Project Management 6th edition Pinto Solutions Manual

SKU: 9780135421086-SOLUTIONS

CHAPTER ONE

Introduction
Why Project Management?

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DISCUSSION QUESTIONS

1.1 What are some of the principal reasons why project management has become such a popular business tool in recent years?

In today's market, the length of product life cycles is shortening. This means businesses are under pressure to produce new or improved products at an increasingly rapid pace. Growing global markets, consumer tastes, and competition demand that products constantly be improved to be better, faster, and sleeker and offer more features. Most organizations are planning their next product or product improvement as their latest innovation is just on its way out the door. Under conventional business practices, keeping up with this demand for innovation can be difficult. Project management provides organizations with a toolkit with which to enhance innovation and accelerate product development.

1.2 What do you see as the primary challenges to introducing a project management philosophy to most organizations? That is, why is it difficult to shift to a project-based approach in many companies?

Many companies face resistance to change, which can make implementing a new approach, such as a project-based structure, very difficult. Employees must be trained in new processes and learn how to integrate them into their existing roles. Often, resistance arises because employees are hesitant to embrace major changes in established practices due to uncertainty about potential outcome.

1.3 What are the advantages and disadvantages of using project management?

Advantages:

- Innovative, produce new ideas and new products
- Geared toward accomplishing a specific goal
- Aimed at customer satisfaction

Disadvantages:

- Inaccurate cost estimates during initial stages may cause project to fail due to lack of resources
- Low success rate in some industries
- Requires heavy commitment by staff

1.4 What key characteristics do all projects possess?

Projects:

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- are temporary operations with a defined life span
- help develop and execute organizational strategies and goals
- are sources of innovation and progress
- stimulate internal collaboration between members of various functional areas
- are limited by resource and time constraints
- end when objectives are successfully reached

1.5 Describe the basic elements of the project life cycle. Why is an understanding of the life cycle relevant for our understanding of projects?

The project life cycle includes the stages of the project's development. The basic elements of the cycle include:

- conceptualization: outlines project goal, scope of work, identifies required resources and stakeholders
- planning: specifications, timetables, and other plans are created; work packages are broken out; assignments are made; and process for completion is defined
- execution: actual work of project takes place, majority of teamwork is performed, and, characteristically, majority of costs are incurred
- termination: project is completed and passed on to customer, resources are reassigned and team members disbanded

Project life cycles serve as a valuable framework for determining the scope and resource requirements of specific projects. By clearly defining a project's life cycle, organizations can identify potential challenges and pitfalls early in the process. More broadly, understanding project life cycles enhances awareness of how projects operate within an organization and how they differ from traditional corporate processes.

1.6 Think of a successful project and an unsuccessful project with which you are familiar. What distinguishes the two, both in terms of the process used to develop them and their outcomes?

This question is intended for classes with students who have had some experience with projects in the past. It seeks to get them to examine the causes of success and failure from their own experience. Instructors should then begin developing a list of the various causes of success and failure as a point of discussion.

1.7 Consider the Expedition Everest case at the end of the chapter: What elements in Disney's approach to developing its theme rides do you find particularly impressive? How can a firm like Disney balance the need for efficiency and smooth development of projects with the desire to be innovative and creative? Based on this case, what principles appear to guide its development process?

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This case lets students comment on the particularly appealing elements in Disney's project management approach, for example, their attention to detail and willingness not to cut corners in terms of cost or schedule to make sure that the ride offers a memorable experience. The need to balance efficiency and creativity is an interesting one because it gets to the heart of project trade-offs. There are always more trips to be taken, more time to be spent, more artifacts that can be gathered to continuously "tweak" the ride; however, ultimately, they must also adhere to a roll-out schedule that gets the project completed. How much is enough? How much is too much? These form the basis of great in-class discussions. Finally, it is important to get the class to consider other factors that must weigh into project development decisions, like safety and general appeal. For example, creating a ride that is too intense for young children would violate Disney's "kid friendly" philosophy. Likewise, all new rides must first be completely safe for the passengers, so any design issues always must be subordinated to safety.

