countries years ago. By looking at history, we can see the growth in the types of challenges companies can expect as they try to become excellent in project management.

During the 1940s, line managers functioned as project managers and used the concept of over-the-fence management to manage projects. Each line manager, temporarily wearing the hat of a project manager, would perform the work necessitated by his or her line organization and, when that effort was completed, would "throw the ball over the fence" in the hope that someone would catch it. Once the ball was thrown over the fence, the line managers would wash their hands of any responsibility for the project because the ball was no longer in their yard. If a project failed, blame was placed on whichever line manager had the ball at that time.

The problem with over-the-fence management was that the customer had no single contact point for questions. This posed a serious problem when issues needed to be resolved. The filtering of information wasted precious time for both the customer and the contractor. Customers who wanted firsthand information, especially about resolving problems, had to seek out the manager in possession of the ball. For small projects, this was easy. However, larger and more complex projects made this harder.

During this time, very few problem resolution practices were identified. Project management was not seen as a career-path position in most companies, and project managers were willing to walk away from projects rather than resolve issues. If there were approaches for resolving issues, they would stay within a given functional area, often never to be shared with the remainder of the company. Suboptimal project management decision-making was the norm.

Following World War II, the United States entered into the Cold War with the Soviet Union. To win the Cold War, the United States had to compete in an arms race and rapidly build weapons of mass destruction. In a cold war, the side that has the capability to respond with overwhelming force is often seen as having an advantage. Development of weapons of mass destruction involved very large projects involving a multitude of contractors.

The arms race made it clear that the traditional use of over-the-fence management would not be acceptable to the Department of Defense for projects such as the B-52 bomber, the Minuteman intercontinental ballistic missile, and the Polaris submarine. The government wanted a single point of contact, namely a project manager who had total accountability through all project phases. In addition, the government wanted the project manager to possess a command of technology rather than just an understanding of technology, which meant that the project manager would be an engineer, preferably with an advanced degree in some branch of technology. The side benefit was that the project manager had the competence to resolve most technical challenges, but not business-related issues. The use of project management was then mandated for some smaller weapon systems, such as jet fighters and tanks. The National Aeronautics and Space Administration (NASA) mandated the use of project management for all activities related to the space program.

Many projects in the aerospace and defense industries had cost overruns of more than 200–300%. Blame was erroneously placed on improper implementation of project management when, in fact, the real problem was the inability to forecast technology, resulting in numerous scope changes occurring. Forecasting technology is extremely difficult for projects that could last 10–20 years. Scope change challenges were the primary issue and played havoc with project decision-making efforts.

By the late 1950s and early 1960s, the aerospace and defense industries were using project management on virtually all projects and were pressuring their suppliers to use it as well. Project management was growing, but at a relatively slow rate, except for aerospace and defense. Other industries saw the project management implementation challenges faced in aerospace and defense and were reluctant to use project management practices.

Because of the vast number of contractors and subcontractors, the government needed standardization, especially in the planning process and the reporting of status information. The government established a life cycle planning and control model and a cost-monitoring system, and created a group of project management auditors that visited each contractor to make sure that the government's money was being spent as planned. These practices were to be used on all government programs above a certain dollar value.

The biggest challenges during this time were significant cost overruns and schedule slippages. Private industry viewed the project management practices as an overmanagement cost and saw no practical value in project management. The project management challenges on government programs were well-publicized in the news and journal articles.

Because many firms saw no practical value in project management in their early years, there were misconceptions about it. Some of the misconceptions included:

- Project management is a scheduling tool like PERT/CPM (Program Evaluation and Review Technique/Critical Path Method) scheduling.
- Project management applies to large projects only.
- Project management is designed for government projects only.
- Project managers must be engineers, preferably with advanced degrees.
- Project managers need a command of technology to be successful.
- Project success is measured in technical terms only. (Did it work?)

1.4 Project Management Challenges: 1960–1985

Between 1960 and 1985, a better understanding of project management existed. Growth in the field had come about more through necessity than through desire, but at a very slow rate. Its slow growth can be attributed mainly to a lack of acceptance of the new management techniques necessary for successful implementation of project management. An inherent fear of the unknown acted as a deterrent for both managers and executives.

Other than aerospace, defense, and construction, many companies in the 1960s managed projects informally. In informal project management, just as the words imply, projects were handled on an informal basis, and the authority of the project manager was minimized. Most projects were handled by functional managers and stayed in one or two functional lines, and formal communications were either unnecessary or handled informally because of the good working relationships between line managers. Those individuals who were assigned as project managers soon found that they were functioning more as "accidental" or temporary project leaders or project monitors than as real project managers. Functional managers were responsible for resolving issues. Many organizations today, such as low-technology manufacturing, have line managers who have been working side by side for 10 or more years. In such situations, informal project management may be effective for capital equipment or facility development projects, and project management is not regarded as a profession.

By 1970 and through the early 1980s, more companies departed from informal project management and restructured to formalize the project management process, mainly because the size and complexity of their activities had grown to a point where they were unmanageable within the current structure. The opportunity for more types of challenges was increasing.

Not all industries needed project management, and executives had to determine whether there was an actual need before making a commitment. Several industries with simple tasks, whether in a static or a dynamic business environment, did not need formalized project management. Manufacturing industries with slowly changing technology did not need project management, unless, of course, they had a requirement for several special projects, such as capital equipment activities, that could interrupt the normal flow of work in the routine manufacturing operations. The slow growth rate and acceptance of project management were related to the fact that the limitations of project management were readily apparent, yet the advantages were not completely recognizable. Project management requires organizational restructuring. The question, of course, is: "How much restructuring?" Executives avoided the subject of project management for fear that "revolutionary" changes would have to be made in the organization.

Project management restructuring has permitted companies to:

- Accomplish tasks that could not be effectively handled by the traditional structure
- Accomplish one-time activities with minimum disruption of routine business

The second item implies that project management is a "temporary" management structure and, therefore, causes minimum organizational disruption. The major problems identified by those managers who endeavored to adapt to the new system all revolved around conflicts in authority and resource allocation issues. Companies began to recognize the need for capturing best practices, especially those that could reduce some human behavior issues. Improvements in the methodologies were also taking place.

Another major concern was that project management required upper-level managers to relinquish some of their authority through delegation to middle managers. In several situations, middle managers soon occupied the power positions, even more so than upper-level managers.

Project management became a necessity for many companies as they expanded into multiple product lines, many of which were dissimilar, and organizational complexities grew. This growth can be attributed to four factors:

1) Technology increasing at an astounding rate
2) More money being invested in research and development (R&D)
3) More information being available
4) Shortening of project life cycles

To satisfy the requirements imposed by these four factors, management was "forced" into organizational restructuring; the traditional organizational form that had survived for decades was inadequate for integrating activities across functional "empires." Restructuring brought new types of challenges to project management.

By 1970, the environment began to change rapidly. Companies in aerospace, defense, and construction pioneered the implementation of project management, and other industries soon followed, some with great reluctance. NASA and the DoD "forced" subcontractors to accept project management.

Because current organizational structures were unable to accommodate the wide variety of interrelated tasks necessary for successful project completion, the need for project management had become apparent. It was usually first identified by those lower-level and middle managers who found it impossible to control their resources effectively for the diverse activities within their line organization. Quite often, middle-level managers felt the impact of the changing business environment more than upper-level executives.

Once the need for change was identified, middle management had to convince upper-level management that such a change was warranted. If top-level executives could recognize the problems with resource control, then project management would not be adopted, at least formally. Informal acceptance, however, was another story.

As project management developed, some essential factors in its successful implementation were recognized. The major factor was the role of the project manager, which became the focal point for integrative responsibility. The need for integrative responsibility was first identified in complex R&D projects. This brought to the surface more challenges that previously were simply ignored and treated as part of doing business.

R&D technology broke down the boundaries that used to exist between industries. Once stable markets and distribution channels were now in a state of flux. The industrial environment was turbulent and increasingly hard to predict. Many complex facts about markets, production methods, costs, and scientific potential were related to investment decisions in R&D.

All of these factors have combined to produce a king-size managerial headache. There were just too many crucial decisions to have them all processed and resolved at the top of the organization through regular line hierarchy. Decision-making challenges began to grow. They had to be integrated in some other way.

Providing the project manager with integrative responsibility resulted in:

- Total project accountability being assumed by a single person
- Project rather than functional dedication
- A requirement for coordination across functional interfaces
- Proper utilization of integrated planning and control
- The resolution of challenges

Without project management, these five elements must be accomplished by executives, and it is questionable whether these activities should be part of an executive's job description. An executive in a Fortune 500 corporation stated that he was spending 70 hours each week working as both an executive and a project manager, and he did not feel that he was performing either job to the best of his abilities. During a presentation to the staff, the executive stated what he expected of the organization after project management implementation:

- Push decision-making down in the organization.
- Eliminate the need for committee solutions.
- Trust the decisions of peers.

Those executives who chose to accept project management soon found the advantages of the new technique:

- Easy adaptation to an ever-changing environment
- Ability to handle a multidisciplinary activity within a specified period of time
- Horizontal as well as vertical workflow
- Better orientation toward customer problems
- Easier identification of activity responsibilities
- A multidisciplinary decision-making process
- Innovation in organizational design

As project management evolved, best practices became important. Best practices were learned from both successes and failures. Unfortunately, the number of challenges increased significantly. In the early years of project management, private industry focused on learning the best practices from successes to help resolve the challenges. The government, however, focused on learning about the best practices from failures. When the government finally focused on learning from successes, the knowledge of best practices came from its relationships with both prime contractors and subcontractors. Some of these best practices that came out of the government included:

- Use of life-cycle phases
- Standardization and consistency
- Use of templates (e.g., for statement of work [SOW], work breakdown structure [WBS], and risk management)

- Providing military personnel in project management positions with extended tours of duty at the same location
- Use of integrated project teams
- Control of contractor-generated scope changes
- Use of earned value measurement techniques

1.5 Accidental Project Management

In most private and public sector companies worldwide, project management is treated as a profession. However, there are still companies in the global marketplace that are reluctant to treat project management as a profession and career path position. These companies are often reluctant to recognize the value in project management as a profession and use the concept of "accidental" or part-time project managers.

A worker is selected to function as a project manager because of his/her special technical skills, writing ability, or contact with specific clients and stakeholders. The accidental project manager may function as a project manager just for a short period of time, in addition to one's normal duties.

Accidental project management exists because there are companies that do not want to provide people with the salary and responsibility expected as a project manager, are reluctant to pay for project management education, and fear giving project managers authority and decision-making responsibility. The use of accidental project managers can become a serious issue affecting project success when using diverse, global project teams where each participating organization views project management differently.

1.6 Project Management Challenges: 1985–2025[1]

By the 1990s, companies had begun to realize that implementing project management was a necessity, not a choice. Project management had spread to virtually every industry and best practices were being captured to help prevent and manage challenges. In the author's opinion, the appearance of best practices by industry can be summarized as follows:

- 1960–1985: Aerospace, defense, and construction
- 1986–1993: Automotive suppliers
- 1994–1999: Telecommunications
- 2000–2003: Information technology
- 2004–2006: Healthcare
- 2007–2008: Marketing and sales
- 2009–Present: Global public and private sector companies of all sizes

1 Many of the comments made by executives in the remainder of this chapter and throughout the book have been taken from early editions of Project Management Best Practices: Achieving Global Excellence by Harold Kerzner. The dates of the comments are not critical. But it is important to recognize how executives are now and have been viewing the growth of project management practices and the accompanying benefits.

Table 1.1 Five Phases of the Project Management Life Cycle

Embryonic	Executive Management Acceptance	Line Management Acceptance	Growth	Maturity
Recognize Need	Get visible executive support	Get line management support	Recognize use of life-cycle phases	Develop a management cost/schedule control system
Recognize Benefits	Achieving executive understanding of project management	Achieving line management commitment	Develop a project management methodology	Integrate cost and schedule control
Recognize Applications	Establish project sponsorship at executive levels	Provide line management education	Make the commitment to planning	Develop an educational program to enhance project management skills
Recognize What Must Be Done	Become willing to change the way of doing business	Become willing to release employees for project management training	Minimize creeping scope Select a project tracking system	

The question now is not how to implement project management, but how fast it can be done. How quickly can we become mature in project management? Can we use the best practices to accelerate the implementation of project management? How can we quickly resolve the challenges that will be appearing?

Table 1.1 shows the typical life-cycle phases that an organization goes through to implement project management. In the first phase—the embryonic phase—the organization recognizes the apparent need for project management. This recognition normally takes place at the lower and middle levels of management, where the project activities take place. The executives are then informed of the need and assess the situation.

Six driving forces lead executives to recognize the need for project management:

1) Capital projects
2) Customer expectations
3) Competitiveness
4) Executive understanding
5) New project development
6) Efficiency and effectiveness

Manufacturing companies are driven to project management because of large capital projects or a multitude of simultaneous projects. Executives soon realize the impact on cash flow and that slippage in the schedule could end up idling workers.

Companies that sell products or services, including installation, to their clients must have good project management practices. These companies are usually non-project-driven but function as though they were project-driven. These companies now sell solutions to their customers rather than products. It is

almost impossible to sell complete solutions to customers without having superior project management practices because what you are selling is your project management expertise (i.e., your project management processes).

There are two situations where competitiveness becomes the driving force: internal projects and external (outside customer) projects. Internally, companies get into trouble when they realize that much of the work can be outsourced for less than it would cost to perform the work themselves. Externally, companies get into trouble when they are no longer competitive on price or quality or when they simply cannot increase their market share. Both situations are accompanied by challenges.

Executive understanding is the driving force in those organizations that have a rigid traditional structure that performs routine, repetitive activities. These organizations are quite resistant to change, unless the change is driven by the executives. This driving force can exist in conjunction with any of the other driving forces.

New product development is the driving force for those organizations that are heavily invested in R&D activities. Given that only a small percentage of R&D projects ever make it into commercialization, where the R&D costs can be recovered, project management becomes a necessity. Project management can also be used as an early warning system so that a project can be canceled.

Efficiency and effectiveness, as driving forces, can exist in conjunction with any other driving forces. Efficiency and effectiveness take on paramount importance for small companies experiencing growing pains. Project management can be used to help such companies remain competitive during periods of growth and to assist in determining capacity constraints.

Because of the interrelation of these driving forces, some people contend that the only true driving force is survival. When the company recognizes that survival of the firm is at stake, the decision to implement project management becomes easier, but resolving the challenges becomes greater.

Enrique Sevilla Molina, PMP®, formerly corporate PMO Director at Indra Group, discusses the driving forces at Indra Group that necessitated the need for excellence in project management:

> *The internal forces were based on our own history and business experience. We soon found out that the better the project managers, the better the project results. This realization came together with the need to demonstrate in national and international contracts, with both US and European customers, our real capabilities to handle big projects. These big projects required world-class project management, and for us managing the project was a greater challenge than just being able to technically execute the project. Summarizing, these big projects set the pace to define precise procedures on how to handle stakeholders, big subcontractors and become a reliable main point of contact for all issues related to the project.*

The speed at which companies reach some degree of maturity in project management is most often based on how important they perceive the driving forces to be. Competitiveness is the slowest path because these types of organizations do not recognize that project management affects their competitive position directly. For project-driven organizations, the path is reversed. Competitiveness is the name of the game, and the vehicle used is project management.

Once the organization perceives the need for project management, it enters the second life-cycle phase of Table 1.1, executive acceptance. Project management cannot be implemented rapidly in the near term without executive support. Furthermore, the support must be visible to all.

The third life-cycle phase is line management acceptance. It is highly unlikely that any line manager would actively support the implementation of project management without first recognizing the same support coming from above. Even minimal line management support will still cause project management to struggle.

The fourth life-cycle phase is the growth phase, where the organization becomes committed to the development of the corporate tools for project management. This includes the processes and project management methodology for planning, scheduling, and controlling as well as selection of the appropriate supporting software. Portions of this phase can begin during earlier phases.

The fifth life-cycle phase is maturity. In this phase, the organization begins using the tools developed in the previous phase. Here, the organization must be totally dedicated to project management. The organization must develop a reasonable project management curriculum to provide the appropriate training and education in support of the tools as well as the expected organizational behavior.

By the 1990s, companies finally began to recognize the benefits of project management. Table 1.2 shows the critical success factors (CSFs) and critical failure factors (CFFs) that have led to changes in our

Table 1.2 Critical Factors in the Project Management Life Cycle

Critical Success Factors	Critical Failure Factors
Executive Management Acceptance Phase	
Consider employee recommendations	Refuse to consider ideas of associates
Recognize that change is necessary	Unwilling to admit that change may be necessary
Understanding the executive role in project management	Believe that project management control belongs at executive levels
Line Management Acceptance Phase	
Willing to place company interest before personal interest	Reluctant to share information
Willing to accept accountability	Refuse to accept accountability
Willing to see associates advance	Not willing to see associates advance
Growth Phase	
Recognize the need for a corporate-wide methodology	View a standard methodology as a threat rather than as a benefit
Support uniform status monitoring/reporting	Fail to understand the benefits of project management
Recognize the importance of effective planning	Provide only lip service to planning
Maturity Phase	
Recognize that cost and schedule are inseparable	Believe that project status can be determined from schedule alone
Track actual costs	See no need to track actual costs
Develop project management training	Believe that growth and success in project management are the same

view of project management. Many of these factors were identified through the discovery and implementation of best practices.

Recognizing that the organization can benefit from the implementation of project management is just the starting point. The question now becomes: How long will it take us to achieve these benefits?

During the first decade of the twenty-first century, the understanding and acceptance of the benefits began permeating all levels of senior management rather than just those executives who interfaced with projects on a daily basis. Three comments from senior management at American Greetings Corporation illustrate this point:

> *Through project management, we've learned how to make fact-based decisions. Too often in the past we based our decisions on what we thought could happen or what we hoped would happen. Now we can look at the facts, interpret the facts honestly and make sound decisions and set realistic goals based on this information.*
>
> Zev Weiss, formerly chief executive officer, American Greetings

> *The program management office provides the structure and discipline to complete the work that needs to get done. From launch to completion, each project has a roadmap for meeting the objectives that were set.*
>
> Jeff Weiss, formerly president and chief operating officer, American Greetings

> *Through project management, we learned the value of defining specific projects and empowering teams to make them happen. We've embraced the program management philosophy and now we can use it again and again to reach our goals.*
>
> Jim Spira, retired president and chief operating officer, American Greetings

When all of the executives are in agreement as to the value and benefits of project management, continuous improvements in project management occur at a rapid pace, and pressure is placed upon the organization to resolve challenges quickly.

1.7 Creating the Right Culture

As project management evolved, companies realized the importance of having one or more project management methodologies to help address all of their project needs and issues. But at the same time, companies were quite slow at understanding the importance of also having a corporate culture that supports project management.

Creating the right corporate culture for project management is not easy. However, when a strong corporate culture is in place and it actively supports project management such that other best practices also develop, the potential damage and risks from many of the challenges are minimized. Some corporate

cultures lack cooperation among the players and support well-protected silos. Other cultures are based on mistrust, while others foster an atmosphere where it is acceptable to persistently withhold information from management. These factors prevent effective resolution of challenges.

A telecommunications company funded more than 20 new product development projects, which all had to be completed within a specific quarter to appease Wall Street and provide cash flow to support the dividend. Management persistently overreacted to bad news, and information flow to senior management became filtered. The project management methodology was used sparingly for fear that management would recognize early on the seriousness of problems with some of the projects.

Not hearing any bad news, senior management became convinced that the projects were progressing as planned. When it was discovered that more than one project was in serious trouble, management conducted intensive project reviews on all projects. In one day, eight project managers were either relieved of their responsibilities or fired. But the damage was done, and the problem was really the culture that had been created. Beheading the bearer of bad news can destroy potentially good project management systems and lower morale.

In another telecommunications company, senior management encouraged creativity and provided the workforce with the freedom to be creative. The workforce was heavily loaded with technical employees with advanced degrees. Employees were expected to spend up to 20% of their time coming up with ideas for new products. Unfortunately, this time was being charged back to whatever projects the employees were working on at the time, thus making the cost and schedule portion of the Enterprise Performance Management (EPM) system ineffective.