1.8 Consider the six criteria for successful IT projects. Why is IT project success often so difficult to assess? Make a case for some factors being more important than others.

IT project success is often difficult to assess because the criteria for success—system quality, information quality, use, user satisfaction, individual impact, and organizational impact—are not easy to accurately measure. Customer feedback related to user satisfaction, system quality, and impact may vary from user to user. For instance, while someone in insurance claims may find the system user friendly and beneficial to everyday tasks, an employee in actuary may find it cumbersome and difficult to navigate. When it comes to IT projects and the criterion above, user background, training, and experience could greatly affect the success rate of the project. These factors may not be fully known during initial planning and implementation stages.

However, criteria such as system/information quality and use may be easier to assess. The team should be able to determine whether the designed system meets the specifications of the customer. All specifications should have been determined from the beginning, so upon completion test runs should determine if the system meets quality standards. In the area of use, following implementation, in most cases, it is possible to track use. Due to their ability to be more concretely measured, these factors, combined with the overall satisfaction of the customer, may be more important in determining success of the project than other more arbitrary measures.

1.9 As organizations seek to become better at managing projects, they often engage in benchmarking with other companies in similar industries. Discuss the concept of benchmarking. What are its goals? How does benchmarking work?

Benchmarking compares the performance of a company to that of industry competitors and in some cases, for instance, where procedures or functions are similar, to that of superior performers in other industries. To set benchmarks for a company, first a leader in the industry is selected. Then, the company gathers data of that leader's performance measures. The data is

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analyzed and gaps between the leader/benchmarks and the company are noted. The company then sets goals and strives to meet the benchmarking standards. The goal of benchmarking is, therefore, to seek out weak performance areas within the company and set goals for improvement.

1.10 Explain the concept of a project management maturity model. What purpose does it serve?

Implementing project management occurs in phases over time. Companies evolve through stages of project management. A Project Maturity Model is a structured framework used to assess and improve an organization's capability in managing projects effectively. Maturity models provide a starting point for companies new to project management. Project maturity models offer businesses a way to map out necessary steps to becoming competitive through project-based work. Maturity models assess a specific company's current practices (related to projects), establish the company's position in relation to its competitors, and provide guidelines for improvement. They use industry data to establish a series of benchmarks. Based on industry competitors, they can then determine stages required as well as how quickly a company should develop. The company can then follow the model to achieve the highest level of ability in each pertinent project management area.

1.11 Compare and contrast the four project management maturity models shown in Table 1.3. What strengths and weaknesses do you perceive in each of the models?

The four models each use five levels beginning with an initial ad hoc or sporadic use of project management and ending with a fully integrated project management system with emphasis on innovation and continuous improvement. Other similarities among the models include an element of benchmarking or use of industry standards to measure project management performance. The models do vary on the relative pace of innovation. For instance, the ESI's International Project Framework develops more slowly in early stages than that of Kerzner's Project Management Maturity Model. In addition, some models focus more on learning while others are more directed at control. Kerzner's discusses training and curriculum while SEI's Capability Maturity Model Integration outlines steps for control and assessment of results.

Center for Business Practices

Strengths: It is mapped out at an appropriate pace; there are no broad leaps from one stage to the next. Also, it emphasizes the role of project management as corporate processes, which means project management becomes part of the working firm, not just part of the job duties of a specific group or team.

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Weaknesses: This model lacks direction in management training. It refers to management awareness and support, but does not mention training or formal training.

Kerzner's Project Management Maturity Model

Strengths: Kerzner's does a much better job of designating at what levels managers need to be trained or curriculum developed.

Weaknesses: Benchmarking does not come in until level 4, which maybe a little late. A firm in this model would have already integrated project management processes; trying to make any significant adjustments (in accordance with benchmarking figures) after this integration may be difficult.

ESI International's Project Framework

Strengths: This model has two strong qualities. The first is its overt emphasis on innovation and continuous improvement. Secondly, the model emphasizes the need for integration and understanding throughout the firm.