While management appeared to have good intentions, the results were not what management expected. New products were being developed, but the payback period was getting longer and longer, while operating costs were increasing. Budgets established during the portfolio selection of the project process were meaningless. To make matters worse, the technical community defined project success as exceeding specifications rather than meeting them. Management, in contrast, defined success as commercialization of a product. Given the fact that as many as 50–60 new ideas and projects must be undertaken to have one commercially acceptable success, the cost of new product development was bleeding the company of cash, and project management was initially blamed as the culprit. Even some of the best EPM systems are unable to detect when the work has been completed other than by looking at money consumed, and time spent.

It may take years to build up a good culture for project management, but it can be destroyed rapidly through the personal whims of management. A company undertook two high-risk R&D projects concurrently. A time frame of 12 months was established for each in the hope of making a technological breakthrough; even if it could happen, both products would have a shelf life of about one year before obsolescence would occur.

Each project had a project sponsor assigned from the executive levels. At the first gate review meeting, both project managers recommended that their projects be terminated. The executive sponsors, to save face, ordered the projects to continue to the next gate review rather than terminate them while the losses were small. The executives forced the projects to continue to fruition. The technical breakthroughs occurred six months later than planned, and virtually no sales occurred with either product. There was only one way

the executive sponsors could save face: promote both project managers for having successfully developed two new products and then blame marketing and sales for their inability to find customers.

Pulling the plug on projects is never easy. People often view bad news as a personal failure, a sign of weakness, and a blemish on their career path. There must be an understanding that exposing a failure is not a sign of weakness. The lesson is clear: Any executive who always makes the right decision is certainly not making enough decisions, and any company where all of the projects are being completed successfully is not working on enough projects and not accepting reasonable risk.

For several decades, project management focused on traditional projects that had relatively short durations. Project teams were allowed to create their own culture even though it may have conflicted with the command-and-control culture established by senior management.

Organizational cultures that focus on command and control from above are now becoming somewhat ineffective and do not interface well with the types of cultures needed for the new type of projects, which are somewhat longer in duration, more strategically oriented, and require creativity and innovation. Companies have recognized that the corporate culture and project cultures must have some degree of compatibility. The four critical components for compatibility include:

- *Sharing of vision*. Senior management must give up the idea that information is power. Team members must be provided with the necessary business strategy information to make sure that the projects are aligned with strategic business objectives. This information may also be important for overcoming challenges.
- *Participative safety*. There must exist a nonthreatening environment where team members can participate freely in discussions and state their opinions without fear of punishment. Team members should not be punished or criticized for identifying potential solutions to challenges that are unacceptable to senior management.
- *Senior management criticism*. Senior management must make it clear to project teams that whatever criticism is provided should be seen as constructive rather than personal criticism.
- *Tolerance for failure*. There must be recognition and acceptance that there exist significant risks on some projects and risk mitigation may not work. Some challenges may not be resolved. Some projects will fail, and team members should not be blamed for the failures.

There are many situations that occur on projects that can disrupt cultures. Examples include:

- Management and/or stakeholders impose unrealistic budgets and schedules
- Qualified functional resources that are needed fluctuate in being assigned to project teams based upon the desires of their functional managers
- Ineffective project governance
- Delays in decision-making
- Resistance to acceptance of new project management processes, tools, and techniques
- Constantly changing priorities

In some cultures, workers are reluctant to share ideas for fear of criticism by their peers. Tapping into their minds will be a challenge. There are several possible causes for organizational resistance to cultural

change. Some cultures are subject to frequent change as new products and services are created or due to a change in the firm's business model. Some people fear change since it may remove them from their comfort zones. The longer someone spends in project management using a one-size-fits-all methodology, the more likely it is that they may become protective of the standard tools, techniques, and processes they have been using and resist change.

One of the more serious risks that can prevent effective cultures from forming is when internal competition becomes unhealthy. If management allows rewards for individual achievements to significantly outweigh team rewards, workers may make decisions in their own best interest rather than in the best interest of the company. Information may not be shared, and suboptimal decision-making may occur.

1.8 Global Project Management

As the world marketplace begins to accept project management and recognizes the need for experienced project managers, more opportunities have become available for people aspiring to become project managers. The need is there and growing. According to Thomas Grisham[2]:

> International business and project management practices have converged in the last 10 years. Organizations are tending toward hiring multitalented people who are self-motivated, intelligent, and willing to take responsibility. Some of the reasons are:
>
> - The need for leaner and flatter organizations to reduce cost
> - The need for leadership skills throughout the organizational food chain from top to bottom—lead one day, follow the next, and be comfortable personally in either role
> - The need for knowledge workers throughout the organization
> - Globalization and the need to improve quality while reducing cost
> - Kaizen to keep quality high while reducing cost
> - Diversity
>
> Years ago, companies had three pay grades for project managers: junior project managers, project managers, and senior project managers. Today, we are adding in a fourth pay grade, namely global project managers. Unfortunately, there may be additional skills needed to be a global project manager. Some of the additional skills include managing virtual teams, understanding global cultural differences, working in an environment where politics can dictate many of the decisions, and working under committee governance rather than a single sponsor.
>
> Managing global projects, especially when you must use a diverse team, is challenging. There are numerous obstacles and potential problems that may not exist on domestic projects. The project manager must be culturally fluent and possess strong communication skills, especially when managing across multiple time zones. Diverse team members may need specialized training. Traditional leadership styles based upon offering rewards or threatening punishment may not

2 T. W. Grisham, International Project Management (Hoboken, NJ: Wiley, 2010), p. 3.

work. The challenge is how to inspire diverse team members. Unfortunately, global projects may be heavily dependent on local cultures that are based upon religious and political influence.

All members of diverse international teams believe that their opinion counts, they are being listened to and understood. It is important to negotiate the ground rules related to cultural right from the start so that everyone understands the necessity for effective and often limited collaboration. Companies have policies on how and when issues can be escalated to higher levels of management and stakeholders.

Most companies prefer that people interested in becoming global project managers have experience first in managing domestic projects.

1.9 Growth of Project Management Challenges

For several decades, the growth in project management practices, along with continuous improvements, resided mainly in the contractors' organizations. Contractors viewed project management practices as how they could provide complete solutions to their clients. Stakeholders and clients did not interfere with the contractors' execution of projects as long as they received the expected results.

Most of the clients were pleased with this approach and began asking for more complex products and services from the contractors. As complexity increased, so did the number of issues that required collaboration between contractors, clients, and stakeholders for resolution. Many of the issues required knowledge of project management practices before the best decision could be made. Project managers were now spending a great deal of time putting out fires.

Customers began recognizing the importance of project management and became quite knowledgeable in project management in order to participate in project decision-making. To stay ahead of the game, contractors began making rapid improvements to their project management practices and began capturing best practices and lessons learned. Customers began using project management practices in their internal projects, and their knowledge also increased to the point where they became more actively involved in the contractor's execution of their projects.

As the evolution of project management practices spread worldwide, contractors learned a very important lesson: When customers possess more knowledge about effective project management practices than the contractors do, customers can become more actively involved in the contractor's execution of projects and create challenges that are difficult for the contractors to resolve. Contractors do not want customers to tell them how to manage their projects. Many of the issues and challenges discussed in the chapters that follow were based on changes customers wanted to make during the execution of the projects.

- Risk taking
- Curiosity
- Failure tolerance
- Everyone to tap into their own level of creativity
- Freedom to follow one's intuition

- Avoid or defer from rapid judgment
- Collaboration (informal)
- Active listening
- Being team players
- Managing tensions rather than just tradeoffs

1.10 Types of Project Management Challenges

As more and more companies recognized the benefits of using project management, capturing best practices became commonplace. Unfortunately, there was a misbelief that best practices could be the solution to all challenges. Emphasis was placed more so on achieving the project's benefits rather than how to resolve the challenges that could occur during project execution. But that would soon change.

Perhaps the biggest change in how people viewed project management was the realization that completed projects could provide business value rather than merely deliverables. Completing projects within the traditional triple constraints of time, cost, and scope was not necessarily a success if the deliverables did not bring business value to the company. A company can be excellent in project management, but working on projects that do not bring value to the company.

Businesses changed their traditional perception of project management. Organizations realized that changes will be accompanied by new challenges that need to be resolved. Business cases for projects now include a benefits realization plan and often are accompanied by a detailed description of the business value expected at the conclusion of the project or shortly thereafter.

Project selection practices and the building of the portfolio of projects are now predicated on the desire to maximize benefits and business value. Projects that were once considered pet projects for the benefit of a single individual are being removed from the queue and replaced with projects that can benefit the whole organization. Benefits realization planning, benefits management, and business value management are now prime focuses at the executive levels of management.

By 2025, project management had matured into both a business and project management practice recognized by most companies as a necessity for survival. Some of the characteristics of modern project management practices include:

- Use of multiple project management methodologies
- An increase in the use of project management tools such as artificial intelligence (AI), digitalization, big data, and the Internet of Things (IoT)
- Growth in the number of forms, guidelines, templates, and checklists used in project management
- Growth in the importance of human behavior factors in project management
- Globalization of project management practices using diverse teams
- A growth in new projects requiring creativity and innovation

As expected, the growth of project management internationally brought with it more challenges and issues needing resolution. Many of the challenges that companies faced years ago have been resolved in companies that are now reasonably mature in project management. However, the same challenges are

beginning to appear in the global environment, with companies just beginning to use project management practices. Examples include:

- *Budget constraints*. This occurs when a project exceeds the budget, often because the requirements were not fully understood at project initiation, or the scope of the project changed during project execution.
- *Using the management reserve*. The management reserve is a sum of money established and held in reserve for contingencies. This becomes a challenge when the reserve becomes an item of conflict as to who makes the decision on where to use it, when to use it, and how much of it should be used.
- *Scope creep*. This occurs when additional work is required beyond what was agreed upon in the plan. Scope creep can result from changing requirements.
- *Schedule constraints*. This occurs when the deadlines are unrealistic, and the team is unable to accomplish the necessary workload within the time allocated in the plan.
- *Lack of accountability*. This occurs when people refuse to accept responsibility for an activity, refuse to admit that mistakes were made, neglect to keep their promises, and refuse to accept feedback even if constructive criticism.
- *Poor risk management*. This occurs when work does not go according to plan because of unforeseen events and the team struggles with risk mitigation efforts.
- *Communication issues*. This occurs when there are communication issues between project teams, organizational management, clients, and stakeholders.
- *Managing stakeholder expectations*. This occurs when stakeholders become actively involved in project execution and change their requirements and expectations. It also occurs when stakeholders are expected to be more actively involved and fail to do so.
- *Workload mismanagement*. This occurs when project planning is incomplete, or people assigned possess the wrong skill sets.
- *Poor success and failure criteria*. This occurs when team members must make decisions but do not have a clear understanding of what is meant by project success and project failure.
- *Outdated requirements and project strategy*. This often occurs on long-term projects where the requirements must change most often because the business strategy has changed.
- *Changes in regulatory requirements*. This occurs when government regulatory requirements have changed.
- *Team conflict*. This occurs when several projects may be in conflict for the same resources and team members have problems deciding where to apply their loyalties.
- *Team friction*. This occurs when team members find it difficult to work with the project manager or other team members.
- *Lack of resources*. This occurs when insufficient resources exist.
- *Resources with inadequate skills*. This occurs when the assigned resources lack the necessary skills to perform the required work.
- *Technological shortcomings*. This occurs frequently on projects requiring innovation and creativity based upon technology that does not exist yet.
- *Methodology selection*. This occurs when project teams have a choice of project management methodologies for a given project.

- *Fluctuating customers' needs*. This occurs on projects that allow the needs of the customer to change after project go-ahead.
- *Heavy focus on profit margins*. This occurs when the project team focuses more on the project's profit margins than on the quality of the deliverables.
- *Using the wrong software*. This occurs when project team members have a choice of software packages that can be used.
- *Inability to maintain progress*. This occurs when project teams allow other priorities to become more important than maintaining project progress.
- *Inability to keep up with project management trends*. This occurs when project forms, guidelines, templates, and checklists are allowed to become outdated or perhaps not updated from the collection of best practices.
- *Lack of available training*. This occurs when the organization does not provide sufficient training for the workforce.
- *Competing priorities*. This occurs when workers have competing priorities with other issues.
- *Team members working in silos*. This occurs when team members demonstrate loyalty to their functional departments even though they are assigned to a project.
- *Removing team members from their comfort zones*. This occurs when team members are asked to perform assignments that they are not used to doing.
- *Poor project leadership*. This occurs when team members and stakeholders are unhappy with the project manager's leadership style.
- *Managing remote teams*. This occurs when a portion of the project team works from home or resides in different parts of the world.
- *Maintaining team motivation*. This occurs when the team lacks motivation.
- *Unsure about the project's direction*. This occurs when people are assigned to work on projects without fully understanding the direction of the project.

Every project, whether domestic or global, can possess several of these challenges, and the challenges can recur frequently on the same project. Expecting to manage projects without challenges is wishful thinking. Regardless of how mature a company is in project management, challenges can always occur.

Everyone understands the necessity to resolve the challenges to improve their future performance. Unfortunately, many companies struggle with implementing solutions. Some of the issues with the implementation of solutions include:

- Workers are reluctant to implement solutions for fear of being removed from their comfort zones and having to work differently.
- The organization does not know who should take the lead in implementing the changes needed.
- Implementation may take too long.
- Implementation may require specialized resources.
- The organizational culture does not fully support change management practices.
- Executive leadership does not actively support a culture to implement many of the changes.
- Many of the changes may require training and education programs for new ways of working.

There are three activities that companies should consider to ease the pain of having to deal with challenges:

- *Executive understanding of project management*. Project teams may not have the authority to resolve the challenges without support from senior management. Also, senior management must understand their role in project management and can bridge the gap with stakeholders through effective collaboration during project execution. This is discussed in Chapter 2.
- *Training and education*. The return on investment in project management education for both team members and executives can appear as a reduction in the challenges needing resolution and an increase in repeat business from clients. The education provided can also show how other companies managed the challenges. This is discussed in Chapter 3.
- *Identifying best practices*. Preventing mistakes from reoccurring and quicker solutions to challenges can come from the identification of project management best practices. This is discussed in Chapter 4.

1.11 Early Warning Signs of Challenges

Very rarely do projects get into trouble overnight. There are usually early warning signs that a project might have serious challenges. Many early warning signs are evident right at the onset of the project. By recognizing the early warning signs, the project manager may be able to minimize the damage and possibly save the project. Some of the early warning signs of potential issues include:

- Team members lack interest, motivation, and enthusiasm for the project
- Unqualified resources
- Team members request to be reassigned to other projects
- High turnover of personnel
- Team members have personal agendas
- Team members do not show up at meetings
- Power struggles
- Lack of sponsorship involvement
- Lack of stakeholder interest
- Stakeholders and/or sponsors begin to micromanage
- Poor collaboration among team members and stakeholders
- Discussions concerning changing scope

There are several other early warning signs. The earlier you can identify that these situations occur, the greater the options exist for recovery.

1.12 Barriers That Cause Global Challenges

The challenges discussed previously can exist in any organization anywhere in the world. However, in many companies worldwide, there are still executives who openly provide lip service to project management acceptance, yet behind the scenes, they erect meaningful barriers to prevent it from working

properly. The barriers that create most of the challenges result from the company's recognition of the importance of company or national politics, religions, and cultures.

New techniques and technologies are being introduced into the project management environment, such as digitalization, AI, the IoT, big data, blockchain, and disruptive project management practices. But even though most of the core concepts of project management have been recognized and used successfully for decades, there is still resistance in the form of barriers that can prevent successful implementation of all or specific aspects of project management. An understanding of these barriers can help us prevent or diminish the impact of the accompanying challenges.

Today, many of the barriers that were identified in primarily emerging markets are now quite apparent in developed nations, as well as within areas of companies that may have been using project management for decades, wherever they may be located. Barriers are no longer restricted solely to specific nations or regions. Some barriers may be industry-specific, appear in certain functional disciplines of a company, or occur because of the personal whims of managers and executives. Barriers can materialize anywhere and at any time. The result is the identification of one or more of the challenges listed.

The global barriers are broken down into the following six categories:

- Human resource management
- Legal factors
- Sponsorship
- Implementation costs
- Culture
- PMO

1.12.1 Human Resource Management Barriers

Whenever we change or introduce new management processes, whether it is for project management, Agile, Scrum, Six Sigma, or other practices, we must consider the impact on the salary and compensation programs of the employees in the organization. If they are to follow the new processes, they certainly expect to be recognized and even rewarded for doing so. Unfortunately, organizations often introduce new management processes without considering employee performance review implications until the oversight is manifested in employee discontent because they were not recognized and rewarded, a barrier that impacts the new processes from being implemented correctly.

Sometimes, human resource barriers are created that can cause a conflict between what appears to be in the best interest of the project and the team members. It is not uncommon for the project team to fail to realize the impact of the barrier or even that it exists until the project is completed. For example, several years ago, a US company was so pleased with the success of an ongoing project that they wrote an article for the local newspaper that included the picture of the project manager and the assistant project manager. The team members were unhappy that they were not given any recognition for the project's ongoing success. As a result, they purposely slowed down the work, causing the remainder of the project to be less successful than the first part of the effort. The team members stated that they would never work for the project manager and assistant project manager again.

In most cases, the result may be limited project success, or possibly even failure, based on when the barrier is recognized and addressed.

1.12.1.1 Situation 1 (The Colocation Barrier)

A project manager working for a government agency was placed in charge of a two-year project and wanted to have the team colocated. The project manager was fearful that, if the team members were to remain in their functional areas, the functional managers might use the employees frequently on other projects, thus impacting the schedule of his project. During the project staffing function, the project manager also demanded the best resources, knowing full well that many of the employees would be overqualified for the tasks and therefore underutilized. Although the demand for the best resources benefited this project manager's assignment, other projects which required workers with these specific skills were shorthanded and struggled to meet their time, cost, and scope objectives. The project manager's decision may have benefited the project but not necessarily the company at large.

The project manager located a vacant floor in a government building, and all the team members were relocated to this location. Additionally, the team was assigned to the project on a full-time basis even though the project did not necessarily require full-time staff. However, even though the employees were removed from their functional organizations, their functional managers were still responsible for their performance reviews.

The project was completed in two years and deemed a success. However, many of the team members were quite upset because:

- Most of them were given mediocre performance reviews during the two-year period because their functional managers were unaware of their performance.
- When given the choice of who deserved a promotion during the two-year period, the functional managers first promoted those employees who remained in the functional area.
- Some team members discovered that their functional managers filled their vacated position with other employees and that it was their responsibility to find positions elsewhere in the organization, possibly losing seniority in the process.

In Situation 1, which occurred in a developed nation, the project was a success, and the project manager was promoted. Unfortunately, the project team members did not benefit from being assigned to the project and stated that they would not want to work for this project manager again. The organization had to rethink the benefits of using a colocated team approach. Barriers can exist anywhere.

1.12.1.2 Situation 2 (The Prolonged Employment Barrier)

A government-run utility in an emerging market nation embarked upon a three-year project to build a new power generation plant. To minimize the cost of the project and support the local economy, the decision was made to use local and countrywide labor rather than hiring more expensive contractors external to their country. This would have the additional benefit of providing employment for many local residents.

The local labor force welcomed the employment opportunity but was and remained fearful of what might happen when the project came to an end. To guarantee long-term employment, including possible retirement benefits, the employees not only began working at a slower pace, but they also started to make purposeful mistakes, causing rework, thus lengthening the project's schedule to a point where it has now stretched out to ten years. Poor project management implementation was blamed as the barrier for the schedule delays.

1.12.1.3 Situation 3 (The Building of an Empire Barrier)

This situation shares certain characteristics with Situation 2. In certain countries, one's salary, power, and authority are based upon the size of the empire one controls. In such a case, hiring three below-average employees to do the same work as two average employees certainly contributes to the goal of empire building. Additionally, even though finding competent human resources may be difficult, sometimes companies simply do not put forth a good search effort; friends and family members may be hired first, regardless of their qualifications. In this situation, the project's schedule is usually elongated so that the empire that is built will last as long as possible.

1.12.1.4 Situation 4 (The Overtime Barrier)

Overtime is usually needed when pressure is placed upon the team to maintain, or even accelerate, the project schedule. However, in some cultures, overtime is used as a reward system to give employees the opportunity to earn additional income. This can occur even if overtime is not necessary.