Weaknesses: The movement between levels 1 through 3 may cause problems for a firm. In level 1, processes are ill-defined and have little organizational support; this changes little as the corporation moves to level 2, which has no project control processes. Then, in level 3, processes are tailored. Given the undefined nature of processes prior to level 3, it may be hard to reach this goal initially. This may cause companies to become stalled in level 3.

SEI's Capability Maturity Model Integration

Strengths: Quality is a top concern even in early stages of this model. Analysis and insurance procedures are developed at different stages to ensure standards are met.

Weaknesses: On the other hand, the attention to testing may also hinder project management integration. There may be an overabundance of measures to control, analyze, and qualify in this system. While quality is of importance, the level of time commitment to those procedures may be the crux of this model. Team members may become frustrated with the project process if they (or their work) are constantly being measured, tested, and re-measured.

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CASE STUDIES

Case Study 1.1 MegaTech, Inc.

MegaTech, Inc., is designed to highlight some of the reasons why an organization that had operated in a relatively stable and predictable environment would seek to move to an emphasis on project-based work. The trigger event in this case is the advent of the NAFTA treaty, which opened up competition on a more price-competitive basis.

Questions

1. What is it about project management that offers MegaTech a competitive advantage in its industry?

Project management techniques will allow the firm to combine the advantages of internal efficiency with external (environmental) responsiveness. For example, it was determined that successful firms offer frequent product updates, which MegaTech's move has allowed them to exploit. It has also promoted a team-based atmosphere that is encouraging cooperation and unity of effort among the different functional departments.

2. What elements of the marketplace in which MegaTech operates led the firm to believe that project management would improve its operations?

The intense, new competitive nature of the marketplace impels companies to find new methods for competitive advantage. With many new competitors and serious price pressure, success will require firms to be fast to market, hold the lid on costs, and offer frequent upgrades and new products—all while encouraging an atmosphere of risk taking and cooperation.

Case Study 1.2 The IT Department at Hamelin Hospital

The IT Department case shows the prevalence of projects in settings that are perhaps not as obvious (in this case, a large hospital). The case is designed to get students to understand the ubiquitous nature of project-based work in our modern public and private organizations. It also demonstrates career paths and how successful work on projects is often rewarded with corporate success. Projects are not a distraction or a side-line; they are the principal means by which the IT department's operations are demonstrated.

Questions

1. What are the benefits and drawbacks of starting most new hires at the help desk function?

Most new hires start at the help desk function, where they can become familiar with the system, learn about problem areas, become sensitive to user's frustrations and concerns, and understand how the IT department affects all hospital operations. Students may also note that though

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mundane, working at the help desk forces people to "pay their dues" by demonstrating their commitment to the organization prior to being trusted with enhanced responsibilities.

2. What are the potential problems with requiring project team members to be involved in multiple projects at the same time? What are the potential advantages?

One serious disadvantage is that it stretches departmental resources very thin; people can be involved in multiple projects and are likely to start letting commitments slip if they are not careful. Also, it is often difficult to move from assignment to assignment quickly and seamlessly. Instead, team members experience times when they are not productive as they try and multitask across several projects at once. Among the advantages are that this configuration allows the project team members to work with many different people, including several project managers, experiencing different managerial styles and interpersonal relationships. It also keeps team members interest high because their involvement in multiple teams and projects ensures that they do not become bored by routine.

3. What signals does the department send by making "project manager" the highest position in the department?

The main signal is the idea that the career path for successful IT professionals runs directly through project-based work. They cannot be successful in this organization unless they are competent at first serving in and then running projects.

Case Study 1.3 Disney's Expedition Everest

The Expedition Everest case is an example of the extreme attention to detail that Disney pays in all of their rides. Their management is a combination of careful planning coupled with the imagination and knack for visual effects for which the company is well known. The case tells the story of the development of the ride, the numerous steps Disney went through to get every detail as accurate as possible, and reflects on their overall approach to project management.

Questions

1. Suppose you were a project manager for Disney. Based on the information in this case, what do you think the company uses when designing a new ride? That is, how would you prioritize the needs for addressing project cost, schedule, quality, and client acceptance? What evidence supports your answer?