Some countries put restrictions on overtime and may require that the government must authorize overtime, especially if it is paid overtime. This occurs when the country is fearful that overtime, if prolonged, may create a new class of citizens. There is also the danger that mistakes may be made intentionally on many projects in order to justify the use of extended overtime.

1.12.1.5 Situation 5 (The Career Path Barrier)

A government agency discovered that as it began outsourcing more work to national and non-national contractors, its ability to evaluate project management performance was becoming difficult because each contractor would report status differently. Some contractors appeared to be performing at a higher level of project management than others by using PMBOK® Guide processes; however, the government agency was unable to compare contractors' performance for awarding future contracts. The agency then encouraged all contractors to use the project management practices found in the PMBOK® Guide and highly recommended that the individuals managing their contracts become project management professionals (PMP)-certified.

Even though the government agency recognized the value in promoting project management professionalism in the contractors' organizations, it did not recognize those same benefits to its own workforce. Public sector project managers were treated more as project monitors than project managers. The government's Office of Personnel Management was unable to write job descriptions for government project managers because their duties, authority, responsibility, and decision-making capability did not fit in the standard "mold" used for other job descriptions. As such, an assignment as a government project manager was viewed as a non promotable position that could negatively impact one's career.

1.12.1.6 Situation 6 (The Certification Barrier)

An emerging market nation recognized the benefits of implementing project management practices and encouraged both government contractors as well as government agencies to support training programs that led to individuals earning PMP certification. Such programs were established by private firms as well as universities to achieve that goal, and, in most instances, the company or government agency paid for the training.

Upon earning their PMP certification, the employees requested a salary increase. The company refused, arguing that the cost it had invested in their training should be viewed as a near-term salary increase and that other financial benefits would occur in the future. The employees were not

satisfied with the response, as they had expected immediate financial benefits upon becoming certified. As such, some employees found employment with other companies, and yet others found employment in other countries where the PMP was valued, and the individuals were rewarded with a salary increase. The companies stopped paying for project management training, no longer supported certification efforts, and, in many cases, discontinued the encouragement to follow the PMBOK Guide.

1.12.1.7 Situation 7 (The Educational Barrier)

A company that recognized the need for project management implementation sent its employees to project management training programs to learn best practices. The employees returned to work with the expectation that they would be able to implement the tools and techniques they learned in the training. When the employees discovered that their company was reluctant to implement many of the new approaches they had learned, the employees sought employment elsewhere.

1.12.2 Legal Barriers

Some countries establish laws that provide limitations on how much, if any, of the financial resources that the country possesses can leave the country. The country can put limitations on procurement activities that leave the country, such as prohibiting contracts with vendors from outside the country. There can also be laws prohibiting or restricting paid overtime for employees.

Companies that wish to do business within these countries must abide by these laws, even if they seem improper. An example might be an employee's right to hold a job even if the performance is substandard. Some laws may even foster corruption possibilities by making it clear that bribes and "gifts" may be appropriate under certain circumstances during competitive bidding activities.

1.12.2.1 Situation 8 (The Procurement Barrier)

The government of an emerging market nation wanted to limit the procurement of goods and services to organizations from within the country. During the competitive bidding process, the local companies were asked to develop a list of qualified vendors from within the country for the government's approval. Accordingly, project managers had no option but to hire contractors from within the country, even if external contractors provided higher-quality goods and services. To make matters worse, additional pressure was imposed on selecting contractors in cities that had the highest unemployment rates, regardless of the capabilities of the vendors.

1.12.2.2 Situation 9 (The Unemployment Barrier)

A project manager was pressured into awarding a procurement contract to a vendor from a city that had significant unemployment. As the project progressed, the project manager realized she could accelerate the schedule by approving the vendor's use of overtime. However, government permission was required for authorization of overtime pay. The project manager soon discovered that the government would not authorize overtime and was also reluctant to allow the project to finish early and with fewer resources because it could result in an increase in the unemployment level and poverty in the community.

1.12.2.3 Situation 10 (The Rigid Policies Barrier)

A company was awarded a contract for a government agency in a country that utilized rigid public procurement processes, rules, and laws. The legal environment created a great deal of inflexibility, and many of the traditional processes in the PMBOK Guide, such as integrated change management, were not in line with the government's requirements. To adhere to the inflexible procurement processes, the project's budget was increased and the schedule had to be extended.

1.12.2.4 Situation 11 (The Restrictions Barrier)

Due to political concerns, or to promote certain competitive practices, certain countries have policies that may restrict who a contractor may be allowed to select as a subcontractor, both within the country or even external to the country. Some policies also dictate which subcontractors a prime contractor must hire, even if the subcontractor's interest in the project is different from that of the prime.

Even though a customer or government agency would like to follow the techniques for decision-making found in the PMBOK Guide, there can still exist laws or policies related to the criteria for decision-making, the time to make the decision, and the parties involved in making the decision that are not entirely consistent with those found in the PMBOK Guide. Moreover, each government agency can have its own interpretation for the acceptance/rejection criteria for project deliverables, the evaluation of overall project quality, and decisions related to the application and receipt of required permits and licenses. Notable differences in decision-making processes that can exist between countries include:

- Ensuring that there is a common understanding of the customer requirements, technical specifications, and quality standards, especially when the client and its contractors are from different countries.
- Establishing timing and requirements for the process of obtaining permits and construction licenses in accordance with the applicable regulations and laws of a country.
- Interpreting or agreeing to the requirements or acceptance criteria of the project and its deliverables.
- Identifying which parts of the organization are involved when negotiating scope and other changes to the project.
- Defining and interpreting norms, laws, international treaties, and rules that must be complied with.
- Managing, administering, and negotiating leases of machinery and equipment with third parties, especially when dealing with other countries.
- Ensuring that the project manager has been able to acquire, lease, or otherwise use the most productive equipment, software, and other assets, even if such resources need to be acquired from outside the country.
- Defining and adequately managing the project's integrated change control system, making sure each requested change is authorized based on the analysis of its impact on risks, time, and project resources.
- Demonstrating the PMO's value to the organization through such activities as monitoring project governance, establishing a common framework of methodologies, processes, policies, and project management information systems.

1.12.3 Project Sponsorship Barriers

Project sponsors (or governance committees) are assigned to projects to provide project teams with a line of sight to senior management for strategic information, assistance for decisions that cannot be made

entirely by the project team, coordination of large stakeholder groups, and resolution of problems more properly handled by senior management. It is not uncommon for individuals to be asked to serve as sponsors without understanding project management or their role and responsibility as a sponsor. Such individuals often do not understand or appreciate the difference between functional management and project sponsorship. There is also the risk that the person selected may abuse the position. In any event, the barriers can prevent, or severely limit, the implementation of effective project management in an organization.

1.12.3.1 Situation 12 (The Centralization of Authority Barrier)

Proponents of professional project management practices advocate that authority and decision-making should be decentralized and pushed down to the lowest level possible. However, many countries foster and maintain a culture in which very few people have the authority to make decisions. Decision-making serves as a source of vast power in both privately held companies and governmental organizations. In such companies, the executive level will never surrender its authority and decision-making power to project managers. The result is that project managers may then function as puppets, unable to effectively manage their projects.

1.12.3.2 Situation 13 (The Lack of Executive Sponsorship Barrier)

Project sponsors are being appointed, but they are not from the executive ranks. There are two reasons for this. First, executives may recognize that they lack project management knowledge or the technical knowledge of the project to be useful to the project manager and team. Accordingly, they could make bad decisions that would become visible to the people who put them in power. Second, and possibly most important, serving as a sponsor on a project that fails could end the executive's career, politically. Therefore, sponsorship, if it exists at all, is often at a low level in the organizational hierarchy, a level at which employees are expendable. The result? Sponsors cannot or will not make decisions or help project managers in times of trouble. This creates an environment of invisible sponsorship.

1.12.3.3 Situation 14 (The Organizational Hierarchy Barrier)

In traditional project management practices, it is thought that problems are resolved at the project sponsor level. But in nations in which organizational hierarchy is sacred, following the chain of command can lengthen the project management process to a point where schedules become irrelevant. Also, the infrastructure supporting project management may exist only to filter bad news from the executive levels and to justify the existence of functional managers. Some information and decision-making authorities may reach as high as government ministers. Simply stated, project managers may not know where and when a decision will be made and cannot be sure in whose hands the project information will ultimately end up. There may be excessive bureaucracy that is not visible at the project manager's level.

1.12.3.4 Situation 15 (Insecurity at Executive Levels Barrier)

Executives may feel insecure about performing as a sponsor because their positions are the result of political appointments. Additionally, project managers may be viewed as the stars of the future and, as such, are a threat to executives. Project management implementation could force the loss of an executive's status, which is often accompanied by fringe benefits and other privileges. Before executives

consider throwing their support behind a new approach, such as project management implementation or an individual project, they worry about its effect on their power, authority, and chances for advancement.

1.12.3.5 Situation 16 (The Social Obligations Barrier)

In certain emerging market nations, social obligations due to religious beliefs and politics are a way for executives to maintain alliances with those who put them in power. As such, project managers may not be allowed to interact socially with certain groups that may possess critical information. Unlike traditional project management practices, where project managers may have the right to communicate with everyone, it may not be possible without going through the project sponsor.

1.12.3.6 Situation 17 (The Lack of Education Barrier)

Not all sponsors are conversant in the language and practice of project management or even have a desire to learn what they don't know. Being unsure about their role as a sponsor, they focus mainly on how to deliver the results faster and at a lower cost, regardless of the quality, risks, or the best way to achieve the end results. Sometimes, sponsors will make promises to customers that require rework or additional testing at no cost to the customer. This creates havoc for project teams.

1.12.3.7 Situation 18 (The Project Charter Barrier)

Lacking even a cursory knowledge of project management, sponsors are reluctant to prepare and sign a project charter for fear that the costs and schedule are not well estimated. This then forces some team members, including stakeholders, to begin to perform certain project tasks without prior authorization.

1.12.4 Cost of Implementation Barriers

Most organizations today understand the benefits that can be derived from effective project management implementation, but are unsure about the costs associated with obtaining those benefits. As such, there may be apprehension, or even fear, in committing to an investment in project management, thereby creating a barrier.