The case clearly shows that Disney makes its priorities quality and client acceptance. Given the industry they are in, they must first ensure that all their rides are safe and of the highest quality (customers expect nothing less from the Disney name). Because these issues are paramount, concerns with cost and schedule are secondary considerations. To illustrate this priority, consider the multiple trips that Disney Imagineers took to Nepal to gather local artifacts, check the

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topography, and building styles, and other steps to ensure accuracy. These come at a cost but to Disney, the overall effect is worth it.

2. Why is Disney's attention to detail in its rides unique? How do they use the "atmosphere" discussed in the case to maximize the experience while minimizing complaints about length of wait for the ride?

Disney is interested in creating more than simply a ride; they seek to provide their customers with an experience. In order to maximize this effect, the attention to detail, including the ancillary buildings they construct and the way in which the grounds are prepared, is all designed to distract the customer from the sometime lengthy wait for the ride. The better able Disney is to develop this sense of overall atmosphere, the more their customers will find the ride memorable and their overall satisfaction with Disney will be that much higher.

Case Study 1.4 The Most Expensive VA Hospital in History: The $2 Billion Scandal in Aurora, Colorado

This case follows the disastrous record of the Federal Government trying to build a VA hospital in Aurora, Colorado and the many challenges that were exposed because of huge cost overruns and schedule delays. Government projects have had a checkered history and the case identifies a handful of examples before discussing the Aurora VA Hospital in detail, including a timeline spanning nearly 20 years from the determination that a new hospital was needed, to the final opening. The case also investigates a number of reasons why government projects, such as the Aurora VA Hospital, are prone to these problems, with a laundry list of issues that routinely pop up, including (1) lack of consequences for using budgets inefficiently, (2) the difficulty in disciplining federal employees in cases of clear misbehavior, and (3) persistently unrealistic and low bidding by contractors who know that once the project is approved, overruns will automatically be covered. Students enjoy the case as an example of failure, but also it requires them to reflect on how they might propose useful solutions to these challenges.

Questions

1. Given the challenges of managing large public projects like Aurora VA Hospital, how might you suggest creative ways to minimize cost overruns such as this project experienced?

This question is intended to demonstrate to students the way that project management requires us to carefully plan the project front-end, develop a coherent goal or set of goals for the project, and make sure that these goals are widely understood. One of the problems with this project was that as costs continued to rise, the project had to be re-evaluated and the scope adjusted multiple times to cut costs, while overall, the project's costs continued to balloon. It also requires students to consider the problem with oversight in such large projects and the way unscrupulous contractors can take advantage of the situation to underbid because there is little penalty for overrunning a budget once the project in "on the books."

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2. Successful project management requires clear organization, careful planning, and good execution. How was the absence of each of these traits shown in this example?

The Aurora VA Hospital case offers great examples of the need to carefully organize a variety of different contractors and other stakeholders, to ensure that everyone is working toward the same goals. The original plan for the hospital grew and became more elaborate and expensive as the project progressed. Meanwhile, the key contractors had typically underbid in order to win the work, knowing that for government contracts, there was little incentive to hold down costs after the fact, as these projects were typically allowed to spin out of control but still proceed. The case examines three ways in which waste is allowed to continue during project execution, as it is rare for government employees to be held directly accountable for misunderstandings, scope changes, or cost overruns. As the case notes, once "the hole has been dug," project oversight is typically perfunctory and insufficient to keep these projects on schedule and on budget, to the detriment of their final price tag and capabilities. All in all, this is a great case example illustrating why project management is such a challenge and the myriad issues and groups that effective leaders must manage for project success.

3. Consider the alternative argument that the VA hospital could be considered a success story when we factor in the ideas of "impact" and "value." Is there a middle ground between efficiency (doing a project right) and effectiveness (doing the right project)?

This question requires to think about project success as more than just the triple constraint of time, cost, and quality, which are usually considered the measures of project management efficiency. By these criteria, the Aurora VA Hospital was an expensive failure but when we consider the project in the larger context of societal value or creating an impact, the result is much less clear-cut. Hospitals offer important social benefits, and, on this criterion, it could be argued that the project suffered "short-term pain for long-term gain." This question is an excellent opportunity to create a debate among members of the class regarding the often-murky nature of project success.

INTERNET EXERCISES

1.1 The largest professional project management organization in the world is the Project Management Institute (PMI). Go to its Web site, www.pmi.org, and examine the links you find. Which links suggest that project management has become a sophisticated and vital element in corporate success? Select at least three of the related links and report briefly on the content of these links.

Answer: Look under PMI for Organizations. See the many areas where project management can have a great impact, including Government, Academic Institutions, Non-profit Organizations and NGO's, Human resources, and Marketing.

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Three related links include:

- https://www.pmi.org/certifications/project-management-pmp
- https://www.pmi.org/certifications/certified-associate-capm
- https://www.pmi.org/certifications/agile-acp

Each of these links takes the reader to various certifications that can add value to their resume and assist them on their career journey.

1.2 Go to the PMI Web site and examine the link "Membership." What do you discover when you begin navigating among the various chapters and cooperative organizations associated with the PMI? How does this information cause you to rethink project management as a career option?

Answer: PMI offers various types of memberships, and even membership for students. There is a long list of benefits from joining PMI, including ways to enhance your career growth potential through skill development and free and discounted professional development (see certifications).

1.3 Go to http://www.pmi.org/business-solutions/case-studies and examine some of the cases included. What do they suggest about the challenges of managing projects successfully? The complexity of many of today's projects? The exciting breakthroughs or opportunities that projects allow us to exploit?

Answer: There is an interesting case study that resulted from a 2021 disaster in British Columbia, Canada. A tragic weather event called an atmospheric river flowed across British Columbia causing severe flooding, landslides, and bridges collapsing. Towns were cut off and travelers stranded. The Ministry of Transportation and Infrastructure relies on project management to assist with a wide range of projects from highway improvement to public transportation. In this particular disaster, the Ministry turned to project management to identify critical paths, create a work breakdown structure, implement communication protocols, conduct a risk assessment, and manage contributors and various stakeholders.

1.4 Using your favorite search engine, type in the keywords "project," "project manager," and "project management." Randomly select three of the links that come up on the screen. Summarize what you find.

Answer: For "Project Manager"

- Indeed surfaces with lots of available job opportunities

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- A link to software solutions at https://www.projectmanager.com/

For "Project Management"

- A link to project management tools

1.5 Go to the link from the Software Engineering Institute of Carnegie Mellon University at https://resources.sei.cmu.edu/asset_files/SpecialReport/1994_003_001_16265.pdf and access the software process maturity questionnaire. What are some of the questions that IT companies need to consider when assessing their level of project management maturity?

Answer:

- Is corrective action taken when actual results deviate significantly (Comments: from the project's software plans)?
- Is someone on the project assigned specific responsibilities for tracking software work products and activities (e.g., effort, Comments: schedule, and budget)?
- Are the activities for software project tracking and oversight reviewed with senior management on a periodic basis (e.g., Comments: project performance, open issues, risks, and action items)?

AI ENGAGEMENT EXERCISES

1.1 Access ChatGPT or another generative AI tool. Give it the prompt: "Why is project management so critical for world economies?" Which of these reasons do you find most important and why?

Answer: Innovation and Transformation: All industries need innovation and transformation to grow and succeed. Industries like healthcare, finance, and telecommunications evolve through projects. Project management ensures that innovation moves from idea to large-scale economic impact.

1.2 Access ChatGPT or another generative AI tool. Give it the prompt: "How do we define a 'successful project'?" Note the wide range of factors that determine a successful project. Do you see any problems with this list; for example, how long might it take to determine if a project has successfully delivered "value" for customers? What is the danger in assessing project success too early or too late?

Answer: A "successful project" can be defined in several dimensions, since success goes beyond just finishing on time. Traditionally, project success is judged by the "Iron Triangle" (time, cost, quality), but modern definitions are broader—that is, Business and Stakeholder Success; Long-

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Instructor's Resource Manual (Download only) for Project Management: Achieving Competitive Advantage, 6e

Project Management: Achieving Competitive Advantage

Sixth Edition

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Pearson

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