The fear is often that readers of the PMBOK Guide believe that all the processes, inputs, outputs, and tools and techniques must be implemented for the benefits to be fully realized. This is not the case. There are extensions to the PMBOK Guide focused on specific application areas such as software, construction, and government projects. "Downsizing" the PMBOK Guide can certainly work for many organizations, and in fact, the Guide talks about "tailoring" the processes to a specific organization or project.

1.12.4.1 Situation 19 (The Cost of Implementation Barrier)

The costs associated with implementing project management could include purchasing hardware and software (for a project management information system), developing a project management methodology, creating project performance reporting techniques, and training. These costs are not minor and require a significant financial investment that a company may not be able to afford. Implementing project management also ties up significant, and expensive, human resources for an extended time because it takes competent professionals to make it all happen, and, given that every organization has limited

resources, they may avoid implementing project management even though they recognize its benefits because they have more pressing problems at hand.

1.12.4.2 Situation 20 (The Risk of Failure Barrier)

Even if a company is willing to invest time and money to implement project management, there is a significant risk that implementation will fail. Also, once implemented, there is a risk that any individual project will fail, and some in the organization will blame the faulty implementation of project management as the source of the problem. Executives who are then called upon to explain why a specific project failed in the face of an expensive implementation of project management may find that their position in the hierarchy is now insecure. It comes as no surprise that certain executives refuse to either accept or visibly support project management within their organization.

1.12.4.3 Situation 21 (The Costs of Training Barrier)

Project management implementation is difficult without providing adequate training for those who are called upon to practice it. This includes project managers, team members, and sponsors. The need for training can create additional problems. First, how much money must be allocated for training? Second, who will provide the training and what are the credentials of the trainers? Third, can project professionals be released from current project work to attend training classes? It is time-consuming and expensive to train people in project management. The cumulative cost of implementation and training may cause executives to think twice before making an investment in project management.

1.12.4.4 Situation 22 (The Need for Sophistication Barrier)

Project management requires sophistication, not only in the technology that facilitates its implementation, but also in the ability of people to work together. In emerging market nations, employees may not have received training in such important topics as creating high-performance teams; also, the personnel evaluation process may not reward them for teamwork contributions. Communication skills may also be weak, including report writing and the ability to give a coherent presentation. Employees may see their ability to work in teams as a medium through which others will recognize their lack of ability and competency in key areas.

1.12.5 Culture Barriers

Sustainable project management success requires a cooperative culture where team members work together and make decisions in the best interest of the firm. This is most often accomplished without considering authority, power, or pay grade. Cooperative cultures often determine the type of organizational structure to be used for projects. As an example, the matrix structure seems to work best with cooperative cultures. Yet even within a cooperative culture, barriers can be erected if the employees feel threatened or have hidden agendas that may not align with the project's goals and objectives.

1.12.5.1 Situation 23 (The Planning Barrier)

If an organization lacks commitment to sound project management practices, the planning process often suffers, resulting in poor estimates for work effort, duration, and cost. The planning barrier can occur if the organization fails to support the use of a methodology. The result can be an ambiguous scope and requirements. Poor planning usually translates into plans that change too often, unrealistic milestones,

and a lack of faith at all levels of management that project management can succeed. If there are risks that a project may fail due to poor planning, the team members may offer all kinds of excuses as to why they cannot, or do not, participate in planning activities.

1.12.5.2 Situation 24 (The Paperwork Nightmare Barrier)

When looking at the number of processes in the PMBOK Guide, there is apprehension that an excessive amount of unproductive time may be spent completing all the "paperwork," in the form of plans, required. The project manager and team will offer a host of reasons as to why certain reports, documentation, and plans are not necessary, thereby creating another barrier. This barrier can be significant if the organization believes in the philosophy that "what is not on paper has not been said."

1.12.5.3 Situation 25 (The Project Completion Barrier)

As projects begin to wind down, team members begin to worry about their next assignment. If this uncertainty is not addressed by the project manager or sponsor, team members, by reducing their productivity, may elongate the project closure process until they are assured of their next assignment. They may also leave their current project before the work is completed if they can guarantee employment elsewhere. This may, and often does, create hardship for the remaining team members. There's another reason why team members lack dedication to project closure. And that's because they are often afraid of participating in the lessons learned process. As we know, lessons learned are based upon what was done well and what was done poorly. As such, they may not want any official documentation that shines a spotlight on what went wrong, especially if their name is associated with any blunders or mistakes.

1.12.5.4 Situation 26 (The Management Reserve Barrier)

Cooperative cultures tend to find ways to protect themselves and their colleagues from certain risks, rework, poor estimating, and other such situations. The management reserve is one such way. However, a barrier can be created when the customer of the project believes that the management reserve is created solely for the benefit of the organization performing the project rather than the customer.

1.12.5.5 Situation 27 (The PMP Barrier)

One of the benefits of certification is that the project manager ensures that each person's role and responsibility is known to all. The Responsible, Accountable, Consulted, and Informed (RACI) Chart is an excellent tool to communicate the project team's roles and responsibilities at the activity level, thereby providing a common understanding of who is responsible for what actions. However, not all organizations encourage their people to become certified as PMP. In organizations that do not support a systematic approach to project management, do not provide sufficient training for their project practitioners, and do not support certification of one type or another, the role of the project manager often becomes that of a firefighter.

1.12.6 Project Management Office (PMO) Barriers

Even though there are multiple types of PMOs, the existence of a PMO usually indicates that an organization is dedicated to continuous improvement in project management. Unfortunately, some executives may view the PMO as a threat to their power and influence if they are content with the status quo and are not interested in the type of organizational change that implementing project management causes.

PMOs can be used not only to promote effective project management practices but also to capture and share the best practices and lessons learned, among many other activities. They can also assist senior management in the monitoring of enterprise environmental factors that can impact decision-making. This is important in emerging market nations that oftentimes struggle with hyperinflation and must control the country's scarce resources.

1.12.6.1 Situation 28 (The "Information Is Power" Barrier)

When managers believe that information is power, they create barriers that may prevent the formation of organizations that gather and disseminate such information. Sometimes, several functional PMOs are created to centralize information and control its release. Infighting can occur among functional units as to who controls each PMO if the information collected and disseminated is seen as a source of power.

1.12.6.2 Situation 29 (The PMO Financing Barrier)

All PMOs require human and nonhuman resources to be effective, and resources require capital expenditures. Managers who believe information is power will always create barriers that justify not financing a PMO. Barriers can be established by either staffing the PMO with nonqualified individuals, starving the PMO of needed funds, or limiting the tools provided to the PMO for monitoring and controlling projects.

Although the focus was on nations outside North America, all countries, including emerging market nations, have an abundance of talent that has yet to be fully harvested. Barriers can appear in any organization for a multitude of reasons as identified in the situations presented in this section. As the importance of project management grows, executives will come to recognize and accept that the benefits of project management are too great to ignore. They will see that implementing project management will lead to increased customer and employee satisfaction, an increase in revenue and profits, and a decrease in the number of troubled projects. The barriers and accompanying challenges that impede successful project management implementation will still exist, but organizations will begin to excel in how to live and work within the barriers and constraints imposed.

Executives (for-profit, nonprofit, and government) are beginning to see more of the value of project management and have taken steps to expand its implementation throughout their organizations. Executives in those rapidly developing emerging market nations appear today to be much more aggressive in providing the support needed for breaking through many of the barriers noted above. As more success stories emerge, we will see an increase in the number of executives in emerging markets supporting the necessary investment in project management to make it a core management process.

1.13 Managing Multicultural Challenges in Latin America and the Caribbean[3]

1.13.1 Introduction

I am Lisandro Echeverría Villalobos, passionate about project management and team leadership. My training in project management began in 2002 with Dr. Harold Kerzner and the International Institute for Learning (IIL) in Costa Rica, and since then, I have applied project management practices to

3

complex, multicultural projects across Latin America and the Caribbean. I share my experience in overcoming challenges in politically sensitive and multicultural environments, using project management methodologies to achieve successful outcomes.

1.13.2 Challenge Definition

1.13.2.1 Project Context

My projects focused on implementing programs funded by the US government aimed at improving governmental systems and processes in Latin America and the Caribbean. These multimillion-dollar projects faced significant challenges, including:

- *Union and stakeholder resistance*. Internal opposition and lack of cooperation from certain stakeholders hindered the implementation of technological solutions.
- *Sabotage and internal conflicts*. Issues such as lack of training, defective equipment, and unfounded accusations caused delays and tensions.
- *Political and cultural complexity*. The need to navigate politically sensitive environments and adapt to different organizational cultures added an additional layer of difficulty.
- *Payment delays and bureaucracy*. Despite meeting project objectives, payments were often delayed due to bureaucratic processes and manipulation by local stakeholders.

1.13.2.2 Impact of Challenges

These challenges not only affected project execution but also jeopardized the sustainability of the results and the trust of stakeholders. The lack of alignment between project objectives and stakeholder expectations was one of the greatest obstacles. This misalignment often stemmed from a combination of factors, including cultural differences, political agendas, and varying levels of understanding about the project's goals and benefits. For instance, in some cases, local stakeholders had different priorities or were influenced by external pressures, which created resistance to the changes proposed by the project. This resistance was not merely about technical or logistical issues but was deeply rooted in the human and organizational dynamics of each context.

Moreover, the complexity of managing multimillion-dollar budgets in politically sensitive environments added another layer of difficulty. Financial transparency and accountability were critical, as any perception of mismanagement could undermine the project's credibility and jeopardize its continuity. Ensuring that funds were used efficiently and effectively required not only rigorous financial controls but also constant communication with stakeholders to address their concerns and expectations.

The sustainability of the results was also at risk due to the lack of buy-in from key stakeholders. Without their support, the implemented solutions could fail to gain traction or be abandoned once the project team left. This was particularly challenging in environments where change was viewed with skepticism or where there was a history of failed initiatives. Building trust and fostering a sense of ownership among stakeholders was essential to ensure that the project's benefits would endure beyond its completion.

1.13.3 Solutions Implemented

1.13.3.1 Methodologies and Tools Used

To overcome these challenges, I applied project management methodologies and tools, including:

- *Risk identification and management*. From the outset, I identified potential risks and developed mitigation strategies, including a database of risks inherited from previous projects.
- *Stakeholder negotiation and alignment*. I worked closely with key stakeholders, from high-level officials to operational staff, to align expectations and secure their support.
- *Use of flexible contracts*. I implemented "umbrella" contracts that allowed adjustments to the project scope and budget according to local needs and constraints.
- *Transparency and accountability*. I established clear mechanisms to monitor project progress and ensure transparency in the use of funds.

1.13.3.2 Project Execution

Project execution was based on the following stages:

1) *Scope and objective definition*. I worked with stakeholders to clearly define the project scope and expected outcomes. This involved conducting workshops and meetings to ensure that everyone had a shared understanding of the project's goals, deliverables, and success criteria. By involving stakeholders from the beginning, we fostered a sense of ownership and commitment to the project.
2) *Detailed planning*. I developed detailed schedules and budgets, ensuring that each step was backed by adequate resources and capabilities. This included creating a comprehensive project plan that outlined tasks, milestones, responsibilities, and timelines. I also established contingency plans to address potential risks and uncertainties.
3) *Implementation and monitoring*. I oversaw the implementation of solutions, monitoring progress and adjusting the plan as needed. This required regular communication with the project team and stakeholders, as well as the use of project management tools to track performance, manage dependencies, and ensure that deliverables were completed on time and within budget.
4) *Risk and conflict management*. I proactively addressed risks and conflicts, using negotiation and mediation to resolve issues. This involved identifying potential risks early in the project, developing mitigation strategies, and maintaining open lines of communication with stakeholders to address concerns and conflicts promptly.
5) *Closing*. I ensured that all project objectives were met and that deliverables were formally accepted by the stakeholders. This phase included conducting a thorough review of the project's performance, documenting lessons learned, and facilitating the transition of the project's outcomes to the operational environment. I also ensured that all contractual obligations were fulfilled and that the project team was properly recognized for their contributions. Additionally, I conducted a post-implementation review to assess the project's impact and identify opportunities for future improvements.

1.13.4 Results and Learnings

1.13.4.1 Quantifiable Results

Although I cannot reveal specific details due to confidentiality, the projects significantly improved the transparency and efficiency of governmental systems in several countries. These results were reflected in:

- *Reduced processing times*. Digitizing processes reduced the time required to complete administrative tasks.
- *Improved accountability*. The implemented systems allowed for greater control and transparency in the use of public funds.
- *Training and empowerment*. Hundreds of officials were trained in the use of new technologies and methodologies.

1.13.4.2 Key Learnings

The human factor is essential. Beyond tools and technologies, the success of a project depends on the ability to manage and motivate the people involved.

Flexibility is key. In complex and multicultural environments, it is essential to adapt quickly to changes and unforeseen challenges.

Transparency builds trust. Transparency in project management is crucial for gaining stakeholder trust and ensuring long-term success.

1.13.5 Final Reflections

Project management is not just about controlling scope, time, and cost. It is also about understanding and managing the human, cultural, and political dynamics that influence project success. I have learned that true leadership in project management is not about being the center of attention but about serving as a facilitator and catalyst for collective success.

Ultimately, the purpose of any project should be to improve people's lives. If we can empower and motivate end-users, we will have achieved true success.

1.14 Overcoming Project Ambiguity: How Dubai Customs Integrates Strategic Foresight to Build Resilient Initiatives[4]

In an era where unforeseen disruptions—from geopolitical shocks to technological breakthroughs—can derail billion-dollar initiatives overnight, the cost of reactive decision-making has never been higher. According to PMI's Pulse of the Profession (2020), organizations lose 11.4% of investment due to poor

4 This section is provided by Ajith Nair—Senior Research & Business Solutions Specialist | Future Foresight Lead—Dubai Customs.

project performance, much of it stemming from misalignment with evolving strategic priorities and a limited capacity to anticipate future uncertainties.

Against this backdrop, Dubai Customs posed a bold, future-facing question: What if we could embed foresight into our projects from day one—designing for uncertainty rather than reacting to it?

1.14.1 Executive Summary

In today's high-volatility environment, traditional project management frameworks often fall short in navigating deep uncertainty. Recognizing this gap, Dubai Customs redefined its project delivery approach by systematically integrating strategic foresight into the fabric of project governance and execution.

This anticipatory model empowered teams to surface and stress-test future scenarios, align cross-functional stakeholders on long-term trajectories, and transition from reactive risk management to proactive uncertainty navigation. The result: increased project resilience, streamlined delivery cycles, and a forward-compatible portfolio aligned with Dubai's strategic ambitions.

More than an internal transformation, this approach offers a scalable blueprint for public sector organizations seeking to future-proof their project ecosystems and enhance long-term public value.

1.14.2 Introduction: The Global Challenge and Dubai's Proactive Response

The twenty-first century presents organizations with an unprecedented confluence of complexity and disruptive forces. Geopolitical realignments, exponential technological growth, and volatile economic landscapes demand more than just agile responses; they require anticipatory governance. Dubai Customs, operating at the crossroads of global trade and a key enabler of the UAE's dynamic economy, recognized this imperative early. Faced with future-critical projects—from advanced customs inspection to AI-powered trade intelligence—Dubai Customs identified a critical gap: traditional project management approaches, while structured, struggled to navigate profound ambiguity, leading to potential misalignments and inefficiencies. The core problem was clear: to ensure the long-term viability and impact of strategic initiatives, a new paradigm was needed. Dubai Customs' fusion of strategic foresight with rigorous project governance offers a compelling blueprint for how public sector entities can not only weather the storms of change but also build the capacity to thrive within them, ensuring sustained public value.

Yet, in many organizations, project portfolios are still anchored primarily in static five-year strategic plans. While these plans provide structure, they often lack the agility to respond to fast-emerging disruptions. Projects initiated under such frameworks risk becoming misaligned—or even obsolete—when confronted with sudden policy shifts, technological breakthroughs, or evolving stakeholder demands. Without the anticipatory lens of strategic foresight, institutions face a persistent risk: delivering yesterday's solutions to tomorrow's challenges.

1.14.3 The Core Challenge: Transcending Strategic Blind Spots in Project

Dubai Customs' ambitious transformation portfolio, like many large-scale endeavors, encountered critical project management challenges stemming from inherent strategic blind spots. Overcoming these was paramount for success:

- *Strategic uncertainty and its project impact*. A primary hurdle was Strategic Uncertainty. Projects were often launched based on current assumptions, without a robust mechanism to understand how

long-term geopolitical, technological, or economic shifts would fundamentally alter their viability or value. For project managers, this translated into the persistent risk of developing solutions for an outdated future, leading to scope creep as realities shifted, misaligned deliverables, and ultimately, a diminished return on investment. Traditional project planning struggled to accommodate this level of deep uncertainty.

- *Stakeholder misalignment in a complex ecosystem*. Compounding this was Stakeholder Misalignment. In a multiagency environment with diverse priorities and varying degrees of future-readiness, achieving unified commitment proved a significant project management challenge. Differing expectations about future needs and solutions led to conflicting requirements, protracted decision-making cycles, endless revisions, and a constant struggle to maintain buy-in, directly impacting project timelines, costs, and overall effectiveness.
- *The limitations of reactive risk management*. Furthermore, traditional Reactive Risk Management practices proved insufficient. By predominantly focusing on historical data and known risks, project teams were often blindsided by emergent, unprecedented disruptions due to gaps in anticipating change—the "unknown unknowns." This left projects vulnerable to sudden derailments, forcing teams into a constant firefighting mode rather than proactive mitigation, and highlighted a critical gap in conventional project risk planning when faced with novel, high-impact uncertainties.
- *This environment underscored a fundamental limitation*. traditional project management paradigms, while effective for predictable endeavors, were ill-equipped to navigate the profound ambiguity inherent in future-shaping transformations. It became evident that a new approach was essential—one that moved beyond simply executing projects within given constraints to actively anticipating and shaping the future context. This necessitated embedding strategic foresight deep within the project management fabric, enabling Dubai Customs to not only identify and overcome these blind spots but to turn potential future challenges into opportunities for resilient and impactful project delivery.

1.14.4 The Solution: A Systemic Approach to Foresight

To address these challenges, Dubai Customs formalized a Strategic Foresight Framework, adapted from the Global Innovation Management Institute (GIMI) methodology for government transformation (see Figure 1.1). This wasn't an academic exercise; it was a customized operationalized "foresight framework" designed to make future thinking actionable.

- *Scoping and framing*. Defining project-critical uncertainties, key drivers of change, and relevant time horizons.
- *Horizon scanning*. Systematically using trend radars, weak signal analysis (often AI-powered), and expert Delphi panels to identify emerging shifts.
- *Scenario development*. Crafting divergent yet plausible "future worlds" using techniques like 2×2 matrices and influence mapping to explore a range of potential operating environments.
- *Strategic alignment and action mapping*. Critically, linking preferred and challenging scenarios back to current initiatives, generating new future-proofed project concepts, and proactively de-risking existing portfolios against potential disruptions. This engine was fully embedded within the project delivery governance model, ensuring projects originated from, and were continuously tested against, foresight outputs.
- *Foresight in action*. Measurable Resilience and Tangible Transformations Integrating Foresight with Global Standards (PMI)

Framework

Dubai Custom Foresight Tailored Framework

S1: Scoping
- Define Focal Issues and Time Horizons
- Define Key Questions

S2: Environment Scanning
- Identify patterns, Key Drivers and Key Uncertainties
- Explore and Analyze Trends to classify, and prioritize them

S3: Future Scenarios Development
- Build scenarios and future narratives

S4: Strategy Alignment
- Adjust the strategy according to future scenarios
- Identify initiatives and projects

S1: Scoping	S2: Environment Scanning	S3: Future Scenarios Dev.	S4: Strategy Alignment
• **The main goal of this step is to define the perimeter of Future Foresight issues,** or projects, to frame the context. • The **outcome** of this step is the definition of the **Focal Issues, the Time Horizons, and Key Questions for the Future Foresight effort along the model.**	• **The main goal of this step is to explore perpetually the environment for signals, trends, and influencing factors.** • The **purpose** of this step is to **capture and manage the data for the analysis of trends,** to classify and prioritize them, and to identify patterns and ascertain the Key Drivers of Change and Uncertainties.	• **The main goal of this step is to further analyze the synthesized data and knowledge to plan and build scenarios** and future narratives of alternative futures in different forms, working with key stakeholders in the process, and modelling.	• **The main goal of this step is to study and analyze the implications from future scenarios,** and **identifying the implications on Dubai Customs strategy,** customs regulatory policies to guide the planning of change. • Simultaneously, **aligning with key stakeholders on the identified implications** from the analysis.

Figure 1.1 Dubai customs operational foresight framework.

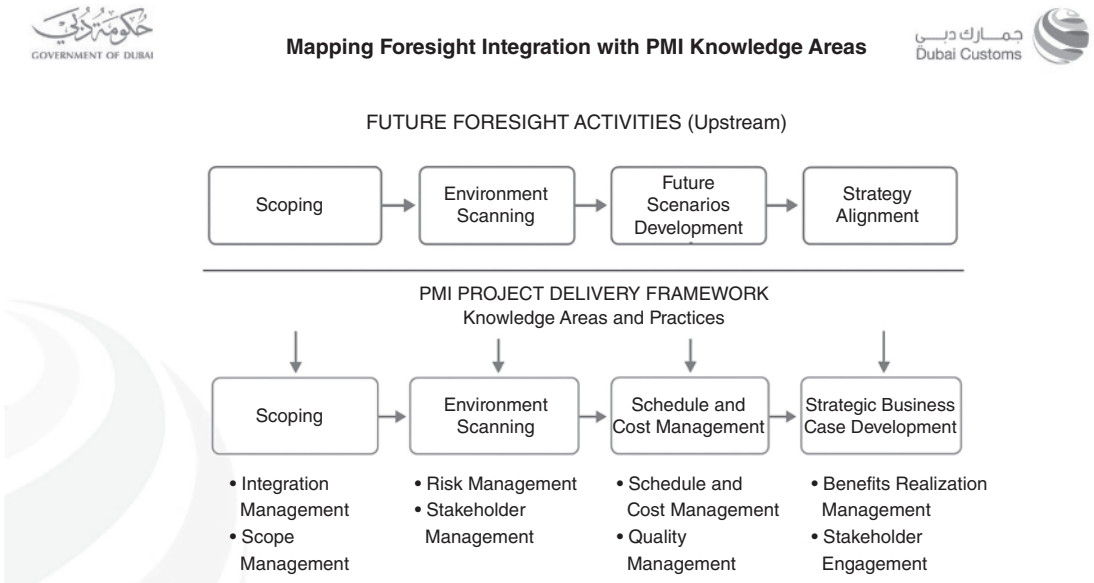

Figure 1.2 Mapping foresight integration with PMI knowledge areas.

To ensure foresight translated into execution excellence, Dubai Customs systematically mapped its foresight framework to its project management practices aligned with PMI's PMBOK Guide Knowledge Areas (see Figure 1.2). Foresight outputs became a strategic intake filter for project initiation (Integration Management). Scenario-driven workshops stress-tested project scopes and schedules against multiple futures (Scope and Schedule Management). Risk registers evolved to include scenario matrices and wild-card triggers (Risk Management), and future visioning sessions fostered early inter-agency alignment (Stakeholder Engagement).

This integration embodied PMI's evolving principle of a "Duty of Foresight," transforming business cases from static plans into future-proofed opportunity maps and risk registers from reactive logs into dynamic anticipation systems.

This growing emphasis on strategic anticipation is increasingly reflected in professional standards. As the Project Management Institute (PMI) advices: "The chapter board of directors should build a consistent practice of foresight to act as responsible investors and champions and anticipate evolving mix of requirements required to thrive in the future" (PMI, Policy Manual for PMI Chapters, 2020).

This statement signals the professionalization of foresight—not just as a leadership trait, but as a governance standard embedded within modern project institutions.

1.14.5 Anticipated Impact of Strategic Foresight on Project Management Performance

The integration of strategic foresight into Dubai Customs' project planning process was not a theoretical exercise—it has already reshaped how future initiatives are scoped, de-risked, and prioritized, even

before execution. While several foresight-informed initiatives are currently in advanced planning or pre-implementation phases, measurable benefits have been modeled based on simulations, stakeholder alignment workshops, and redesigned project intake protocols.

1.14.6 Evidence from Early-Stage Projects

1.14.6.1 Enhanced Project Risk Management and Procurement

In the Future of Border Trade initiative, scenario workshops exploring geopolitical fragmentation and regulatory divergence directly influenced the project's risk framework. New regulatory risk triggers were embedded into procurement templates and vendor contracts for the planned blockchain rollout. This anticipatory adjustment—derived from scenario stress-testing—was modeled to reduce costly mid-execution scope changes and contractual risks.

1.14.6.2 Future-Proofed Project Scope and Quality Management

The Passenger Flow Transformation initiative utilized a "Biometric Mega Hubs" scenario to stress-test the scalability of smart inspection systems. As a result, AI-upgrade pathways and operational resilience thresholds were added to procurement specifications. These adaptations improved project scope and quality robustness, ensuring deliverables would remain valid under future peak loads.

1.14.7 Modeled Performance Improvements

The following improvements are derived from foresight-informed planning simulations, intake filter design, and stakeholder scenario alignment:

Projected 28% reduction in procurement rework cycles
Scenario-based specifications minimized ambiguity, reducing the likelihood of revision during vendor execution.
Estimated 35% acceleration in stakeholder alignment
Cross-functional workshops enabled earlier consensus on strategic direction, reducing delay in planning approvals.
Modeled 42% improvement in risk heatmap accuracy
Integration of wildcard monitoring and weak signal tracking enhanced forward-looking risk detection.
Forecasted 38% reduction in project approval lead time
Foresight-informed intake filters allowed faster evaluation and prioritization of strategically aligned projects.

Note: These metrics represent anticipated improvements based on early-stage simulation, stakeholder input, and governance redesign. Full validation will occur through post-implementation performance tracking.

1.14.8 Institutional Transformation: A New DNA

The integration of foresight catalyzed a profound institutional shift within Dubai Customs. Proactive Project Initiation became the norm, with initiatives emerging from strategic signals and future scenarios rather than solely top-down mandates. Enhanced Project Resilience meant delivery teams could better

anticipate change, manage uncertainty, and align outputs to future demands. Most importantly, a cultural shift occurred: foresight was no longer an isolated function but an embedded strategic capability, part of the Dubai Customs governance DNA, transforming the project delivery department into a strategic foresight nerve center.

1.14.9 Lessons for a Volatile World and Global Replicability

Dubai Customs' journey offers critical, universally applicable lessons for any organization striving for future-readiness:

- *Leadership commitment is paramount*. Sustained executive sponsorship is crucial for embedding foresight.
- *Integration beats isolation*. Foresight delivers maximum value when woven into existing governance, planning, and risk processes, not as a standalone activity.
- *Start with tangible pilots*. Demonstrate value through focused initiatives to build momentum and internal expertise.
- *Make it actionable*. Translate foresight insights into concrete project adjustments, new initiatives, or de-risking strategies.

This model, fusing foresight with PMI-aligned project delivery, is not just a Dubai success story; it serves as a robust blueprint for other government entities and large corporations globally seeking to navigate complexity and build resilient enterprises.

1.14.10 Conclusion and Call to Action

In an age of accelerating change, strategic foresight is not a luxury—it is an essential infrastructure for resilient project delivery and sustained organizational success. Dubai Customs' pioneering journey demonstrates how an intentional, systematic approach to anticipating the future can transform project execution from a compliance-driven function into a powerful engine for strategic adaptation and value creation. Their experience stands as a benchmark. The challenge and opportunity for leaders globally is to embrace strategic foresight, not merely to adapt to a predetermined future, but to actively shape it. By institutionalizing anticipatory governance, organizations can unlock new levels of innovation, safeguard public or shareholder value, and build a lasting capacity to thrive in an ever-evolving world. The time to invest in foresight is now; the future will not wait.

1.15 Kombs Engineering

While some companies are fortunate enough to be able to identify crises early and take corrective action, others are not as fortunate. Although this case study appears to be outdated, there are valuable lessons that can be learned about what not to do when embarking on the path to maturity, especially when the customer may have more project management knowledge than the contractor. Consider the Michigan-based Kombs Engineering (name of the company is disguised at company's request).

In June 1993, Kombs Engineering grew to a company with $25 million in sales. The business base consisted of two contracts with the Department of Energy (DoE), one for $15 million and one for $8 million. The remaining $2 million consisted of a variety of smaller jobs for $15,000–$50,000 each.

The larger contract with the DoE was a five-year contract for $15 million per year. The contract was awarded in 1988 and was up for renewal in 1993. The DoE had made it clear that, although it was very pleased with the technical performance of Kombs, the follow-on contract had to go through competitive bidding by law. Marketing intelligence indicated that the DoE intended to spend $10 million per year for five years on the follow-on contract with a tentative award date of October 1993. On June 21, 1993, the solicitation for proposals was received at Kombs. The technical requirements of the request for a proposal were not considered to be a problem for Kombs. There was no question on anyone's mind that, on technical merit, Kombs would win the contract. The more serious problem was that the DoE required a separate section in the proposal on how Kombs would manage the $10 million/year project as well as a complete description of how the project management system at Kombs functioned.

When Kombs won the original bid in 1988, there had been no project management requirement. All projects at Kombs were accomplished through the traditional organizational structure. Only line managers acted as project leaders.

In July 1993, Kombs hired a consultant to train the entire organization in project management. The consultant also worked closely with the proposal team in responding to the DoE project management requirements. The proposal was submitted to the DoE during the second week of August. In September 1993, the DoE provided Kombs with a list of questions concerning its proposal. More than 95% of the questions involved project management. Kombs responded to all questions.

In October 1993, Kombs received notification that it would not be granted the contract. During a postaward conference, the DoE stated that it had no "faith" in the Kombs project management system. Kombs Engineering is no longer in business.

Kombs Engineering is an excellent case study to give to students in project management classes. It shows what happens when a subcontractor does not recognize how smart the customer has become in project management. Had Kombs been in close contact with its customers, the company would have had five years rather than one month to develop a mature project management system.